



# Arch Capital Group Ltd. Sustainability Accounting Standards Board Disclosure Report 2022

*For the year ended Dec. 31, 2022*



*Prepared in accordance with SASB*

All data in this Sustainability Accounting Standards Board (SASB) disclosure is as of, or for the year ended Dec. 31, 2022 unless otherwise noted.

## SUSTAINABILITY ACCOUNTING STANDARDS BOARD DISCLOSURE

Arch Capital Group Ltd. (together with its subsidiaries, "Arch" or "the Company"), is a publicly listed Bermuda exempted company with approximately \$15.6 billion in capital at December 31, 2022 and is part of the S&P 500 index. Arch provides insurance, reinsurance and mortgage insurance on a worldwide basis through its wholly owned subsidiaries. While we are positioned to provide a full range of property, casualty and mortgage insurance and reinsurance lines, we focus on writing specialty lines of insurance and reinsurance. In addition to providing comprehensive disclosure on our website regarding our approach to value creation, which integrates environmental, social and governance ("ESG") topics, we provide the following disclosures, which are aligned with the Sustainability Accounting Standards Board ("SASB") framework for the insurance industry. SASB standards are designed to identify a minimum set of sustainability issues most likely to impact the operating performance or financial condition of the typical company in an industry, regardless of location. The inclusion of information contained in this report should not be construed as a characterization regarding the materiality or financial impact of that information. For a discussion of information that is material to Arch, please see our 2022 Annual Report on Form 10-K for the fiscal year ended Dec. 31, 2022, filed with the SEC on Feb. 24, 2023 ("2022 Annual Report"). Moreover, this report may use certain terms, including those that SASB or others may refer to as "material," to reflect the issues or priorities of the Company, its subsidiaries and its stakeholders. Used in this context, however, these terms are distinct from, and should not be confused with, the terms "material" and "materiality" as defined by or construed in accordance with securities, or other, laws or as used in the context of financial statements and reporting.

This report may include forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 ("PSLRA"), which reflect our current views with respect to future events, risks and uncertainties. All statements other than statements of historical fact included in or incorporated by reference in this report are forward-looking statements. Forward-looking statements, for purposes of the PSLRA or otherwise, can generally be identified by the use of forward-looking terminology such as "may," "will," "expect," "intend," "estimate," "anticipate," "believe" or "continue" and similar statements of a future or forward-looking nature or their negative or variations or similar terminology. Actual events and results may differ materially from those expressed or implied in these statements. Important factors that could cause actual events or results to differ materially from those indicated in such statements include, among other things, those factors discussed in Item 1A, pages 57-77 of our 2022 Annual Report, and our quarterly reports on Form 10-Q filed with the SEC. These forward-looking statements speak only as of the date of this report. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

This report may contain links to or information from other internet sites. Such links and information are not endorsements of any products or services in such sites, and no information in such site has been endorsed or approved by the Company.

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## Transparent Information & Fair Advice for Customers

### **FN-IN-270a.1**

Total amount of monetary losses as a result of legal proceedings associated with marketing and communication of insurance product-related information to new and returning customers

In accordance with Securities and Exchange Commission ("SEC") requirements, Arch discloses all material legal proceedings, other than ordinary routine litigation incidental to the business, in its annual reports on Form 10-K and quarterly reports on Form 10-Q. In 2022, legal proceedings and/or monetary losses, if any, associated with marketing and communication of insurance product-related information to new and returning customers were immaterial. [See Item 3, page 58 of our 2022 Annual Report.](#)

### **FN-IN-270a.2**

#### Complaints-to-claims ratio

We are dedicated to providing our insureds with a consistent, exceptional level of service. In all interactions, whether for coverage questions or claims, we strive to respond as quickly and effectively as possible. Our experienced claims handlers assist with the process, responding to customer coverage questions, complaints and/or claims.

Throughout 2022, our insurance operations executed a global strategic initiative called "The Arch Experience." The initiative sets standards for behaviors and expectations for how all colleagues interact with customers, each other and partners, across multiple areas including customer coverage issues, complaints and claims. One behavior, "Be Passionate about the Voice of the Customer," was a key priority for our claims organization leadership. We actively obtained internal and external feedback to identify and implement initiatives to serve our claimants better. [See also FN-IN-270a.4](#), "Description of Approach to Informing Customers about Products," for additional details regarding this strategic initiative.

We provide a wide range of commercial property and casualty insurance products primarily through our U.S.-based insurance subsidiaries. Our U.S.-based insurance subsidiaries are subject to insurance regulations in the various states and jurisdictions where they transact business. As a multi-line insurance carrier, we are subject to insurance regulations in all 50 states and other jurisdictions. State insurance departments voluntarily provide consumer complaint data to the National Association of Insurance Commissioners ("NAIC"). The NAIC does not calculate or report on a complaints-to-claims ratio but instead provides a

summary listing of all closed complaints by business line for each underwriting company in the U.S. Closed complaints, as defined by the NAIC, are complaints that have been investigated by the state insurance department and given a resolution code. The NAIC "closed complaint ratio" is calculated by dividing each underwriting company's share of closed complaints in the U.S. market by the underwriting company's market share of premiums in the U.S. The NAIC does not provide one ratio for all our underwriting companies combined. Closed complaint ratio data calculated by the NAIC is available on their consumer site [https://www.naic.org/cis\\_refined\\_results.htm](https://www.naic.org/cis_refined_results.htm). Data for the following companies is available: Arch Insurance Company, Arch Indemnity Insurance Company, Arch Specialty Insurance Company, and Arch Property Casualty Insurance Company.

For our **U.S. mortgage insurance** ("MI") subsidiaries, we rarely deal directly with consumers and, therefore, do not receive many consumer complaints filed with state insurance departments. Due to the structure of MI products, the minimal number of complaints received is not a meaningful metric for assessing our claims-handling process. Therefore, our U.S. MI subsidiaries do not measure claims performance based on complaint volume.

For our **U.S. reinsurance subsidiaries**, we do not deal directly with consumers and, therefore, do not receive consumer complaints filed with state insurance departments. In addition, our reinsurance subsidiaries do not typically receive formal complaints from their ceding company clients other than regarding infrequent claims disputes. Therefore, our reinsurance subsidiaries do not track or measure claims performance based on complaint volume.

### **FN-IN-270a.3**

#### Customer retention rate

**Global Insurance Operations.** For our insurance subsidiaries, we routinely monitor our customer retention rates for all measurable lines of business, excluding nonrecurring products (e.g., surety products, travel products, transactional risk products and political risk coverages). We include this measure in our internal management reporting, ensuring we account for and address any unexpected changes within a business unit. We look at customer retention on both a premium-weighted and policy-count-weighted basis. We feel each diagnostic is informative, and we analyze customer retention at lower segmented levels where useful. Our methodology does not adjust the calculation for involuntarily terminated customers as provided for by the SASB methodology; this generally results in a lower reported retention rate for our business than if we had adjusted for these customers in accordance with the SASB methodology.

Due to the wide diversification of business written by our insurance subsidiaries, the expected customer retention

ratio varies significantly across our business units. Most of our business units achieve retention ratios between 75% and close to 100%, which remain relatively consistent over time.

**U.S. Mortgage Insurance Operations.** We do not track customer retention rates for our U.S. MI subsidiaries because we do not have direct contact with consumers. Instead, for our MI business, the customer is a lending institution. Based on this structure, a more meaningful metric is the retention rate of new insurance written ("NIW"), a common term in mortgage insurance that refers to the aggregate dollar amount of newly insured mortgage loans. In 2021 and 2022, on average, more than 89% of the lender home offices that submitted at least one loan (or unit count) that became NIW submitted at least one loan (or unit count) that became NIW the following quarter.

**U.S. Reinsurance Operations.** We do not track customer retention at a group level for our U.S.-based reinsurance business because we do not find it a useful metric, given that our customers are insurance companies and our strategic focus is on adjusting capacity in different markets based on pricing. Although the metric is not relevant at a group level, some individual departments do track retention rates when it makes sense for their part of the business.

#### **FN-IN-270a.4**

##### Description of approach to informing customers about products

Throughout 2022, our global primary insurance operations executed a global strategic initiative called The Arch Experience to deliver a superior customer experience. Through this intensive program for all employees in our worldwide insurance segment, led by executive leaders and peer promoters, we focused on a series of behaviors and standards to drive solutions-oriented communications with our customers. For example, one of the focused behaviors was "Be Passionate about the Voice of the Customer." As part of this training, topics such as "Listen intently and actively to understand our customer's evolving needs" were discussed. Through this focus on encouraging curiosity and engagement with our customers, we can better anticipate opportunities and act proactively to provide the best solutions to our clients. Our global insurance organization now aligns with these behavioral standards, which are embedded into the business.

For our insurance and mortgage products, customer interactions are generally handled through a limited number of specialized intermediaries, including professionally licensed brokers, agents, wholesalers, coverholders, administrators and mortgage originators, as applicable, who are instrumental in providing information and advisory assistance to existing and potential customers. These intermediaries are also generally involved in reviewing the

policies and managing the insurance relationship following the policy's purchase. Policyholders are also encouraged to review the content wording carefully and to seek clarification as needed.

Our underwriters, sales employees and coverholders have regular contact with the intermediaries to confirm that their clear and comprehensive understanding of our products. The applicable underwriting business unit, communications group and legal department are all involved in preparing and reviewing communications distributed to current or prospective customers. Our communications are tailored to meet the customer's specific needs and vary based on the underlying product type and segment. The information we provide may include, among other things, the specific product and policy scope (including limits and deductibles as applicable), underwriting terms and conditions, pricing information, industry and exposure-related materials, risk management support and other general information about the company issuing the underlying policy, our brand and/or our financial strength, as well as information regarding how to make a claim and claims procedures, as applicable.

In our mortgage business, we work closely with lenders and industry associations to identify areas of opportunity to educate the public on our solutions and address common misconceptions about down payment requirements and the home-buying process. We understand that owning a home can be financially challenging, so we see immense value in participating in inclusive opportunities for the public to engage with experts at Arch and across the industry.

On an ongoing basis, we provide educative materials on the role this part of our business plays in society. We support the efforts of the U.S. Department of Housing and Urban Development ("HUD") to identify approved housing counseling agencies across states on its website. These programs advise people on the home-buying process, default prevention and credit management. By providing this consumer education, we facilitate consumer awareness of products and services and provide them with the knowledge and skills to improve their ability to manage risk.

We help borrowers prepare for the challenges and responsibilities of homeownership through our Government Sponsored Enterprise-approved homebuyer education courses at <https://www.archmi.com/hbe>. We believe prospective homebuyers can also benefit from homebuyer education programs sponsored by community, nonprofit and governmental agencies. We are proud to partner with BALANCE©, a nonprofit financial counseling organization that makes homebuyer education accessible to a broader audience. In 2022, more than 3,200 potential homebuyers completed the homebuyer education course.

In the unfortunate cases where our policyholders experience a covered loss, we are committed to providing timely client service when paying claims. We offer a customer-focused

approach to claims management and endeavor to quickly and efficiently resolve claimant needs. Our policies are clear about the scope of coverage and the claims process. We communicate with our customers through various channels, including through our intermediaries, website, email, advertising, promotional materials, social media and at events and conferences.

Our reinsurance group generally markets its reinsurance products through professionally licensed intermediaries, except for our property facultative reinsurance group, which generally deals directly with the ceding companies. Per the applicable reinsurance contracts, all communications with ceding companies are directed through these intermediaries, including claims communications. The reinsurance group does not market to, contract with or communicate directly with individual insureds.

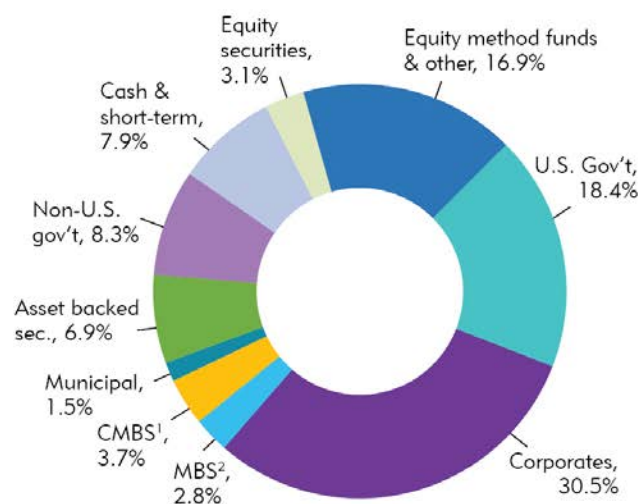
## Incorporation of Environmental, Social, and Governance Factors in Investment Management

### FN-IN-410a.1

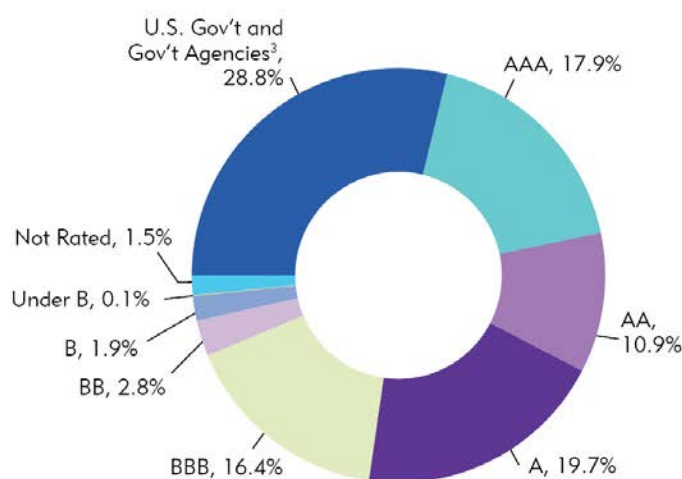
Total invested assets, by industry and asset class

We believe integrating ESG factors into investment analysis contributes to improved returns and reduced risks over the long term and aligns with our stakeholders' best interests. As careful stewards of the capital entrusted to us, we manage our investment portfolio with an understanding that the portfolio is designed to ensure an ongoing ability to pay claims when due. As a long-term asset manager and owner, we integrate ESG factors into investment analysis and decision-making. Through our fundamental analysis, we incorporate investee companies' ESG risk ratings, which include factors such as corporate governance, climate risk exposure, carbon reduction and workforce policies. We aim to deliver total return and income for Arch while potentially realizing added benefits when investing to create a positive benefit for society. For a discussion of our investment portfolio, [see Item 7, pages 61-93, "Management's Discussion and Analysis of Financial Condition and Results of Operations—Financial Condition—Investable Assets, Liquidity, and Capital Resources" in our 2022 Annual Report](#). As of Dec. 31, 2022, approximately 80% of our total investable assets were invested in fixed maturity, short-term investments and cash. The portfolio is diversified across sectors, with investment-grade corporates and U.S. government securities representing the two largest sectors. The portfolio's average S&P/Moody's credit rating was AA-/Aa3.

### INVESTMENTS BY TYPE



### FIXED MATURITIES BY RATING



<sup>1</sup> CMBS = Commercial mortgage-backed securities.

<sup>2</sup> MBS = Mortgage backed securities.

<sup>3</sup> Includes U.S. government-sponsored agency MBS and agency CMBS.

## FN-IN-410a.2

Description of approach to incorporation of environmental, social and governance factors in investment management processes and strategies

Insurance companies are subject to regulatory investment requirements that limit our investment flexibility regarding the types of investments we may hold and the concentrations of credit and equity risk we may amass. These requirements are designed to ensure that insurers have sufficient liquidity to pay claims as they are presented.

As disclosed in our 2022 Annual Report, a significant majority of our funds available for investment are deployed in a widely diversified portfolio of U.S. government, corporate and other high-quality, liquid assets. A significant portion of our portfolio comprises securities issued by the U.S. government and government agencies and AAA, AA and A-rated securities.

As a long-term asset manager and owner, we integrate ESG factors into our investment analysis and decision-making. Through our fundamental analysis, we incorporate investee companies' ESG risk ratings, including factors such as corporate governance, climate risk exposure, carbon reduction and workforce policies. When investing, we aim to deliver total return and income for Arch while potentially realizing added benefits when investing to create a positive benefit for society.

Our Responsible Investing ("RI") Policy, adopted in early 2022, provides a framework for governance, investment strategy, engagement, reporting and communications. In developing the RI Policy, we considered the six principles set forth by the United Nations Principles of Responsible Investment ("UN PRI"). The RI Policy reflects our approach to sustainable value creation by considering ESG factors, including climate change, in the investment process for all asset classes under our management. [See pages 18-19 of our 2022 Sustainability Report for details regarding our RI Policy.](#)

Arch's investment team employs qualitative and quantitative analysis to identify company- or manager-specific risks and opportunities. Our investment team uses various resources to stay informed of developments in ESG ratings and evaluation methodologies to understand the potential implications of emerging ESG factors. For our internally managed assets, we consider ESG factors and ratings when assessing new investment opportunities, where reliable data is available.

Our RI strategy involves engaging on an ongoing basis with our external managers regarding ESG integration into their investment decisions. We also discuss ESG risks and

encourage adoption of strong RI practices. Additionally, we request external managers provide annual ESG reports and metrics on their organization's performance.

Our ESG risk management process involves pre-investment due diligence — managed by our investment teams and approved by our Investment Committee — for externally managed assets. The Investment Committee comprises senior members of our investment team, our Chief Executive Officer and our Chief Financial Officer. Active engagement with external managers, post-investment is another central tenet of our approach. For internally managed assets, carbon metrics and other ESG factors are included in our investment decisions and reporting, where available. We review the portfolio for issuers with poor or weaker trending ESG ratings and seek to emphasize those with more favorable ESG risk profiles, where attractive investment opportunities and ratings are available.

## Policies Designed to Incentivize Responsible Behavior

### FN-IN-410b.1

Net premiums written related to energy efficiency and low-carbon technology

At Arch, we capture premium data based on the line of business and by state (as applicable) rather than data related to energy efficiency and low-carbon technology. This is in line with statutory insurance regulations and generally does not lend itself to summarizing the net premiums written related to such exposures. In addition, the premium data reporting requirement by state insurance regulators does not lend itself to summarizing the net premiums written related to such exposures.

We believe Arch is positioned to benefit from the increased economic activity related to energy and resource efficiency. Through our U.S. casualty insurance business, we have introduced products that support solar energy, wind, methane recovery, biofuel production and Leadership in Energy and Environmental Design (LEED)-certified buildings. Through our international energy division, we target expansion in the renewable sector by supporting new ventures in offshore wind farm fields and the solar sector.

### FN-IN-410b.2

Discussion of products and/or product features that incentivize health, safety and/or environmentally responsible actions and/or behaviors

Our U.S. casualty insurance business units (construction, national accounts, casualty, retail energy, alternative

markets, defense base act, foreign casualty for overseas military/governmental bases and high excess workers' compensation) offer primary and excess casualty coverages to middle market and large accounts across a variety of industry segments. Our large account underwriting segments specialize in loss-sensitive insurance programs, such as large deductible, self-insured retention and retrospectively rated programs. Insureds are able to manage their premium costs better through individual account ratings and pricing, which reflects their own loss experience. Further, insureds are incentivized to implement and adhere to strong risk management, safety and loss prevention programs. With this program structure, the risk is shared between the insurer and the insured and allows us to extend our risk control service offerings to improve customer results. For our middle market and smaller commercial accounts, such as private equity firms, real estate and hospitality, financial institutions, professional services and healthcare, we also extend our risk control service offerings to help these businesses with their overall risk management practices.

## Health & Safety

**1. Our Risk Control Services Platform.** Through our risk control services platform, Arch Risk Control, we offer health and safety support for our U.S.-based casualty insurance customers, including construction, national accounts, retail energy, high excess workers' compensation, alternative markets, property/casualty programs, and excess and surplus casualty. We provide businesses with access to comprehensive services, including training resources, technical information and consulting solutions, to help our customers safeguard their employees.

Our risk control staff has helped our customers better understand and manage their health, safety and environmental risks and exposures to loss. In 2022, we continued to increase our risk control staff, supporting our U.S.-based casualty insurance customers by hiring professionals with diverse skill sets to broaden our capabilities and increase our interactions with policyholders. Our risk control staff for our casualty operations has more than doubled in the past two years.

We engage directly with our customers on an ongoing basis to provide best practices and support. We assess prospective and currently bound accounts to identify gaps in existing programs and opportunities to improve results. These assessments help establish service action plans to improve safety and overall risk management practices. This support includes:

- **COVID-19 Resource Communication.** Since the pandemic began in early 2020, we have provided our customers with various COVID-19 resources, including communications, sample pandemic preparedness and response plans, various checklists and tools to manage remote workers, facility sanitation procedures and suggested approaches for employee reentry.

- **Consulting on Work Site Safety and Employee Onboarding Programs.** We understand that a new employee's first few months on the job involve the greatest potential for injury. This is a critical time for employers to properly train and orient employees to be aware of hazards and how to control them. Through our consulting services, we help our customers develop and implement consistent workplace safety orientation and training programs and encourage them to hold their supervisors accountable for these critical activities. Examples of critical work site employee safety training topics include effective daily briefings and task hazard analysis, fall protection, electrical safety, struck-by, confined space entry, excavations, lockout/tagout, driver safety and heavy equipment operations. Beyond the new employee focus, our consulting efforts emphasize client management systems and processes to encourage employee safety practices to be carried out and consistently maintained and audited throughout the employment life cycle.
- **Consulting to Protect the Public.** Many of our policyholders interact with, or are exposed to, the public through the communities and customers they serve. Some of their scopes of work may create potential injury exposure to the public. Arch Risk Control focuses on these public exposures and helps our clients develop plans and best practices to eliminate or minimize exposure to injuries. This includes (1) driver improvement to prevent policyholder at-fault accidents impacting the traveling public; (2) assistance with slip/fall exposures in retail environments; and (3) improved safety and management of temporary highway work zones to facilitate safe passage for public vehicles and pedestrians.
- **Safe Driving.** Driving creates a significant risk to our customers' employees and the public. Our risk control staff works with our customers to help them properly screen and manage employee drivers of all types of vehicles to improve their on-the-road safety performance. At the policyholder level, we sample and review customer motor vehicle records to ensure appropriate driver screenings and management programs are in place. We also promote safe driving and provide our customers with access to driver training and management resources through several third-party alliances. These resources are designed to combat distracted driving and reinforce defensive driving skills. We offer our customers, through a third-party vendor, access to continuous employee driver record monitoring so that our customers can better assess their drivers' risk profiles in real time and



take corrective actions before a driver moves to an unacceptable level.

■ **Additional Resources to Support Our Insureds.** In 2022, we formed several business alliances to provide additional resources for our policyholders. These alliances focus on preferential pricing and Arch contributory funding arrangements for targeted safety and loss prevention tools, such as:

- Crisis counseling and mental health consulting, including post-traumatic event counseling (i.e., supporting companies in building resilient workplaces in the face of disaster, disruption and everyday behavioral health challenges).
- Mobile device blocking apps to address distracted driving.
- Vehicle camera and telematics systems for driver monitoring and improvement.
- Cloud-based safety management system software.
- Online safety and health training.
- Accident reporting application to facilitate prompt and efficient documentation.
- ESG advisory services for our retail energy accounts.

■ **New for 2023.** Arch Risk Control launched a new software application to facilitate and enhance our ability to track and manage account interactions and services for new and current insureds. This system enables our risk control specialists to monitor recommendations for improvement, track the status and ultimately closure of program gaps identified in our business evaluations. This application is designed to ensure we provide proper support for our customers and continued operational improvement to reduce losses.

**2. Safety Training for First Responders.** In addition, through our programs for emergency responders and firefighters, we offer a suite of safety and training aids to help promote safety and reduce the potential for on-the-job error or injury. Our services educate and inform these first responders on industry safety and compliance best practices. These services are offered to thousands of ambulance and emergency workers and volunteers. In addition, we offer an e-learning and training management system with more than 550 courses available. While e-learning is not meant to replace quality face-to-face and hands-on training, we realize that tremendous time requirements are placed on individuals in today's fast-paced environment, making it difficult for everyone to attend scheduled training. Our e-learning courses allow first responders to supplement scheduled hands-on training and are available 24/7.

Our webinars are designed to help our insureds stay safe and supported while serving their communities during times of crisis. In 2022, we conducted 36 webinars and extended participation in these webinars to non-clients throughout the U.S. The following are some of the topics covered during the training:

- **Emergency Vehicle Driver Training.** We offer comprehensive driver education covering the skills and knowledge required to operate emergency vehicles. These classroom and hands-on courses are offered to better prepare drivers to cope with the extra demands when working in emergencies.
- **Fit for Duty.** We offer training to fire-service department leaders on how best to monitor their members and recognize situations when members may not be fit for duty. Ensuring first responders are mentally, emotionally and physically fit for their jobs, decreases risk and keeps members safe.
- **Emergency Services Insurance Program Essential Series:** We provide online instruction and training briefs to training officers that cover basic firefighter skills to further enhance hands-on training. These trainings provide first responders with fundamental and foundational skills.
- **Safe Handling of Fire Gear.** We provide education on safely cleaning and storing protective fire gear that often contains combustion by-products. Because some firefighters, especially volunteer firefighters, frequently take their gear home with them, we provide education about the secondary exposure risks to their families and how to prevent them.
- **Lithium-Ion Battery Exposures.** With the increase in fires caused by lithium-ion batteries, we offer training sessions focused on the techniques that firefighters can use to help mitigate risk when fighting these unique fires.

## Environmental Responsibility

One of our core commitments is identifying business opportunities associated with more environmentally friendly practices. We develop products and product features that address our customers' evolving needs and incentivize responsible environmental behavior, while being priced to meet our long-term financial objectives.

■ **Renewable Energy Practice.** Through our proprietary general liability practice, our products extend coverage to power generation and renewable energy customers active in solar and wind technology. Our products, services and expertise help these industries keep their employees safe and protect their physical assets, balance sheet and, ultimately, their long-term success.

Our coverage provides insurance solutions for all aspects of a renewable energy business, from research and development to operations. As U.S. domestic and international renewable energy industries continue to expand, our renewable energy practice analyzes industry trends, market data and loss trends to design and develop insurance products tailored to the specific needs of renewable energy businesses.

- **Surety Bonds for Solar Energy.** We support projects that accelerate the climate transition through our Surety business by focusing on the renewable energy sector. The demands for renewable energy, including solar energy, are increasing, leading to more solar development projects. We have a dedicated team of surety underwriters that specializes in the renewable energy industry. The team focuses on solar, wind, battery/energy storage, biomass and hydro opportunities for financial assurance requirements. Arch Surety provides myriad bonds to the renewable energy sector, including performance bonds guaranteeing the construction of solar plants (both light commercial and grid scale), interconnection bonds guaranteeing renewable energy sources are designed and constructed to tie into the grid correctly, and performance bonds that guarantee grid-scale battery storage systems are built and installed to specifications.
- **Green Building Coverages.** Traditional property policies are designed to provide coverage to rebuild a structure as it existed before to a loss, with materials of like kind and quality. If an insured, further to a covered peril, elects to replace its damaged traditional building with sustainable materials, our "Arch Gateway" policy form covers the additional costs to achieve at least the minimum requirements, including the cost of sustainable materials, certified professionals, the certification application and transporting debris to recycling facilities.
- **Premium Credits Offered in Connection with Commercial Property Coverage.** Arch encourages environmentally responsible behaviors by offering premium credits. Through our risk selection process, insureds can qualify if they:
  - **Have or install early fire detection and suppression systems.** Such systems are designed to reduce the frequency and severity of fires resulting in reduced carbon emissions.
  - **Meet "substantial" building construction standards.** Commercial properties built to withstand wind or earthquake may have reduced debris disposal at landfills in the event of a loss.
  - **Adhere to proper property and equipment maintenance.** The benefits include avoiding fires,

floods, mechanical breakdowns or water intrusion leading to mold or contamination and reduced debris from obsolete equipment.

#### ■ Onshore Energy Business Unit.

- **Climate Transition Pathways.** Our insurance operations in the U.K. participate in the Willis Towers Watson "Climate Transition Pathways" ("CTP") initiative that helps high-carbon industries get access to insurance while they take steps to transition to lower carbon solutions. Industry-agnostic customers leverage CTP to find insurance capacity when their transition plans are aligned with the Paris Agreement<sup>1</sup> and are accredited by an external third party. We are proud to participate in this innovative solution that supports environmentally conscious behaviors.
- **Recognizing opportunities in renewable energy.** Our onshore energy group is focused on growing our portfolio in energy-efficient and low-carbon technology markets including renewable power generation, nuclear power generation, hydro, biofuel or geothermal power generation and biofuel production.

- **Retail Energy Business Unit.** Our proprietary general liability and umbrella policy forms and endorsements extend coverage to a wide variety of energy-related risks, CO<sub>2</sub> sequestration risks, and many types of renewable energy risks as well as product manufacturers, suppliers and other businesses that support the energy industry. These product updates provide additional coverage for pollution-related losses, including certain losses resulting from carbon dioxide sequestration operations and saline substances, and also reduce or exclude coverage for power generation using coal, or for the mining, processing, handling, storage or transportation of coal. In the ever-changing energy industry, we offer expertise and products to address our clients' unique risks. Our underwriting and risk control professionals are focused on our customers and we seek to provide the products, services and expertise needed to help manage risk and avoid accidents, and also offer support and resources to help customers recover in the event of a loss. In addition, our retail energy unit has focused on encouraging ESG integration and disclosures of new and existing customers.

- **Pollution Spills.** Safely operating high-risk energy activities is critical to acting as responsible stewards of the environment. Under our Cornerstone<sup>SM</sup> products, we offer many of our energy customers

<sup>1</sup> Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, T.I.A.S. No. 16-1104

protection against pollution events, including coverage for pollution clean-up costs, pollution-related bodily injury and property damage and specified crisis management expenses. For other customers, including our renewable energy customers, we offer coverage for emergency pollution mitigation costs, pollution-related bodily injury and property damage and specified crisis management expenses. Because we recognize the potential for harmful environmental impact resulting from unintended pollution events, we provide specific coverage enhancements into our Cornerstone<sup>SM</sup> policy for many types of pollution events to allow our customers to more rapidly address the effects of a pollution incident to help minimize the severity of environmental impact.

- **Well Control Events.** To address these potentially significant impacts on our customers, their employees and the environment, we have partnered with a third-party vendor to offer our customers best practice oil and gas well control training, emergency response plans and incident response. For applicable customers, we also offer access to a telephone hotline that connects them with a well control professional as a situation develops who can provide steps to manage well pressure to avoid a well blowout.
- **ESG Advisory Services.** Starting in 2022, we now offer our public and private energy customers, through an alliance with a third-party vendor, access to an ESG consulting team that provides actionable insight to companies navigating the ESG disclosure landscape.
- **Environmentally Focused Risk Control Services.** The Arch Risk Control platform also provides support and training to our insureds, including hot work (welding and/or, flame cutting) and fire impairment protocols and best practices. In addition, we provide support for emergency response planning, flood emergency response plan development, hurricane preparedness and safe solar panel installation.

## Environmental Risk Exposure

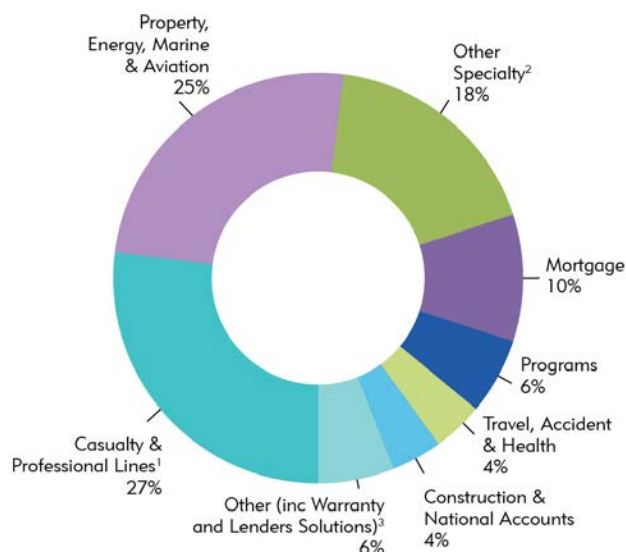
### FN-IN-450a.1

Probable maximum loss of insured products from weather-related natural catastrophes

We operate leading specialty property and casualty and mortgage insurance businesses across a wide range of geographies and products, providing meaningful diversification and earnings stability. In all, 90% of our total net premiums written in 2022 were from our property and

casualty business, while 10% originated from our mortgage insurance business. The graph below shows a detailed allocation of our net written premiums.

### LINE OF BUSINESS



1. Includes casualty, professional liability, executive assurance, cyber insurance, healthcare, contract binding and excess motor.
2. Includes reinsurance for proportional motor, cyber, trade credit and surety, accident and health, workers' compensation catastrophe, agriculture, political risk and other.
3. Includes insurance for warranty and lenders solutions, alternative markets and other insurance and reinsurance.

We have large aggregate exposures to natural catastrophic events, including hurricanes, floods, wildfires, tsunamis, windstorms, earthquakes, hailstorms, tornadoes, explosions, severe winter weather, fires, droughts and other natural disasters. We monitor our exposure to catastrophic events and periodically reevaluate the estimated probable maximum pre-tax loss for such exposures. We use natural catastrophe modeling techniques to estimate loss from catastrophic events. Our approach to evaluating underwriting risk from natural catastrophes employs both proprietary and vendor-based models to inform risk assumption and reinsurance purchasing decisions designed to manage our exposure to catastrophic events. We actively monitor and evaluate the impact of changes in the vendor-based systems and adjust our risk evaluation as necessary. As new information and techniques emerge, we update our proprietary models, which are integral to our enterprise risk management process and support our long-term financial strategies and objectives.

For our natural catastrophe-exposed business, we seek to limit the amount of exposure we assume from any single insured. We seek to limit the probable maximum pre-tax loss to a specific level for severe catastrophic events. Currently, we seek to limit our 1-in-250-year return period net probable maximum loss from a severe catastrophic event in any geographic zone to approximately 25% of

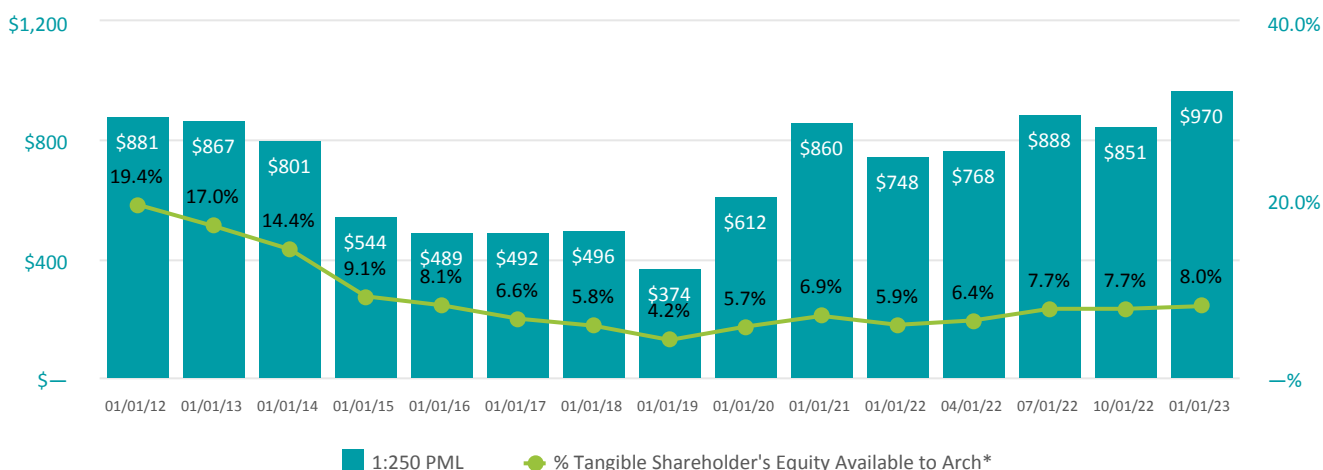
tangible shareholders' equity available to Arch (total shareholders' equity available to Arch less goodwill and intangible assets). We reserve the right to change this threshold at any time.

Based on in-force exposure estimated as of Jan. 1, 2023, our modeled peak zone catastrophe exposure is a windstorm affecting the Florida Tri-County, with a net probable maximum pre-tax loss of \$970 million, followed by windstorms affecting the Northeast U.S. and the Gulf of Mexico with net probable maximum pre-tax losses of \$908 million and \$903 million, respectively. As of Jan. 1, 2023, our modeled peak zone earthquake exposure (San Francisco, California, area earthquake) represented approximately 60% of our peak zone catastrophe exposure, and our modeled peak zone international exposure (U.K. windstorm) was

substantially less than our peak zone windstorm and earthquake exposures. Refer to the chart below of our peak zone probable maximum loss for additional context regarding our estimates of changing exposure to natural catastrophes in our portfolio over time.

Net probable maximum loss estimates are net of expected reinsurance recoveries before income tax and before excess reinsurance reinstatement premiums. Catastrophe loss estimates reflect the zone indicated and not the entire portfolio. Because hurricanes and windstorms can affect more than one zone and make multiple landfalls, our catastrophe loss estimates include clash estimates from other zones.

## ACGL PEAK ZONE 1:250 PML (\$m)



\*Non-GAAP Financial Measures: Tangible shareholders' equity available to Arch represents total shareholders' equity available to Arch, which includes non-cumulative preferred shares, less goodwill and intangible assets (excluding amounts attributable to non-controlling interests). We believe that tangible shareholders' equity available to Arch is useful to investors because it provides a more accurate measure of the realizable value of shareholders' equity. The following table provides a reconciliation of total shareholders' equity available to Arch to tangible shareholders' equity available to Arch:

(U.S. Dollars in Millions)	December 31,															
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Mar-22	Jun-22	Sep-22	Dec-22	
Total shareholders' equity available to Arch	4,563	5,134	5,609	6,092	6,167	8,254	9,197	9,440	11,497	13,106	13,546	12,920	12,418	11,795	12,910	
Less: goodwill and intangible assets	22	38	27	110	98	775	646	628	731	682	942	924	866	805	802	
Tangible shareholders' equity available to Arch	4,541	5,096	5,582	5,982	6,069	7,479	8,551	8,812	10,766	12,424	12,604	11,996	11,552	10,990	12,108	

## FN-IN-450a.2

Total amount of monetary losses attributable to insurance payouts from (1) modeled natural catastrophes and (2) non-modeled natural catastrophes, by type of event and geographic segment (net and gross of reinsurance)

The table displays the estimated net losses incurred from current accident year natural catastrophe events for our insurance and reinsurance segments for the last three years, after considering ceded reinsurance and reinstatement premiums. Note these are estimates as of Dec. 31 of each year for events occurring in that year, as reported in our Financial Supplements, which are available on the Investors page of our [website](#). See also the chart in Section FN-IN-450a.1 of our peak zone probable maximum loss for additional context regarding our estimates of changing exposure to natural catastrophes in our portfolio over time.

Segment	Accident Year		
	2022	2021	2020
Insurance	\$ 200,746	\$ 204,463	\$ 154,803
Reinsurance	470,211	437,228	258,480
<b>Total</b>	<b>\$ 670,957</b>	<b>\$ 641,691</b>	<b>\$ 413,283</b>

Arch does not currently distinguish between modeled/non-modeled losses and does not find that to be a meaningful distinction.

## FN-IN-450a.3

Description of approach to incorporation of environmental risks into (1) the underwriting process for individual contracts and (2) the management of firm-level risks and capital adequacy

The Nominating and Governance Committee of our Board of Directors ("Board") provides oversight for ESG matters. Executive Management and our ESG team are responsible for the management and coordination of Arch's ESG efforts, including the integration of climate change in our corporate strategy. Climate-related risks are evaluated and monitored regularly in our underwriting and risk management processes. [See also page 7 our 2022 Sustainability Report for more information on our risk oversight.](#)

We consider climate risk (physical, liability and transition risk) alongside all other relevant risks (e.g., underwriting, investment and operational) and perils in our evaluation process. We look at the impact of climate factors in the near and long term. Risks tied to climate change are articulated and addressed in our [Task Force for Climate-related Financial Disclosures Report](#), our entity-wide risk register and our annual Own Risk and Solvency Assessment ("ORSA").

Climate change could impact the frequency or severity of weather events such as hurricanes, tornado activity,

windstorms, floods and wildfires. Any increase in the frequency or severity of natural disasters may adversely affect our financial condition and results. We use various modeling methods, some proprietary and some using third-party computer models, to inform our underwriting and reinsurance decisions and manage our aggregate exposure to climate risk and catastrophic events. The exposures include those from natural catastrophes such as hurricanes, earthquakes, typhoons, floods and wildfires. The output of our modeling keeps our management informed of peak high-risk zones and insurance policies with exposure to a risk of a substantial loss from a catastrophic event.

The underwriting process is tailored by its nature to reflect the unique characteristics of the underlying risk. In addition to natural catastrophe exposures, we may factor other related environmental risk characteristics into our underwriting process. As underlying drivers of risk change, such as those from environmental causes, we reflect the changed riskiness in both our pricing and our overall risk appetite. We may limit risk through contract endorsements and/or exclusions in certain circumstances.

Additional detail about our services, products and product features that address our customers' evolving needs and incentivize responsible environmental behaviors can be found in FN-IN-410b.2.

One key risk metric we incorporate in our underwriting decisions is a target return on capital. Riskier contracts require a higher return on capital and consequently higher prices. This enables us to manage risk across our portfolio to an acceptable level and allocate capital efficiently. Our target returns on capital are based on an overall view of the group's required risk capital and capital adequacy. We monitor capital adequacy against required capital on an ongoing basis and report the results quarterly to our Board. In addition, we perform an annual ORSA process focused specifically on risk governance, firm-wide risks and capital adequacy. The resulting ORSA report is provided to our Board and regulators.

## Systemic Risk Management

### FN-IN-550a.1

Exposure to derivative instruments by category: (1) total potential exposure to non-centrally cleared derivatives; (2) total fair value of acceptable collateral posted with the Central Clearinghouse; and (3) total potential exposure to centrally cleared derivatives

On Dec. 31, 2022, the total investable assets held by Arch were \$28.1 billion. Our current investment guidelines and

our investment approach stress the preservation of capital, market liquidity and diversification of risk. The portfolio consists primarily of high-quality fixed-income securities, with fixed maturities, short-term investments and cash representing 80%, an average effective duration of 2.89 years and average S&P/Moody's credit rating of AA-/Aa3. Additional details about the investment portfolio can be found in the ["Investable Assets Held by Arch" section of "Financial Condition" in Item 7, pages 80-82 in our 2022 Annual Report.](#)

The Company's investment strategy allows for the use of derivative instruments, which are recorded on consolidated balance sheets at fair value. Arch uses various derivative instruments such as futures contracts to enhance investment performance, replicate investment positions or manage market exposures and duration risk that would be allowed under our investment guidelines if implemented in other ways.

Certain of the Company's investments are managed in portfolios that incorporate the use of foreign currency forward contracts, which are intended to provide an economic hedge against foreign currency movements. The Company also purchases to-be-announced mortgage-backed securities ("TBAs") as part of its investment strategy. TBAs represent commitments to purchase a future issuance of agency mortgage-backed securities. For the period between the purchase of a TBA and the issuance of the underlying security, the Company's position is accounted for as a derivative. The Company purchases TBAs in both long and short positions to enhance investment performance and its overall investment strategy. See note 11, "Derivative Instruments," to our consolidated financial statements in Item 8, page 148-149, of our 2022 Annual Report, for additional disclosures concerning derivatives.

The estimated fair value and notional values of the Company's derivative instruments at Dec. 31, 2022 are summarized in the chart:

	Estimated Fair Value		
	Asset Derivatives <sup>1</sup>	Liability Derivatives <sup>1</sup>	Notional Value <sup>2</sup>
Futures contracts <sup>3</sup>	\$ 50,629	\$ (16,963)	\$3,138,446
Foreign currency forward contracts <sup>4</sup>	38,891	(35,446)	1,136,126
Other <sup>4</sup>	58,781	(23,552)	3,591,793
<b>Total</b>	<b>\$ 148,301</b>	<b>\$ (75,961)</b>	

- 1 The fair value of asset derivatives is included in 'other assets' and the fair value of liability derivatives is included in 'other liabilities.'
- 2 Represents the absolute notional value of all outstanding contracts, consisting of long and short positions.
- 3 Represents centrally cleared derivatives.
- 4 Represents non-centrally cleared derivatives.

## FN-IN-550a.2

Total fair value of securities lending collateral assets

In 2021, the Company terminated its securities lending program and no longer enters into securities lending agreements with financial institutions to enhance investment income.

## FN-IN-550a.3

Description of approach to managing capital- and liquidity-related risks associated with systemic non-insurance activities

Arch's Enterprise Risk Management ("ERM") framework encompasses all entities across the group. We have a number of non-insurance company entities performing various functions and/or services, primarily for our underwriting units. They are not considered material sources of risk to the enterprise and are covered by our group risk policy. Included in these non-insurance entities are: (1) the ultimate parent holding company and the intermediate holding companies; (2) the servicing companies for the group's operational activities; (3) providers of insurance-related services; (4) managing general agents for certain of our insurance entities; and (5) investment holding companies. Additionally, there is an entity that purchases residential mortgage loans for sale or securitization.

As a large property and casualty and mortgage insurance enterprise, we are exposed to risks from many sources. There are certain risks we seek for return, while other risks we accept as a by-product of being in business. Because certain risks can be correlated with other risks, the impact of an event or a series of events can aggregate across multiple areas simultaneously and have a material effect on our operations, financial position and/or liquidity. These exposures require an enterprise-wide view of risk concerning the potential impact on all aspects of our operations. We manage our risk-taking to be within our stated risk appetites to create and preserve value for all stakeholders.

ERM activities involve identifying and assessing a broad range of risks, monitoring those risks and executing strategies to manage those risks. Effective ERM also includes determining our capital requirements to support the risks from economic, financial and regulatory perspectives.

Our Board oversees and monitors enterprise risk in support of our long-term financial strategies and objectives. Executive management has day-to-day responsibility for the risk management of our operations. Our Chief Risk Officer is responsible for risk management in support of executive management. Our risk management framework is reviewed and approved at least annually to align with our risk profile.

We expect our liquidity needs, including our anticipated

insurance obligations and operating and capital expenditure needs, will be met by funds generated from underwriting activities and investment income, as well as by our balance

of cash, short-term investments, proceeds on the sale or maturity of our investments, and our credit facilities, for the next 12 months, at a minimum.

## Activity Metric

### FN-IN-000.A

Number of policies in force, by segment

**Insurance and Reinsurance.** The number of policies in force is not an activity metric we use for the insurance or reinsurance coverages we sell to businesses. This measure is not a meaningful metric for coverages that are sold and managed on an account or customer relationship basis.

**U.S. Mortgage Insurance.** We report policies-in-force data quarterly for our U.S. primary mortgage insurance operations. Information regarding our policies in force for 2021 and 2022 is disclosed in the table below:

Mortgage Insurance	1Q 2021	2Q 2021	3Q 2021	4Q 2021	1Q 2022	2Q 2022	3Q 2022	4Q 2022
Ending number of policies in force *	1,214,245	1,199,918	1,188,768	1,171,835	1,159,020	1,168,147	1,168,735	1,160,219
Change from prior year quarter (%)	(6.1)%	(4.7)%	(4.5)%	(5.9)%	(4.5)%	(2.6)%	(1.7)%	(1.0)%
Change from prior quarter (%)	(2.5)%	(1.2)%	(0.9)%	(1.4)%	(1.1)%	0.8 %	0.1 %	(0.7)%

\* Includes first-lien primary and pool policies.