FM Global Group

AMB #: 018502
Associated Ultimate Parent: AMB # 004067 - Factory Mutual Insurance Company

Best's Credit Ratings - for the Rating Unit Members

Financial Strength Rating (FSR)	Issuer Credit Rating (ICR)
A+	**aa**
Superior	**Superior**
Outlook: **Stable**	Outlook: **Stable**
Action: **Affirmed**	Action: **Affirmed**

Assessment Descriptors

Balance Sheet Strength	**Strongest**
Operating Performance	**Strong**
Business Profile	**Favorable**
Enterprise Risk Management	**Appropriate**

Rating Unit - Members

Rating Unit: FM Global Group | AMB #: 018502

AMB #	Rating Unit Members
000103	Affiliated FM Insurance Co
002345	Appalachian Insurance Company
086513	FM Insurance Company Limited
095193	FM Insurance Europe S.A.
004067	Factory Mutual Insurance Co

Best's Credit Rating Effective Date
January 06, 2021

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Information
Best's Credit Rating Methodology

Guide to Best's Credit Ratings

Market Segment Outlooks

Financial Data Presented
Financial data in this report: (i) includes data of affiliated entities that are not rating unit members where analytics benefit from inclusion; and/or (ii) excludes data of rating unit member entities if they operate in different segments or geographic areas than the Rating Unit generally. See list of companies for details of rating unit members and any such included and/or excluded entities.

The financial data in this report reflects the most current data available to the Analytical Team at the time of the rating. Updates to the financial exhibits in this report are available here: Best's Financial Report.

Rating Rationale

Balance Sheet Strength: Strongest

- FM Global's risk-adjusted capitalization, as measured by Best's Capital Adequacy Ratio (BCAR), is considered to be in the strongest category at the 99.6% confidence level. FM Global's balance sheet has been time-tested, as a leading global property insurer and its ability to withstand catastrophes year over year.
- Substantial reinsurance capacity for CATs and terrorism mitigation plays an integral role in preserving capital.
- The group's ability to generate capital is impressive when measured on a compound average growth rate (CAGR) over the last 10 years. Surplus has doubled over the period including the 10% decrease in 2018 from significant CATs and from equity investment losses in late 2018 and early 2020, which have both been more than recouped.
- Surplus and premium growth have both outpaced the growth of Total Insured Value (TIV) over the past 10 years, including a moderate TIV reduction in 2019.
- Equity leverage is consistently higher than that of the composite, generating significant long-term gains through prudent management, but it exposes the balance sheet to periodic market corrections. As a privately owned mutual company, management is able to take a long view on its investment horizons and ride out market swings.

Operating Performance: Strong

- Historical operating performance is generally strong with non-catastrophe trends neutral/slightly positive and prospective operating performance is expected to be strong. However, volatility due to catastrophes is moderate to high.
- Above-average underwriting performance -- a direct byproduct of FM Global's extensive risk management, loss prevention services and engineering expertise. Also reflects FM Global's leadership position in insuring highly protected risks (HPR), which are facilities that meet the highest protection standards.
- Strong results driven by excellent non-CAT loss experience included approximately $4 billion of membership premium credits earned from 2001 through mid-2018. Viewed as return of excess profits, management curtailed credits in 2018 following significant CAT loss years.
- Accident year (AY) loss reserve development has been generally favorable. Legacy asbestos and environmental reserves are long-dated and have been benign.

Business Profile: Favorable

- The group is a well-recognized, global market leader in the commercial and industrial property space.
- A broker market "go to" for large commercial highly protected property risks.
- Strong defensible competitive advantages through its global reach, extensive engineering expertise and risk mitigation / loss prevention services.
- Diversified operations in key markets that have high to moderate barriers to entry with low competition.
- Strong management team coupled with highly effective research-based engineering and a strong reinsurance program.
- Innovation is assessed positively. FM Global does things differently than other insurers in that it relies on engineers versus actuaries. Its credo is stated in its ORSA document that 'the majority of loss is preventable, and that any loss can be minimized.' This philosophy is tightly woven by its management and leadership into its culture and business activities, and it is manifested in the organization's results.

Enterprise Risk Management: Appropriate

- FM Global has demonstrated excellent ERM through loss control and minimization recommendations implemented by its policyholders that have been manifested in a long track record of strong operating profitability, driving balance sheet strength that AM Best assesses as "Strongest."
- The insurer's ERM framework is embedded and appropriate given the size and complexity of its operations. Risk management capabilities are well aligned with the risk profile of the group.
- The group is a well-run organization that has been a consistent property and casualty insurer with a strong and experienced management team that has plenty of depth.

- FM Global has an all-encompassing framework and plan instilled in its corporate culture to effectively identify, measure, monitor, report and control or mitigate both its internal and external sources of risk.
- The ERM strategy is embedded into multiple levels of internal controls that ensure adherence and compliance in transacting the group's business model.

Outlook

- The stable outlooks reflect AM Best's expectation that FM Global Group's risk-based capitalization and operating performance will continue to exhibit generally excellent trends. AM Best recognizes FM Global management's risk management capabilities to continue to generate commensurately strong returns in its niche business model of providing calculated risk coverages at high levels for highly protected industrial property risks. The high risk appetite periodically results in volatile underwriting results from CAT events that management has successfully navigated over the group's long history.

Rating Drivers

- Positive rating action could occur with reduced volatility in underwriting results.
- Negative rating action could result if operating performance or risk-adjusted capitalization falls markedly short of AM Best's expectations.
- Negative rating action could occur if risk-based capitalization is materially weakened by deteriorating non-CAT underwriting trends or following a prolonged equity market downturn.

Key Financial Indicators

Best's Capital Adequacy Ratio (BCAR) Scores (%)

Confidence Level	95.0	99.0	99.5	99.6
BCAR Score	66.2	56.7	52.3	51.2

Source: Best's Capital Adequacy Ratio Model - P/C, US

	9-Months		Year End - December 31				
Key Financial Indicators USD (000)	**2020**	**2019**	**2019**	**2018**	**2017**	**2016**	**2015**
Premiums Written:							
Direct	3,754,986	3,273,180	4,490,385	3,928,922	3,550,622	3,508,681	3,422,594
Assumed*	1,412,134	1,285,827	1,038,813	1,002,058	955,569	882,411	917,198
Ceded*	1,703,099	1,593,745	1,521,582	1,302,396	1,082,896	1,106,109	1,071,976
Net	3,464,021	2,965,262	4,007,616	3,628,584	3,423,295	3,284,984	3,267,817
Net Operating Income	17,214	615,529	805,611	-852,823	-569,066	559,689	505,145
Net Income	473,122	1,102,657	1,474,489	-103,165	-363,668	695,841	680,696
Total Admitted Assets	23,298,145	21,336,937	21,906,959	20,423,211	20,660,155	18,243,619	16,910,776
Policyholders' Surplus	14,067,228	12,819,788	13,707,656	11,241,267	12,501,777	11,519,356	10,546,654

Source: BestLink® - Best's Financial Suite

*Quarterly premiums include affiliated reinsurance premiums that are eliminated in annual assumed and ceded values.

Key Financial Ratios (%)	9-Months 2020	9-Months 2019	Year End - December 31 2019	2018	2017	2016	2015	Weighted Average
Profitability:								
Combined Ratio	103.5	80.5	81.5	138.6	138.3	83.6	86.5	105.8
Reserve Development Combined Ratio Impact	-0.4	-9.6	-12.1	-2.1	-2.9	-7.6	2.0	-4.7
Net Investment Yield	1.4	1.9	2.0	1.9	1.8	1.8	2.0	1.9
Pre-Tax Operating Return on Net Earned Premiums	0.5	27.4	26.5	-29.9	-28.3	25.3	22.4	3.0
Net Income Return on Policyholders' Surplus	4.5	12.2	11.8	-0.9	-3.0	6.3	6.6	4.1
Total Return on Policyholders' Surplus	4.9	19.2	20.1	-11.0	10.4	8.9	4.9	6.8
Leverage:								
Net	1.0	1.0	0.9	1.1	0.9	0.9	0.9	...
Gross	...	...	1.2	1.4	1.2	1.1	1.2	...
Non-affiliated Investment	65.2	68.5	63.2	68.9	73.6	73.0	72.6	...

Source: BestLink® - Best's Financial Suite

Credit Analysis

Balance Sheet Strength

Capitalization

The group has more than doubled its policyholder surplus over the past 10 years at a ten-year compound average growth rate of approximately 8% (as of YE 2019). In 2019, the group’s surplus increased by 21.9% due to better underwriting profitability and rebound of equity markets that had driven a 10.1% decrease in 2018. Continuing strong equity markets have been able to offset the challenging 2020 underwriting year marked by three significant loss events in 1Q20 to increase the surplus to $14.0 billion (2.6%) through the third quarter of 2020.

FM Global's balance sheet continues to demonstrate its resilience as the group continued to grow capital and surplus at a growth rate that outperforms the industry average, notwithstanding the ongoing Covid-19 challenges and the elevated level of catastrophe (CAT) losses that occurred, especially in 2017 and 2018, FM Global experienced a fairly benign CAT year in 2019. Risk-adjusted capitalization more than adequately supports FM Global's risks at the highest confidence intervals, as measured by Best's Capital Adequacy Ratio (BCAR). This favorable capital position is reflective of the group's conservative underwriting leverage, slightly offset by FM Global's elevated common stock leverage and comparatively high level of high risk (schedule BA) assets. Although the group maintains exposure to natural and man-made catastrophes, these risks are mitigated through an extensive risk management program and reinsurance which mitigates FM Global's net exposures to levels in line with the group's capital level. In addition, the company has increased rates over the past couple of years in the hardening and CAT-prone market while selectively reducing its total insured values as well (approximately 10% over the past three years).

The group has achieved solid surplus growth through operating earnings, along with steady investment income. Future surplus growth, however, could be tempered by sudden swings in the equities markets, like the ones that have occurred over the past two years. Based on the group's history, the expectation is that underwriting profits will continue to favorably impact surplus over the medium term, with results dipping in select years under heightened loss experience. AM Best expects risk-adjusted capitalization will remain at the strongest levels over the medium term. The expectation includes consideration for equity market volatility, a normalized level of natural catastrophes, absence of a major terrorist event. It also includes AM Best's comfort and understanding of FM Global's risk management capability to effectively manage through any potential Covid-related Business Interruption claim filings.

Balance Sheet Strength (Continued...)

Capital Generation Analysis USD (000)	9-Months 2020	9-Months 2019	Year End - December 31 2019	2018	2017	2016	2015
Beginning Policyholders' Surplus	13,707,656	11,241,267	11,241,267	12,501,777	11,519,356	10,546,654	10,141,846
Net Operating Income	17,214	615,529	805,611	-852,823	-569,066	559,689	505,145
Net Realized Capital Gains (Losses)	455,908	487,128	668,879	749,659	205,398	136,152	175,551
Net Unrealized Capital Gains (Losses)	32,851	633,145	1,028,199	-1,207,144	1,608,234	283,176	-169,818
Stockholder Dividends	-254	...	-333	-333	-333	-333	-333
Other Changes in Capital and Surplus	-146,148	-157,280	-35,966	50,130	-261,812	-5,982	-105,737
Net Change in Policyholders' Surplus	359,572	1,578,522	2,466,390	-1,260,510	982,421	972,702	404,808
Ending Policyholders' Surplus	14,067,228	12,819,788	13,707,656	11,241,267	12,501,777	11,519,356	10,546,654
Net Change in Policyholders' Surplus (%)	2.6	14.0	21.9	-10.1	8.5	9.2	4.0
Net Change in Policyholders' Surplus (5 yr CAGR)	...	...	6.2	...	...	...	...

Source: BestLink® - Best's Financial Suite

Liquidity Analysis	9-Months 2020	9-Months 2019	Year End - December 31 2019	2018	2017	2016	2015
Net Operating Cash Flow USD (000)	814,941	70,923	-383,042	-26,079	192,324	678,353	618,199
Current Liquidity (%)	174.3	183.3	185.2	160.6	189.5	209.5	202.6

Source: BestLink® - Best's Financial Suite

Asset Liability Management - Investments

FM Global invests its assets in a manner that is designed to ensure adequate liquidity to fund future liabilities. To the extent that its total assets exceed its liabilities (i.e. surplus), excess assets are generally invested in equity securities in accordance with management's view of a long term investment horizon.

The group's common stock leverage is well above its peer composite average (by design), but has declined over the years. FM Global's risk-based capitalization has not been meaningfully impacted by this asset risk, even with the equity market swings observed since late 2018, which have subsequently more than recovered as of this writing.

Approximately 1/3 of total investments are in long term bonds. The group also invests in high risk assets consisting of real estate held by an affiliate and in numerous joint ventures, partnerships and private equity and limited liability corporations. These investments represent approximately 10% of the group's investment portfolio and approximately 15% of surplus. At the end of 2019, the group reported approximately $680 million in contractual unfunded commitments to these partnerships.

Liquidity

FM Global's balance sheet is sound, with invested assets exceeding liabilities by comfortable margins. Current and quick liquidity measures compare favorably to industry composite norms and are enhanced by strong underwriting and operating cash flows. With the implementation of higher deductibles and attachment points, as well as ongoing rate adequacy, and engineering and loss control initiatives, cash flows from underwriting and operations have remained strong since 2002. Given the group's historically strong cash flows and solid risk-based level of capitalization, FM Global is largely protected against the need to liquidate any investments at a loss in order to meet its cash needs. A.M. Best expects cash flows from operations to remain strong in the medium term.

Balance Sheet Strength (Continued...)

Composition of Cash and Invested Assets	9-Months 2020	9-Months 2019	Year End - December 31 2019	2018	2017	2016	2015
Total Cash and Invested Assets USD (000)	21,461,230	19,639,180	19,748,796	18,317,283	19,000,390	17,051,460	15,764,639
Composition Percentages (%)							
Unaffiliated:							
Cash and Short Term Investments	7.1	5.7	6.4	8.2	6.9	6.1	6.5
Bonds	35.4	35.6	35.6	36.6	32.2	34.0	34.1
Stocks	31.9	37.6	34.4	35.3	41.9	42.1	40.7
Other Invested Assets	8.8	5.0	7.1	5.2	4.8	5.5	6.0
Total Unaffiliated	83.2	84.0	83.6	85.3	85.7	87.6	87.3
Investments in Affiliates	16.8	16.0	16.4	14.7	14.3	12.4	12.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: BestLink® - Best's Financial Suite

Bonds and Short Term Investments - Distribution by Maturity (%)	Years 0-1	1-5	5-10	10-20	20+	Average (Years)
Government Bonds	0.3	17.0	10.5	...	0.7	5.1
Government Agencies and Municipal Bonds	0.9	7.5	12.3	4.5	13.7	13.5
Industrial and Miscellaneous Bonds	1.8	17.7	10.2	0.4	2.1	5.9
Bank Loans	...	0.1	0.1	...	...	5.4
Total Bonds	3.0	42.3	33.2	5.0	16.5	8.6

Source: BestLink® - Best's Financial Suite

Reserve Adequacy

The group has reported favorable loss reserve development across most accident years driven by the recognition of redundancies in property lines of business, with some adverse development occasionally recorded for asbestos & environmental (A&E) losses.

According to AM Best's estimates, FM Global ranks among the top 30 largest carriers in the United States in terms of its potential exposure to asbestos and environmental claims, with an historical market share (based on net premiums) of 0.2%. FM Global reported approximately $670 million in net A&E reserves at year-end 2019, with 84% of this amount pertaining to asbestos liabilities. The group's net A&E reserves represent approximately 20% of its overall net loss reserve base and roughly 5% of consolidated surplus. A considerable portion of the group's potential A&E liability stems from its discontinued assumed reinsurance business, which poses more uncertainty than primary business due to its reliance on ceding companies for claims information. Also, claim payments tend to develop more slowly than for primary insurers. The group maintains a centralized claims unit that continues to evaluate, monitor and process claims.

Reserves increased in 2018 to $4.9 billion primarily due to a high volume of individual risk losses and 2018 catastrophe experience. They have since declined due to payment of claims in resolution; better than expected actual versus modeled losses; and a lower year of CAT claims in 2019

As a result of changes in estimates of insured events related to prior years, the provision for losses and loss adjustment expenses reflected net decrease by $1.362 billion in 2019 (after net decreases of $72 million and $101 million in 2018 and 2017, respectively). The decreases were due to the reduction of incurred-but-not-reported (IBNR) reserves based on actual experience and decreases on a small number of individual losses.

Balance Sheet Strength (Continued...)

Loss and Loss Adjustment Expense Reserves and Development - Calendar Year	9-Months		Year End - December 31				
	2020	2019	2019	2018	2017	2016	2015
Loss and ALAE* Reserves USD (000)	3,959,282	3,919,990	3,358,932	4,266,610	3,965,430	2,323,609	2,181,158
Loss and ALAE* Reserves Development USD (000)	-12,232	-264,231	...	-399,912	-88,772	-156,243	-258,157
Development to:							
Original Reserves (%)	...	...	...	-8.6	-2.2	-6.3	-10.6
Prior Year End Reserves (%)	-0.3	-5.4	...	...	...	...	...
Prior Year End Surplus (%)	-0.1	-2.4	...	-3.6	-0.7	-1.4	-2.4

Source: BestLink® - Best's Financial Suite

* Interim LAE reserves balances displayed include Adjusting and Other Unpaid as well as Direct and Cost Containment Unpaid. Year End LAE balances include Direct and Cost Containment Unpaid only.

Loss and Loss Adjustment Expense Reserves and Development - Accident Year	Year End - December 31				
	2019	2018	2017	2016	2015
Original Loss and ALAE Reserves USD (000)	1,497,630	2,619,452	2,656,533	1,256,178	1,214,507
Loss and ALAE Reserves Developed thru Latest Year End USD (000)	1,497,630	2,269,841	2,654,903	1,141,070	1,010,817
Development to Original Reserves (%)	...	-13.3	-0.1	-9.2	-16.8
Accident Year Loss and LAE Ratio (%)	66.2	101.0	110.0	58.0	49.2
Accident Year Combined Ratio (%)	93.6	129.8	139.9	86.8	77.6

Source: BestLink® - Best's Financial Suite

Operating Performance

Historically, FM Global has produced strong operating returns, driven by solid underwriting earnings along with sound and steady investment income. The group's underwriting earnings have resulted from the group's persistent loss control procedures, low expense ratio and (particularly in prior years) favorable market conditions. As market conditions have softened, operating profits have remained strong due to the group's adherence to conservative risk management and pricing strategies. Aside from the group's higher than average catastrophe loss years in 2017 and 2018, the group has generated significant underwriting profits. Above average results are primarily due to its strong market position, highly protected risk expertise, and strong risk management capabilities.

Prior to 2017, results were reflective of more normalized loss years, with 2014, and subsequently 2019, being relatively benign catastrophe years. Underwriting results included approximately 44 and 50 points of catastrophe losses for 2018 and 2017, respectively. Annual cat losses have ranged from 8 to 52 over the past 10 years with an average of 26.6 and a median of 25.3. A point to remember is that, as a mutual, the FM Global is not a profit maximizer in charging its premium rates. That said, management is conservative in its underwriting and ensures adequate rates with the potential for returning excess profits down the road if they materialize.

While the group's income benefits from its consistent generation of investment income, investment yields slightly lag the average of its peer group. This is primarily the result of FM Global's above-average investment allocation to common equities, which have a lower dividend yield than the average yield on the bonds that comprise a larger percentage of the portfolios of its industry peers. While FM Global's elevated investment leverage adds to earnings volatility with generally below average total return on invested assets, it has generally boosted overall long-term return measures. As a result, the group's total returns on revenue and surplus, which include capital gains and losses, strongly and consistently outperform its peer composite.

Underwriting Results:

FM Global has typically produced strong non-CAT underwriting results, reflecting strong risk management capabilities, adequate rates and careful management of terms and conditions. Solid underwriting results in recent years have led the company to provide membership credits, which allow its policyholders to benefit from these favorable results and which encourage the long-term and stable relationship between the group and its customers. Management views the credits as return of excess profits and has paid approximately $4 billion since 2001. However, after five straight years through 2018, management curtailed the credits in response to the recently absorbed CAT losses in 2017 and 2018.

Operating Performance (Continued...)

Underwriting results are underpinned by the group's very detailed knowledge of each risk. FM Global does not use actuarial methods to set prices but instead relies on its staff to establish appropriate rates based on exposure and risk mitigation initiatives of individual insureds. This expertise has contributed to ultimate catastrophe losses approximating 1/2 of modeled losses in recent CATs. The group employs more engineers (nearly 2,000) than the next ten competitors combined. Additionally, the group has a state-of-the-art industrial testing facility that tests both the causes of loss (largely fire focused) and mitigation / minimization of losses.

The group's underwriting performance remains exposed to future acts of terrorism. Under the TRIPRA extension, FM Global's retention (deductible) is $687 million for 2019, plus 20% of all certified losses in excess of this deductible. Nearly 60% of FM Global's policyholders have accepted the terrorism coverage offered by the group under TRIPRA. However, the vast majority of these exposures are represented by horizontal or campus-like risks that are generally not exposed to a total loss. The group does purchase additional terrorism reinsurance outside of TRIPRA. The company has conceptual contingency plans to manage its risks in the event TRIPRA would ever be permitted to expire.

Investment Results:

FM Global's investment yields have remained low over the current five-year period but generally approximate the industry composite results, reflecting the group's elevated level of common equity holdings. Total investment returns (including capital gains) readily exceed those of the group's peer composite but include significant volatility caused by capital gains and losses on the group's substantial equity portfolio, rising and falling with shifts in the equity market. Over the five-year period, the group's net investment income has generally increased, primarily driven by growth in the invested asset base as a result of favorable operating income and positive cash flows offset by modest dividend income on the group's increasing equity holdings and declines in interest yields on the group's long-term bonds. As such, despite the increase in invested assets, the group's overall yield declined on its bond portfolio while a greater percentage of its investment holdings produced modestly higher net investment income on the year.

	9-Months		Year End - December 31					
Operating and Financial Performance Ratios (%) - Company	**2020**	**2019**	**2019**	**2018**	**2017**	**2016**	**2015**	**Weighted Average**
Calendar Year Loss and LAE Ratio	79.2	54.7	54.1	109.9	108.4	54.8	58.1	77.2
Expense and Policyholder Dividend Ratio	24.3	25.8	27.4	28.7	29.9	28.8	28.4	28.6
Combined Ratio	103.5	80.5	81.5	138.6	138.3	83.6	86.5	105.8
Reserve Development Ratio Impact	-0.4	-9.6	-12.1	-2.1	-2.9	-7.6	2.0	-4.7
Net Investment Yield	1.4	1.9	2.0	1.9	1.8	1.8	2.0	1.9
Pre-Tax Operating Return on Net Earned Premiums	0.5	27.4	26.5	-29.9	-28.3	25.3	22.4	3.0
Net Income Return on Policyholders' Surplus	4.5	12.2	11.8	-0.9	-3.0	6.3	6.6	4.1
Total Return on Policyholders' Surplus	4.9	19.2	20.1	-11.0	10.4	8.9	4.9	6.8

Source: BestLink® - Best's Financial Suite

	9-Months		Year End - December 31					
Operating and Financial Performance Ratios (%) - Composite	**2020**	**2019**	**2019**	**2018**	**2017**	**2016**	**2015**	**Weighted Average**
Calendar Year Loss and LAE Ratio	...	59.2	58.1	70.9	77.8	51.5	64.1	64.4
Expense and Policyholder Dividend Ratio	...	35.4	40.4	40.9	38.5	39.0	29.0	37.5
Combined Ratio	...	94.5	98.5	111.8	116.3	90.5	93.2	101.9
Reserve Development Ratio Impact	...	-3.2	-3.9	-5.8	-6.5	-11.3	18.2	-1.0
Net Investment Yield	...	2.1	2.3	2.3	2.1	2.1	2.2	2.2
Pre-Tax Operating Return on Net Earned Premiums	...	11.3	7.6	-4.6	-7.3	18.8	15.2	6.1
Net Income Return on Policyholders' Surplus	...	8.2	7.0	1.4	0.4	6.8	7.2	4.5
Total Return on Policyholders' Surplus	...	12.3	12.3	-5.3	7.9	8.1	5.3	5.7

Source: BestLink® - Best's Financial Suite

Industry Composite: Commercial Property Composite - BestLink® - Best's Financial Suite

Business Profile

FM Global is one of the largest underwriters of highly protected risk (HPR) within the commercial property market and is widely recognized throughout the industry for its extensive loss control, risk management and engineering capabilities. FM Global is afforded a distinct competitive advantage over most insurers by virtue of its professional property engineering expertise, inspection and loss prevention services, training and research. These bundled professional services assist FM Global's policyholders in the identification, assessment and management of property risks. In addition to providing global insurance products and value-added services, FM Global is also known for its captive-like orientation and its focus on long-term business partnerships which, in some cases, span more than 100 years. Many of the group's largest policyholder organizations are also members of FM Global's board of directors, advisory boards and risk management executive councils, which reinforces its understanding of the needs of its clients. The majority of FM Global's policyholders maintain worldwide operating facilities and are typically large industrial companies operating in varied manufacturing and servicing industries. Business is produced on a direct basis and through brokers.

Innovation is assessed positively by AM Best as the company does things differently than other insurers in that it relies on engineers versus actuaries. Its credo is stated in its ORSA document that 'the majority of loss is preventable, and that any loss can be minimized.' The philosophy is tightly woven into its culture and business activities. The mindset is evident in discussions with management; in the content of Annual Report and ORSA reports it; in discussions of its products, pricing, and policies; and in its results. The enterprise has a significant research center from where much of its testing emanates (it recently built a second one in Singapore for AP relationships) and even includes a group in its organizations called FM Approvals to ensure that FM Global loss prevention conditions are followed as precedents to its policy coverage and valid claims, and to approve the materials/methods and their deployment by insureds.

FM Global's insurance coverage includes all-risk policies and policies providing fire and extended coverage, boiler and machinery, difference in conditions, ocean cargo or any combination of these lines of coverage. Business interruption insurance is also offered as a supplement to these lines of coverage. With the implementation of the U.S. government reinsurance of terrorism exposures in November 2002, FM Global was required to offer terrorism coverage to all its insureds with full limits. If TRIPRA was ever permitted to lapse, insureds will be subject to a significantly lower terrorism coverage sub-limit. Management states FM Global would be reinsured to its $450 million net retention in a worst case event.

Insurance activities are conducted in the U.S., Canada, and Asia-Pacific through Factory Mutual Insurance Company (FMIC), the lead U.S. carrier and ultimate parent. Additional insurance activities are conducted in the U.S. and Canada through two U.S. operating companies and two Canadian branch offices. FMIC is the lead carrier in the FM Global Group. Affiliated FM specializes in underwriting small and mid-sized highly protected risks as well as better quality non-HPR accounts of all sizes. In addition, Affiliated FM writes associated coverage, including boiler and machinery and ocean cargo. Appalachian writes coverage on a surplus lines basis.

Through its U.K.-based subsidiary, FM Insurance Company Limited (FMI), the group covers the U.K. exposures of its core US companies. US risks with international exposure are accepted by U.S. underwriter and then allocated to US and UK companies proportionally based on its geographical exposure.

FMI had been used to sell policies across the EU from one EU country, using “passporting rights”. Since insurers and other financial service firms no longer expect to be able to retain those rights after the British exit from the European Union (BREXIT), FM Global established FM Insurance Europe SA (FMIE SA) in Luxembourg in 2016 as its European Economic Area (EEA) hub since it is a multinational business-friendly financial center with regulatory expertise that permits EU pass-porting. FMIE SA has seven European branches. It began writing business in 2018.

FMI and FMIE SA will continue to comprise approximately 15-20% of the group’s gross premiums together as a portion of its EU business shifts from FMI to FMIE SA in response to BREXIT.

Risk Engineering Insurance Company Limited {REICL) is incorporated in Bermuda and its ultimate parent is Factory Mutual Insurance Company. REICL is registered in Bermuda as a Class 3A insurer under the Bermuda Insurance Act 1978, as amended {the "Insurance Act"). REICL provides facultative reinsurance to its parent and affiliates.

In the U.S., members of the FM Global Group operate under an intercompany pooling arrangement, effective January 1, 1999. Under this agreement, each company agrees to pool net premiums earned, net loss and loss adjustment expenses incurred, and other underwriting expenses incurred. Effective January 1, 2005, the participation percentages are FMIC, 86%; Affiliated FM, 12%; and Appalachian, 2%.

Business Profile (Continued...)

Premium Composition and Growth	9-Months 2020	9-Months 2019	Year End - December 31 2019	2018	2017	2016	2015	5 Year CAGR
Direct Premiums Written USD (000)	3,754,986	3,273,180	4,490,385	3,928,922	3,550,622	3,508,681	3,422,594	...
% Change	14.7	12.2	14.3	10.7	1.2	2.5	-0.6	5.5
Reinsurance Premiums Assumed USD (000)*	1,412,134	1,285,827	1,038,813	1,002,058	955,569	882,411	917,198	...
% Change	9.8	-0.2	3.7	4.9	8.3	-3.8	7.6	4.0
Reinsurance Premiums Ceded USD (000)*	1,703,099	1,593,745	1,521,582	1,302,396	1,082,896	1,106,109	1,071,976	...
% Change	6.9	11.3	16.8	20.3	-2.1	3.2	6.6	8.6
Net Premiums Written USD (000)	3,464,021	2,965,262	4,007,616	3,628,584	3,423,295	3,284,984	3,267,817	...
% Change	16.8	6.9	10.4	6.0	4.2	0.5	-0.6	4.0

Source: BestLink® - Best's Financial Suite

*Quarterly premiums include affiliated reinsurance premiums that are eliminated in annual assumed and ceded values.

2019 By Line Business	Direct Premiums Written USD (000)	%	Reinsurance Premiums Assumed USD (000)	%	Reinsurance Premiums Ceded USD (000)	%	Net Premiums Written USD (000)	%	Business Retention %
Allied Lines	1,535,524	34.2	184,580	17.8	514,701	33.8	1,205,403	30.1	70.1
Inland Marine	1,187,057	26.4	253,476	24.4	418,105	27.5	1,022,429	25.5	71.0
Fire	942,525	21.0	96,559	9.3	320,360	21.1	718,724	17.9	69.2
Boiler&Mach	698,682	15.6	512,584	49.3	256,061	16.8	955,206	23.8	78.9
Comm M.P.	105,559	2.4	256	...	24,913	1.6	80,902	2.0	76.5
Top 5	4,469,347	99.5	1,047,456	100.8	1,534,140	100.8	3,982,663	99.4	72.2
All Other	21,038	0.5	-8,643	-0.8	-12,558	-0.8	24,953	0.6	201.3
Total	4,490,385	100.0	1,038,813	100.0	1,521,582	100.0	4,007,616	100.0	74.8

Source: BestLink® - Best's Financial Suite

Geographic Breakdown by Direct Premiums Written USD (000)	Year End - December 31 2019	2018	2017	2016	2015
California	533,577	484,536	457,093	450,810	441,226
Canada	488,089	419,045	391,427	363,609	360,333
Texas	308,669	273,348	252,583	259,893	251,844
Aggregate Alien	308,533	284,447	256,357	234,053	226,836
New York	213,083	185,362	170,346	154,770	159,117
Top 5 States	1,851,951	1,646,737	1,527,807	1,463,135	1,439,356
All Other	2,638,435	2,282,185	2,022,815	2,045,546	1,983,238
Total	4,490,385	3,928,922	3,550,622	3,508,681	3,422,594
Geographic Concentration Index	0.05	...	...	...	...

Source: BestLink® - Best's Financial Suite

Enterprise Risk Management

FM Global's board, working in conjunction with senior management, has established risk tolerances that limit the group's exposure to loss from a variety of factors. The senior officer responsible for enterprise risk management (ERM) reports annually to the board on the group's risk tolerance and risk management framework. Risks have been identified in four broad categories: exposure; investment; regulatory/reputation; and operational. Meetings are held regularly to review risk metrics and risk management activities. Emerging risks are discussed and monitored through regular meetings of senior management, local risk management committees at FM entities around the world, and regular meetings with policyholders to discuss product and service offerings.

An important part of the group's ERM strategy is embedded in multiple levels of internal controls designed to ensure adherence and compliance in implementing the group's business model. These controls are integral to FM Global's day-to-day activities, and are monitored and managed by a cross-functional, corporate management team. Processes and procedures are established and audited

Enterprise Risk Management (Continued...)

regularly in all areas of operation based on a variety of factors, including geography, specialty operations, discipline areas and staff functions. In addition to traditional top-down reviews, regular operations reviews have been instituted to provide an assessment of activities. Additionally, the group's internal audit department evaluates and tests the system of internal controls.

Business continuity plans have been developed for all major sites, and incident command team leaders have been appointed for each of these sites. As part of the group recovery/action planning efforts, the group has documented the response to three broad scenarios: 1) lack of access to the IT infrastructure; 2) lack of access to the building; and 3) lack of employees to staff a facility, and periodically tests the planned responses to ensure continuity of availability and responsiveness to customer needs.

Catastrophe Exposure & Management: Aggregate per-risk and catastrophe reinsurance programs are utilized by FM Global to limit its exposure to severe losses, including catastrophes. Due to the complexity of its exposures, FM Global focuses extensively on risk management and maintains gross and net catastrophe exposures that are moderate, as measured by the group's estimated maximum foreseeable loss (MFL) analysis.

The group's consistent net retention of approximately 70-75% reflects FM Global's ability to retain a higher level of risk than its peers given the group's strong capital position and low underwriting leverage. Although the group has a block of reinsurance recoverables from unrated captive reinsurers, such recoveries are backed by letters of credit or other forms of collateral. Further, its remaining reinsurance recoveries are from highly rated reinsurers, and total recoverables represent a modest percentage of surplus.

Reinsurance Summary

FM Global is considered to be among the market leaders in terms of global property insurance. Due to the size and complexity of its risks, FM Global utilizes facultative and excess-of-loss treaty reinsurance to reduce its exposure to significant loss events. In examining its exposure to catastrophes, all of FM Global's accounts are individually evaluated (on a location basis) based on maximum foreseeable loss (MFL) estimates. Further, management has addressed its risk appetites and client needs with a manageable cyber treaty (backed up by excess cessions) and lower attachments for what it calls 'Figure 5' risks for high challenge occupancies that include molten metal, wood, chemicals, and power generation.

The group utilizes facultative reinsurance when a policyholder's coverage requirements are outside FM Global's underwriting criteria. In addition to facultative reinsurance, the group maintains excess-of-loss protection of $1,100 million excess of its $300 million per-risk retention and $1,350 million excess of its $450 million per-catastrophe retention). In response to the hardening market, in 2020, FM Global chose to accept 25% retention in two layers higher in the tower as opposed to paying the market-driven premium rate increases. The company maintains reduced retention in its second event at $250 million.

Financial Statements

Balance Sheet	9-Months 2020 USD (000)	%	Year End - December 31 2019 USD (000)	%	2018 USD (000)	%
Cash and Short Term Investments	1,524,804	6.5	1,260,602	5.8	1,495,073	7.3
Bonds	7,597,122	32.6	7,039,471	32.1	6,709,920	32.9
Preferred and Common Stock	9,226,723	39.6	8,990,648	41.0	8,087,992	39.6
Other Invested Assets	3,112,580	13.4	2,458,074	11.2	2,024,299	9.9
Total Cash and Invested Assets	21,461,230	92.1	19,748,796	90.1	18,317,283	89.7
Premium Balances	1,136,992	4.9	1,035,053	4.7	813,397	4.0
Net Deferred Tax Asset	6	...	94	...	79	...
Other Assets	699,917	3.0	1,123,016	5.1	1,292,451	6.3
Total Assets	23,298,145	100.0	21,906,959	100.0	20,423,211	100.0
Loss and Loss Adjustment Expense Reserves:						
Net Reported Loss Reserves*	2,893,916	12.4	2,405,137	11.0	3,445,271	16.9
Net IBNR Loss Reserves*	1,065,366	4.6	881,647	4.0	1,124,795	5.5
Net LAE Reserves	...	...	215,180	1.0	293,633	1.4
Total Net Loss and LAE Reserves	3,959,282	17.0	3,501,964	16.0	4,863,699	23.8
Net Unearned Premiums	2,419,100	10.4	2,069,600	9.4	1,817,908	8.9
Other Liabilities	2,852,535	12.2	2,627,739	12.0	2,500,338	12.2
Total Liabilities	9,230,916	39.6	8,199,303	37.4	9,181,944	45.0
Unassigned Surplus	14,065,978	60.4	13,706,406	62.6	11,240,017	55.0
Other Surplus	1,250	...	1,250	...	1,250	...
Total Policyholders' Surplus	14,067,228	60.4	13,707,656	62.6	11,241,267	55.0
Total Liabilities and Surplus	23,298,145	100.0	21,906,959	100.0	20,423,211	100.0

Source: BestLink® - Best's Financial Suite
* Interim reserves balances include LAE.

Income Statement USD (000)	9-Months 2020	9-Months 2019	Year End - December 31 2019	Year End - December 31 2018
Net Premiums Earned	3,114,521	2,742,655	3,755,924	3,454,591
Net Losses and LAE Incurred:				
Current Accident Year	2,478,510	1,764,795	2,486,592	3,869,456
Prior Accident Years	-12,232	-264,231	-453,522	-72,430
Underwriting Expenses Incurred	841,067	764,626	1,095,654	1,041,999
Dividends to Policyholders	408	382	516	499
Net Underwriting Income	-193,231	477,084	626,684	-1,384,933
Net Investment Income	218,909	277,068	379,089	356,591
Other Income (Expense)	-8,675	-2,272	-11,762	-5,094
Pre-Tax Operating Income	17,003	751,881	994,011	-1,033,436
Income Taxes Incurred	-211	136,352	188,400	-180,613
Net Operating Income	17,214	615,529	805,611	-852,823
Net Realized Capital Gains (Losses)	455,908	487,128	668,879	749,659
Net Income	473,122	1,102,657	1,474,489	-103,165

Source: BestLink® - Best's Financial Suite

Statement of Operating Cash Flows USD (000)	9-Months 2020	9-Months 2019	Year End - December 31 2019	Year End - December 31 2018
Net Premiums Collected	3,481,308	2,920,336	3,821,414	3,569,794
Net Losses Paid	1,892,992	2,279,935	3,208,273	3,198,859
Expenses Paid	917,477	691,502	1,095,713	1,210,525
Dividends to Policyholders	405	383	506	489
Net Underwriting Cash Flow	670,434	-51,485	-483,078	-840,078
Net Investment Income	245,555	296,495	362,164	547,123
Other Income (Expense)	-8,675	-2,272	-11,762	-5,094
Income Taxes Paid (Recovered)	92,374	171,815	250,366	-271,970
Net Operating Cash Flow	814,941	70,923	-383,042	-26,079

Source: BestLink® - Best's Financial Suite

Related Methodology and Criteria

Best's Credit Rating Methodology, 11/13/2020

Catastrophe Analysis in A.M. Best Ratings, 10/13/2017

Available Capital & Holding Company Analysis, 10/13/2017

Scoring and Assessing Innovation, 03/05/2020

The Treatment of Terrorism Risk in the Rating Evaluation, 10/15/2020

Understanding BCAR for U.S. Property/Casualty Insurers, 06/03/2021