

Factory Mutual Insurance Company

Key Rating Drivers

Favorable Company Profile: Factory Mutual Insurance Company (FM Global) maintains a strong franchise in the commercial property market for highly protected risks. In 2021, based on statutory results, FM Global held the No. 1 market share position in the boiler and machinery line of business among all U.S. property/casualty groups based on direct premiums written, representing roughly one-third of industrywide premiums. FM Global was also the largest writer of allied lines and fire business in 2021.

Underwriting Results Improve: The GAAP combined ratio was very strong at 69.7% through 9M22, including the impact of membership credits and estimated losses from Hurricane Ian, as a favorable rate environment and generally low loss activity led to underwriting improvement, consistent with long-term results.

FM Global's portfolio of property business is inherently volatile, as the company is one of the leading providers of large-limit commercial property capacity. However, the company's risk management sophistication, loss control and pricing expertise allowed it to achieve very strong financial performance over the long term.

Very Strong Capitalization: FM Global's capital position is very strong and remains well positioned to manage the inherent volatility of the group's results. FM Global's score in Fitch Ratings' Prism capital model remained at 'Extremely Strong' based on 2021 data. GAAP policyholders' surplus decreased by approximately 9%, to \$17.6 billion through 9M22, largely due to unrealized losses on investments, offset by positive underwriting results.

Liquid Investment Portfolio: Fitch believes FM Global's high-quality, fixed-income portfolio provides ample liquidity to meet its policyholder obligations. As of Sept. 30, 2022, the company held over \$2.2 billion of consolidated cash and cash equivalents.

Investment Risk: FM Global's above-average allocation to equities moderated somewhat relative to recent periods, as the company increased diversification across risk assets in an effort to reduce expected portfolio volatility. FM Global's allocation of unaffiliated equities to total cash and invested assets on a GAAP basis was approximately 39% as of Sept. 30, 2022. The company's long-term total return philosophy enabled it to grow its book value over the years and provides greater near-term uncertainty of investment portfolio returns.

Financial Flexibility: As a mutual insurer, the company's financial flexibility is somewhat limited relative to stock company peers. However, the company has no outstanding debt, which Fitch regards as a positive credit factor relative to other insurers rated 'AA'.

Ratings

Factory Mutual Insurance Company

Insurer Financial Strength AA

Subsidiaries

Insurer Financial Strength AA

Outlook

Insurer Financial Strength Stable

Financial Data

Factory Mutual Insurance Company

(\$ Mil.)	2020	2021
Net Premiums Earned	4,706	5,504
Net Income	1,732	2,842
Combined Ratio (%)	92.5	83.1
Return on Surplus (%)	11.1	15.9
Debt and Hybrids	—	—

Source: Factory Mutual Insurance Company.

Applicable Criteria

[Insurance Rating Criteria \(July 2022\)](#)

Related Research

[U.S. Insurers to Navigate a More Precarious Economy in 2023 \(November 2022\)](#)

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Rating Sensitivities

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

- Fitch views a potential upgrade as somewhat limited by Fitch’s broader view of the risks inherent in the company’s profile;
- Consistent levels of strong capital associated with higher rating levels over a multiyear period, including a Prism capital model score of ‘Extremely Strong’;
- A material decline in common equity investments, reducing volatility in surplus.

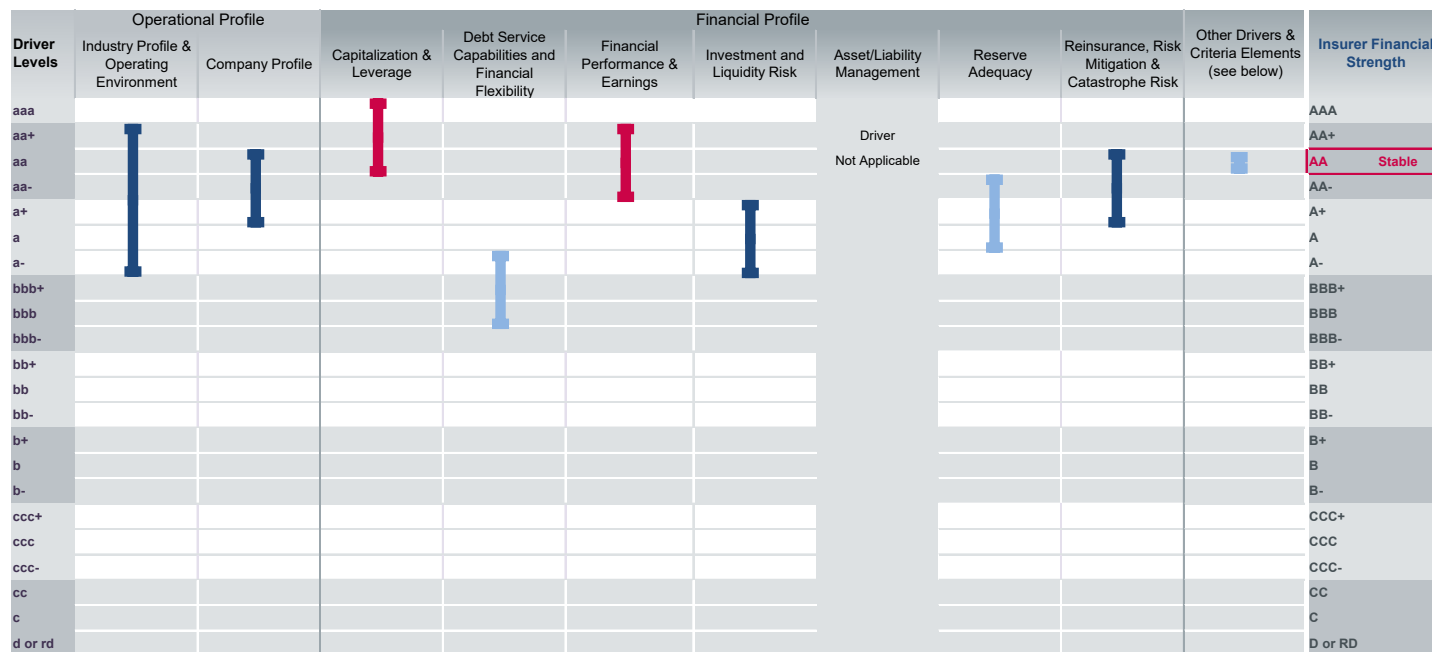
Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

- Severe deterioration in long-term underwriting results, to the point where the company no longer outperforms its peers;
- Consolidated U.S. operating and net leverage approaching 0.75x and 1.75x, respectively;
- Significant deterioration in FM Global’s capitalization as measured by Fitch’s Prism capital model;
- A sustained period of net losses or catastrophe losses out of proportion with market share.

Latest Developments

FM Global announced a \$300 million resilience credit in August 2022, provided to members to invest in climate resilience, especially for flood, wind and wildfire exposures. The credit will be applied as a 5% premium offset against FM Global policies with renewals or anniversaries between Oct. 1, 2022, and Sept. 30, 2023.

Key Rating Drivers – Scoring Summary



Other Drivers & Criteria Elements				
Provisional Insurer Financial Strength Rating				AA
Non-Insurance Attributes	Positive	Neutral	Negative	+0
Ownership / Group Support	Positive	Neutral	Negative	+0
Transfer & Convertibility / Country Ceiling	Yes	No	AAA	+0
Insurer Financial Strength Rating				Final: AA
IFS Recovery Assumption	Good			-1
Issuer Default Rating (IDR)				Final: n.a.

Bar Chart Legend:	
Vertical Bars = Range of Driver	
Bar Colors = Relative Importance	
■ (Red)	Higher Influence
■ (Blue)	Moderate Influence
■ (Light Blue)	Lower Influence
Bar Arrows = Driver Outlook	
↑	Positive
↓	Negative
↕	Evolving
□	Stable

Company Profile

Strong Franchise in Commercial Property Insurance Market

Fitch ranks FM Global's business profile as a favorable compared with all other U.S. non-life insurers, due to the company's unique franchise, largely derived from its engineering capabilities and loss prevention services that are difficult for competitors to replicate. Given the favorable ranking, Fitch scores FM Global's business profile at 'aa-' under its rating guidelines and it carries a moderate weight.

FM Global maintains a strong franchise in the commercial property market for highly protected risks. In 2021, based on statutory results, FM Global held the No. 1 market share position in the boiler and machinery line of business among all U.S. property/casualty groups based on direct premiums written, representing roughly one-third of industrywide premiums. FM Global was also the largest writer of both fire and allied lines in 2021.

FM Global conducts onsite loss prevention and engineering reviews at the majority of its insured sites, including all of its larger policyholder sites, and Fitch believes that these reviews have a significant positive effect on the company's underwriting results. These results, Fitch believes, are due in part to the extensive engineering and loss prevention studies the company conducts at its state-of-the-art engineering test facility. Fitch views FM Global's ability to conduct these studies and the insights they bring to the company's underwriting process as key competitive advantages.

Fitch views FM Global's risk appetite as greater than that of the industry as the company provides capacity for large commercial risks and has the ability to offer large limits on property exposures. The company's underwriting portfolio of large property risks brings inherent volatility to FM Global's year to year operating performance. Fitch considers FM Global the industry leader in incorporating engineering expertise into insurance products and underwriting processes, which helps to mitigate the volatility in results.

FM Global writes business for commercial clients around the globe, providing the company with significant geographic diversification. The company maintains robust underwriting standards that are employed in the same manner for all of the properties around the world for which the company provides coverage. The organization employs more than 1,900 engineers that provide loss control expertise and provide consistency in underwriting practices around the globe.

Fitch also believes FM Global's dual product distribution methods provide diversification as the company uses direct distribution and brokers to market its products and maintains a relatively high degree of operational control over its distribution. The operations staff is comprised of engineers and underwriters, and its members complement the company's distribution channels and have a significant amount of client interaction.

Company Profile Scoring

Business Profile Assessment	Favorable
Business Profile Subfactor Score	aa-
Corporate Governance Assessment	Favorable
Corporate Governance Impact (Notches)	0 notches
Company Profile Factor Score	aa-

Source: Fitch Ratings.

Ownership

Mutual Ownership Is Neutral to the Ratings

FM Global is a mutual insurance company that specializes in providing engineered loss prevention services and high-limit commercial property coverage to its member clients. FM Global was formed in mid-1999 through the merger of Allendale Mutual Insurance Company, Protection Mutual Insurance Company and Arkwright Mutual Insurance Company. Prior to the merger, these companies shared an engineering and research facility, as well as ownership of FM Insurance Company, Ltd. (FMI), and participated in various reinsurance agreements with one another.

The company's primary domestic insurance subsidiaries are Affiliated FM Insurance Company (with its Canada branch) and Appalachian Insurance Company. The organization conducts insurance operations internationally through subsidiaries in Luxembourg (FM Insurance Europe S.A.), the U.K. (FMI) and Mexico (FM Global de Mexico, S.A.) and branch offices in Canada, Australia, New Zealand, Singapore, Hong Kong and Labuan. Risk Engineering Insurance Company Limited is a wholly owned subsidiary of FM Global that only assumes business ceded to it from other FM Global group companies.

Capitalization and Leverage

Very Strong Capitalization Supports Rating Level

FM Global consistently grew policyholders' surplus in recent years, as the company remains well positioned to manage the inherent volatility of the group's results. GAAP policyholders' surplus decreased by approximately 9%, to \$17.6 billion at 9M22, largely due to unrealized losses on investments, offset by positive underwriting results.

FM Global continues to use a conservative amount of operating leverage. At Dec. 31, 2021, the company's annualized ratio of net premiums written to statutory surplus was 0.3x, which is equal to the company's five-year average. Fitch believes FM Global's operating leverage remains supportive of the current rating level. FM Global issues no debt and accordingly uses zero financial leverage, which Fitch considers a positive rating factor.

FM Global's YE 2021 NAIC RBC ratio was 386% of the company action level, as the company maintains very strong levels of policyholders' surplus at the lead company. Fitch views the company's RBC ratio as being higher than many comparably rated peers.

FM Global's score in Fitch's Prism capital model improved to 'Extremely Strong' based on 2021 data, as the company's available capital increased during the period, and natural catastrophe risk contributed a smaller proportion of overall target capital than in prior years. See the *Reinsurance, Risk Management and Catastrophe Risk* section of this report on page 7 for further details on FM Global's catastrophe risks and risk mitigation tools.

Financial Highlights

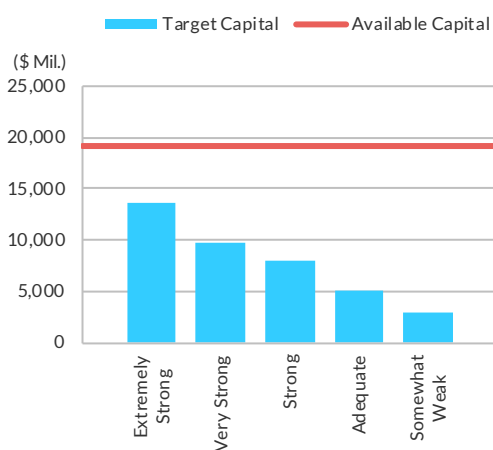
	2020	2021
Policyholders' Surplus (\$ Mil.)	15,359	17,858
Net Premiums Written/PHS (x)	0.3	0.3
Net Leverage (x)	0.9	0.8
Gross Leverage (x)	1.1	1.1
NAIC RBC Ratio ^a (%)	384	386

^aLead company RBC of the company action level.
PHS - Policyholders' surplus. Note: Statutory accounting.
Source: Fitch Ratings, S&P Global Market Intelligence.

Fitch's Expectations

- FM Global is expected to maintain very strong capitalization in 2023, measured by the low levels of underwriting and net leverage, solid NAIC RBC ratio, and a 'Very Strong' Prism score or better.
- Fitch forecasts GAAP net premiums written to surplus to remain in the range of 0.3x-0.35x through 2023. (See *Appendix C* for discussion of Fitch forecasts.)

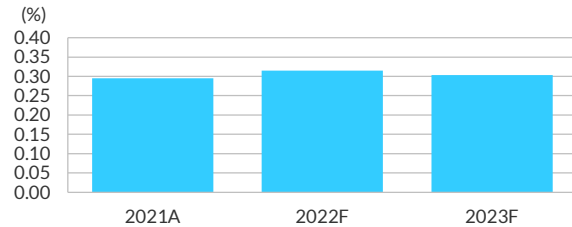
2021 Prism Score – Factory Mutual Insurance Company



(\$ Mil.)	2019	2020	2021
Prism Score	Extremely Strong	Extremely Strong	Extremely Strong
AC/TC at Prism Score (%)	146	159	141
AC/TC at Higher Prism Score (%)	N.A.	N.A.	N.A.
Statutory Surplus	13,708	15,359	17,858
Affiliated Investments	—	—	—
Unrealized Bond Gains/(Losses)	—	—	—
Other Adjustments	702	967	1,326
Available Capital (AC Base)	14,410	16,326	19,184
Target Capital Contributors (%)			
Underwriting	30	33	30
Reserves	5	3	5
Investments	18	19	18
Catastrophe	24	23	22
Other	22	22	25

AC - Available capital. TC - Target capital. N.A. - Not available. Note: Red line is AC base.
Source: Fitch Ratings, S&P Global Market Intelligence.

Fitch Forecast – Net Premiums Written to Surplus



A – Actual, F – Forecast, Note: Statutory data. See Appendix C for more information.
Source: Fitch Ratings.

Debt Service Capabilities and Financial Flexibility

Strong Liquidity with No Debt to Service

Fitch views FM Global’s financial flexibility and debt service to be weaker than that of peers with public ownership and lower than the current rating category. Overall, financial flexibility has a lower influence in determining FM Global’s ratings.

As a mutual insurer, FM Global has no access to the equity capital markets. The company also has limited access to the debt capital markets, thus reducing the financial flexibility of the company. However, management’s strategy accounts for this and manages the company’s cash flows accordingly.

FM Global has never issued debt through the capital markets and the company’s capital structure consists entirely of policyholder-owned funds.

FM Global maintains a significant balance of cash and cash equivalents that provides liquidity to fund losses in the underwriting portfolio and limits the need for additional liquidity from third-party sources.

Financial Highlights

	2020	2021
Cash Flow Ratio (%)	111.0	124.1
Cash and Cash Equivalents (\$ Mil.)	1,707	1,840
Long-Term Debt (\$ Mil.)	–	–
Interest Expense (\$ Mil.)	–	–

Note: Reported on a GAAP basis.
Source: Factory Mutual Insurance Company annual reports.

Fitch’s Expectations

- FM Global is expected to maintain the current strong level of liquidity.

Financial Performance and Earnings

Long-Term Underwriting Success with Potential for Volatility

FM Global’s 9M22 GAAP combined ratio was very strong at 69.7% as underlying performance benefited from improved pricing and terms and conditions in recent periods. FM Global’s portfolio of property business is inherently volatile, as the company is one of the leading providers of large limit commercial property capacity. However, the company’s risk management sophistication, loss control and pricing expertise allowed the company to achieve very strong financial performance over the long term. Fitch continues to view the company’s long-term results as supportive of its ratings.

The company’s operating performance over the long term has been very strong, despite exposure to periodic catastrophe losses, reflecting the company’s underwriting expertise, expense efficiencies and generally favorable market conditions. Fitch believes there is a significant amount of inherent volatility in FM Global’s year to year operating performance because of the company’s large book of property insurance and its corresponding exposure to natural and man-made catastrophe-related losses. Due to this potential volatility, Fitch believes FM Global’s underwriting results are best viewed on a cumulative basis over a relatively long period.

FM Global announced that eligible policyholders would collectively receive an estimated \$600 million in membership credits when they renewed their policies in 2022. The payment of membership credits effectively reduces the level of net earned premium reported by the company. The GAAP combined ratio through 9M22 included 3.0 percentage

points related to membership credits. From 2017 to 2019, membership credits increased FM Global's combined ratio by an average of 6.2 percentage points. Membership credits were not provided in 2020 and 2021.

Financial Highlights

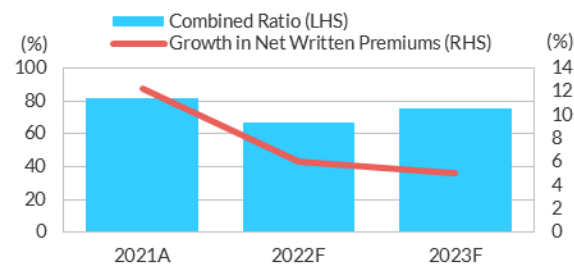
(\$ Mil.)	2020	2021
Net Premiums Earned	4,706	5,504
Net Income	1,732	2,842
Combined Ratio (%)	92.5	83.1
Operating Ratio (%)	82.2	74.3
Return on Common Equity (%)	11.1	15.9

Note: Reported on a GAAP basis.
Source: Factory Mutual Insurance Company annual reports.

Fitch's Expectations

- FM Global's underwriting results in 2023 are expected to remain at levels comparable with the company's long-term results. Fitch forecasts the GAAP calendar-year combined ratio to range between 72% and 82% in 2023 based on strong rates continuing to earn into the book of business, assuming normal catastrophe experience.
- Net premium growth is forecast by Fitch to remain strong through 2023 and range between 4% and 8%.

Fitch Forecast – Financial Performance



A – Actual. F – Forecast. Note: Statutory data. See Appendix C for more information.
Source: FitchRatings.

Investment and Asset Risk

Large Allocation to Equity Risk with Strong Liquidity

FM Global's investment portfolio is managed on a total return basis with a long-term investment horizon. The company invests in fixed-income securities to support the relatively short-duration liabilities generated by its property insurance reserves and equities to support surplus growth. As a result, FM Global is significantly overweight in common stock investments relative to the industry.

FM Global's above-average allocation to equities moderated somewhat relative to recent periods, as the company increased diversification across risk assets in an effort to reduce expected portfolio volatility. FM Global's allocation of unaffiliated equities to total cash and invested assets on a GAAP basis was approximately 39%, as of Sept. 30, 2022. The company's long-term total return philosophy enabled it to grow its book value over the years and produces greater near-term uncertainty of investment portfolio returns.

FM Global's bond portfolio exhibits high credit quality and liquidity, but has added exposure to below-investment grade bonds in recent years. At Dec. 31, 2021, approximately 84% of the statutory combined group fixed-income portfolio consisted of NAIC 1 and 2 bonds, down from 89% in 2020. Statutory surplus exposure to below-investment-grade bonds was 7.5% at YE 2021.

Financial Highlights

	2020	2021
Cash and Invested Assets (\$ Mil.)	22,356	25,271
Cash and Invested Assets/Surplus (x)	1.5	1.4
Investment Yield (%)	1.2	1.5
Risky Asset Ratio (%)	76	82
Risk-Weighted Liquidity Ratio (%)	434	428

Note: Statutory accounting.
Source: Fitch Ratings, S&P Global Market Intelligence.

Fitch's Expectations

- The company is expected to maintain an above-average investment allocation to equity securities, which is consistent with its long-term total return strategy.

Reserve Adequacy

History of Moderate Favorable Reserve Experience

Fitch believes FM Global’s loss reserves are adequate and that the company follows a disciplined approach when establishing reserves. Fitch also believes that the relatively short duration of FM Global’s reserves reduces reserve uncertainty. The vast majority of the company’s loss reserves tend to develop into paid losses within three years.

Fitch uses a reserve adequacy model, and reported paid loss and incurred loss data from Schedule P are used to estimate ultimate accident-year losses and required accident-year reserves. Using FM Global’s YE 2021 data, Fitch’s model estimates an adequate level of reserves using paid loss data and case-incurred data.

Starting with accident-year 2002, each subsequent accident year developed favorably since FM Global’s initial reserve estimates, displaying conservatism in setting the company’s reserves that compare favorably with peers and the overall industry.

FM Global has not reported unfavorable development on asbestos-related reserves since 2017. The company reported a total of \$55 million of asbestos development over the past five-year period, with overall favorable prior-year reserve experience during that time.

Fitch believes that FM Global’s reserves for asbestos-related claims are strong and, unlike many of its peers, FM Global bolstered its asbestos reserves while still generating strong calendar-year profitability. The company’s gross and net survival ratios based on three-year average paid asbestos losses were 30.6x and 32.2x, respectively, at YE 2021. Fitch also believes that FM Global has solid reserves for environmental claims. At YE 2021, the company’s gross and net survival ratios based on three-year average paid environmental losses were 48.5x and 49.7x, respectively. Net asbestos and environmental reserves totaled \$629 million at YE 2021, representing approximately 16% of FM Global’s overall statutory net loss and loss adjustment expense reserves.

Financial Highlights

(\$ Mil.)	2020	2021
Loss Reserves	3,053	3,560
Loss Adjustment Expense Reserves	261	267
Discontinued Lines Reserve Development	–	–
Other Adverse (Favorable) Reserve Development	(148)	(119)
Reserve Development/Premiums Earned (%)	(3.5)	(2.4)

Note: Statutory accounting.

Source: Fitch Ratings, S&P Global Market Intelligence.

Fitch’s Expectations

- Maintenance of the adequate reserve position is expected.

Reinsurance, Risk Mitigation and Catastrophe Risk

Strong Focus on Risk Management

Fitch believes that FM Global’s reinsurance programs provide adequate protection against the large losses the company could face and that the credit quality of the company’s reinsurers is good. FM Global has a significant exposure to natural and man-made catastrophic losses from its large book of property insurance. As a result, Fitch believes that reinsurance is a very important component of FM Global’s risk management process.

FM Global’s excess of loss reinsurance program consists of a per-risk program and a catastrophe program. The per-risk program provides the company with coverage on individual claim losses in excess of \$300 million for Factory Mutual Insurance company, with a \$75 million retention for Affiliated FM. The company’s catastrophe reinsurance program separately provides coverage on catastrophe losses from all perils in excess of \$450 million.

FM Global uses a diverse mix of financially sound reinsurers, and Fitch believes the overall credit quality of the company’s reinsurance recoverable is strong. FM Global’s most substantial reinsurance recoverable exposures are to large companies with high credit ratings, such as Swiss Re Group and Munich Re Group, which provide Fitch with confidence in FM Global’s ability to recover funds owed to the company in the wake of a large claim.

FM Global manages its capital by examining catastrophe exposure using a probabilistic approach relative to capital and by evaluating growth in total insured values relative to growth in surplus. The company uses location-based insured data to determine its exposure in catastrophe-prone areas. As such, the company performs a ground-up analysis and does not rely solely on catastrophe model simulations to determine its potential shock losses.

Fitch also believes the quality of data FM Global uses in its catastrophe exposure analysis is enhanced by the engineering standards it maintains and data collected in relation to its insured properties.

Financial Highlights

(%)	2020	2021
Net Premium Written to Gross Premium Written	71	73
Reinsurance Recoverables to Surplus	18	20

Note: Statutory accounting.

Source: Fitch Ratings, S&P Global Market Intelligence.

Fitch's Expectations

- FM Global is expected to continue to utilize industry-leading risk assessment and loss prevention expertise in its underwriting of its commercial property portfolio.
- The company is expected to maintain use of its robust risk transfer program as part of its overall risk management strategy.

Appendix A: Peer Analysis

Peer Comparison

Click [here](#) for a report that shows a comparative peer analysis of key rating driver scoring.

Appendix B: Industry Profile and Operating Environment

Industry Profile and Operating Environment (IPOE)

Click [here](#) for a link to a report that summarizes the main factors driving the above IPOE score.

Appendix C: Other Rating Considerations

Below is a summary of additional ratings considerations that are part of Fitch's *Insurance Rating Criteria*.

Group Insurance Financial Strength (IFS) Rating Approach

Fitch considers all rated subsidiaries as Core, thus Fitch applies a group rating methodology as the company has the willingness and ability to provide support to group members. FM Global is a party to a pooling arrangement with its wholly owned subsidiaries Appalachian Insurance Co. and Affiliated FM Insurance Co. As a result of the pooling agreement, Fitch considers these U.S.-based insurance subsidiaries to be Core. U.K.-domiciled FM Insurance Company Ltd.; Luxembourg-domiciled FM Insurance Europe S.A.; and Mexico-domiciled FM Global de Mexico, S.A. benefit from significant reinsurance support from FM Global as well policy level guarantees. Risk Engineering Insurance Company Limited is a wholly owned subsidiary of FM Global that only assumes business ceded to it from other FM Global group companies, leading to the status of Core. All operating companies have a 'AA' IFS rating based on a combined group assessment.

Group Ratings Table

	Type	Rating	Outlook
Factory Mutual Insurance Company	IFS	AA	Stable
Affiliated FM Insurance Company	IFS	AA	Stable
Appalachian Insurance Company	IFS	AA	Stable
FM Insurance Company Limited	IFS	AA	Stable
FM Insurance Europe S.A.	IFS	AA	Stable
FM Global de Mexico, S.A. de C.V.	IFS	AA	Stable
Risk Engineering Insurance Company Limited	IFS	AA	Stable

Source: Fitch Ratings.

Notching

Notching Summary

IFS Ratings

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

Holding Company IDR

No holding company relationship exists.

Holding Company Debt

The company issues no debt.

Hybrids

The company issues no hybrid securities.

IFS – Insurer Financial Strength. IDR – Issuer Default Rating.

Short-Term Ratings

Not applicable.

Hybrid – Equity/Debt Treatment

Not applicable.

Transfer and Convertibility Risk (Country Ceiling)

None.

Criteria Variations

None.

About Fitch Forecasts

The forecasts shown in the main body of this report reflect Fitch's forward views from a credit perspective. They are based on a combination of Fitch's macroeconomic forecasts and viewpoints, outlook at the sector level and company-specific considerations developed by Fitch. As a result, Fitch's forecasts may differ, at times materially, from earnings and other guidance provided by a rated entity to the market. To the extent Fitch is aware of material, nonpublic information on likely future events, such as a planned recapitalization or M&A activity, Fitch will not reflect these likely future events in its forecasts. This practice is to assure that such material nonpublic information is not inadvertently disclosed. However, as relevant, such information is considered by Fitch as part of the broader ratings process.

Appendix D: Environmental, Social and Governance Considerations

Credit-Relevant ESG Derivation

Credit-Relevant ESG Derivation			Overall ESG Scale	
Factory Mutual Insurance Company has 8 ESG potential rating drivers			key driver	5
<ul style="list-style-type: none"> Factory Mutual Insurance Company has exposure to underwriting/reserving exposed to asbestos/hazardous materials risks but this has very low impact on the rating. Factory Mutual Insurance Company has exposure to underwriting/reserving exposed to environmental and natural catastrophe risks; impact of catastrophes on own operations or asset quality; credit concentrations but this has very low impact on the rating. Factory Mutual Insurance Company has exposure to compliance risk; treating customers fairly; pricing transparency; privacy/data security; legal/regulatory fines; exposure to insured and own cyber risk but this has very low impact on the rating. Factory Mutual Insurance Company has exposure to social responsibility and its effect on brand strength; increased vulnerability due to credit concentrations but this has very low impact on the rating. Governance is minimally relevant to the rating and is not currently a driver. 	driver	4		
	potential driver	8	3	
	not a rating driver	1	2	
		5	1	

Environmental (E)

General Issues	E Score	Sector-Specific Issues	Reference	E Scale
GHG Emissions & Air Quality	1	n.a.	n.a.	5
Energy Management	1	n.a.	n.a.	4
Water & Wastewater Management	1	n.a.	n.a.	3
Waste & Hazardous Materials Management; Ecological Impacts	3	Underwriting/reserving exposed to asbestos/hazardous materials risks	Capitalization & Leverage; Financial Performance & Earnings; Reserve Adequacy; Reinsurance, Risk Mitigation & Catastrophe Risk	2
Exposure to Environmental Impacts	3	Underwriting/reserving exposed to environmental and natural catastrophe risks; impact of catastrophes on own operations or asset quality; credit concentrations	Capitalization & Leverage; Financial Performance & Earnings; Reserve Adequacy; Reinsurance, Risk Mitigation & Catastrophe Risk; Investment & Asset Risk	1

How to Read This Page

ESG scores range from 1 to 5 based on a 15-level color gradation. Red (5) is most relevant and green (1) is least relevant.

The Environmental (E), Social (S) and Governance (G) tables break out the individual components of the scale. The right-hand box shows the aggregate E, S, or G score. General Issues are relevant across all markets with Sector-Specific Issues unique to a particular industry group. Scores are assigned to each sector-specific issue. These scores signify the credit-relevance of the sector-specific issues to the issuing entity's overall credit rating. The Reference box highlights the factor(s) within which the corresponding ESG issues are captured in Fitch's credit analysis.

The Credit-Relevant ESG Derivation table shows the overall ESG score. This score signifies the credit relevance of combined E, S and G issues to the entity's credit rating. The three columns to the left of the overall ESG score summarize the issuing entity's sub-component ESG scores. The box on the far left identifies some of the main ESG issues that are drivers or potential drivers of the issuing entity's credit rating (corresponding with scores of 3, 4 or 5) and provides a brief explanation for the score.

Classification of ESG issues has been developed from Fitch's sector ratings criteria. The General Issues and Sector-Specific Issues draw on the classification standards published by the United Nations Principles for Responsible Investing (PRI) and the Sustainability Accounting Standards Board (SASB).

Sector references in the scale definitions below refer to Sector as displayed in the Sector Details box on page 1 of the navigator.

Social (S)

General Issues	S Score	Sector-Specific Issues	Reference	S Scale
Human Rights, Community Relations, Access & Affordability	1	n.a.	n.a.	5
Customer Welfare - Fair Messaging, Privacy & Data Security	3	Compliance risk; treating customers fairly; pricing transparency; privacy/data security; legal/regulatory fines; exposure to insured and own cyber risk	Industry Profile & Operating Environment; Company Profile; Reserve Adequacy	4
Labor Relations & Practices	2	Impact of labor negotiations, including board/employee compensation and composition	Company Profile	3
Employee Wellbeing	1	n.a.	n.a.	2
Exposure to Social Impacts	3	Social responsibility and its effect on brand strength; increased vulnerability due to credit concentrations	Company Profile; Investment & Asset Risk; Financial Performance & Earnings; Reinsurance, Risk Mitigation & Catastrophe Risk	1

Governance (G)

General Issues	G Score	Sector-Specific Issues	Reference	G Scale
Management Strategy	3	Operational implementation of strategy	Company Profile	5
Governance Structure	3	Board independence and effectiveness; ownership concentration; protection of creditor/stakeholder rights; legal /compliance risks; business continuity; key person risk; related party transactions	Company Profile	4
Group Structure	3	Organizational structure; appropriateness relative to business model; opacity; intra-group dynamics; ownership	Company Profile; Ownership	3
Financial Transparency	3	Quality and timing of financial reporting and auditing processes	Company Profile	2
				1

CREDIT-RELEVANT ESG SCALE	
How relevant are E, S and G issues to the overall credit rating?	
5	Highly relevant, a key rating driver that has a significant impact on the rating on an individual basis. Equivalent to "higher" relative importance within Navigator.
4	Relevant to rating, not a key rating driver but has an impact on the rating in combination with other factors. Equivalent to "moderate" relative importance within Navigator.
3	Minimally relevant to rating, either very low impact or actively managed in a way that results in no impact on the entity rating. Equivalent to "lower" relative importance within Navigator.
2	Irrelevant to the entity rating but relevant to the sector.
1	Irrelevant to the entity rating and irrelevant to the sector.

ESG Considerations

The highest level of ESG credit relevance, if present, is a score of '3'. This means ESG issues are credit neutral or have only a minimal credit impact on the entity, either due to their nature or to the way in which they are being managed by the entity. For more information on Fitch's ESG Relevance Scores, visit <http://www.fitchratings.com/esg>.

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