



MSCI Inc.

INVESTOR PRESENTATION

March 1, 2023



Forward-Looking Statements

- This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including without limitation, MSCI's full-year 2023 guidance and long-term targets. These forward-looking statements relate to future events or to future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these statements. In some cases, you can identify forward-looking statements by the use of words such as "may," "could," "expect," "intend," "plan," "seek," "anticipate," "believe," "estimate," "predict," "potential" or "continue," or the negative of these terms or other comparable terminology. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties and other factors that are, in some cases, beyond MSCI's control and that could materially affect actual results, levels of activity, performance or achievements.
- Other factors that could materially affect actual results, levels of activity, performance or achievements can be found in MSCI's Annual Report on Form 10-K for the fiscal year ended December 31, 2022 filed with the Securities and Exchange Commission ("SEC") on February 10, 2023 and in quarterly reports on Form 10-Q and current reports on Form 8-K filed or furnished with the SEC. If any of these risks or uncertainties materialize, or if MSCI's underlying assumptions prove to be incorrect, actual results may vary significantly from what MSCI projected. Any forward-looking statement in this presentation reflects MSCI's current views with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to MSCI's operations, results of operations, growth strategy and liquidity. MSCI assumes no obligation to publicly update or revise these forward-looking statements for any reason, whether as a result of new information, future events, or otherwise, except as required by law.

Other Information

- Percentage changes and totals in this presentation may not sum due to rounding.
- Percentage changes refer to the comparable period in 2021, unless otherwise noted.
- All financial figures for the three months ended December 31, 2022 are unaudited unless otherwise noted.
- Foreign currency exchange rate fluctuations reflect the difference between the current period results as reported compared to the current period results recalculated using the foreign currency exchange rates in effect for the comparable prior period. While operating revenues adjusted for the impact of foreign currency fluctuations includes asset-based fees that have been adjusted for the impact of foreign currency fluctuations, the underlying assets under management (“AUM”), which is the primary component of asset-based fees, is not adjusted for foreign currency fluctuations. Approximately three-fifths of the AUM are invested in securities denominated in currencies other than the U.S. dollar, and accordingly, any such impact is excluded from the disclosed foreign currency-adjusted variances.

Company overview



Global Franchise Serving the Who's Who of the Investment Industry



What We Do

Provide critical decision support tools and services for the global investment community

4,759
employees¹

~\$2.3B
Total Run Rate¹

30+
Office locations¹

5%
YoY

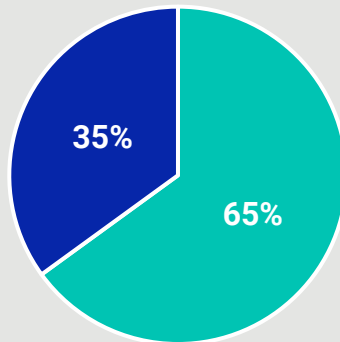
Must-have investment data, tools, models and technology

across asset classes for performance and risk

6,600+
clients¹ in

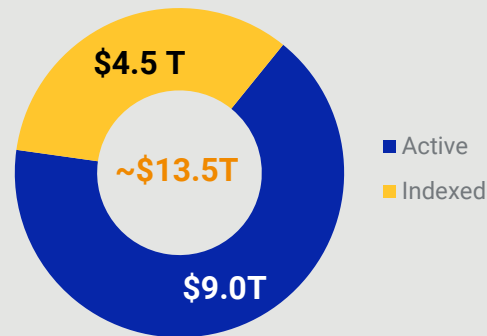
95+
countries¹

- Providing solutions to enable all participants in the investment process
- Driving innovation for industry-leading solutions
- 50+ years of establishing standards in the investment industry



35%¹ of employees located in developed market centers

65%¹ of employees located in emerging market centers

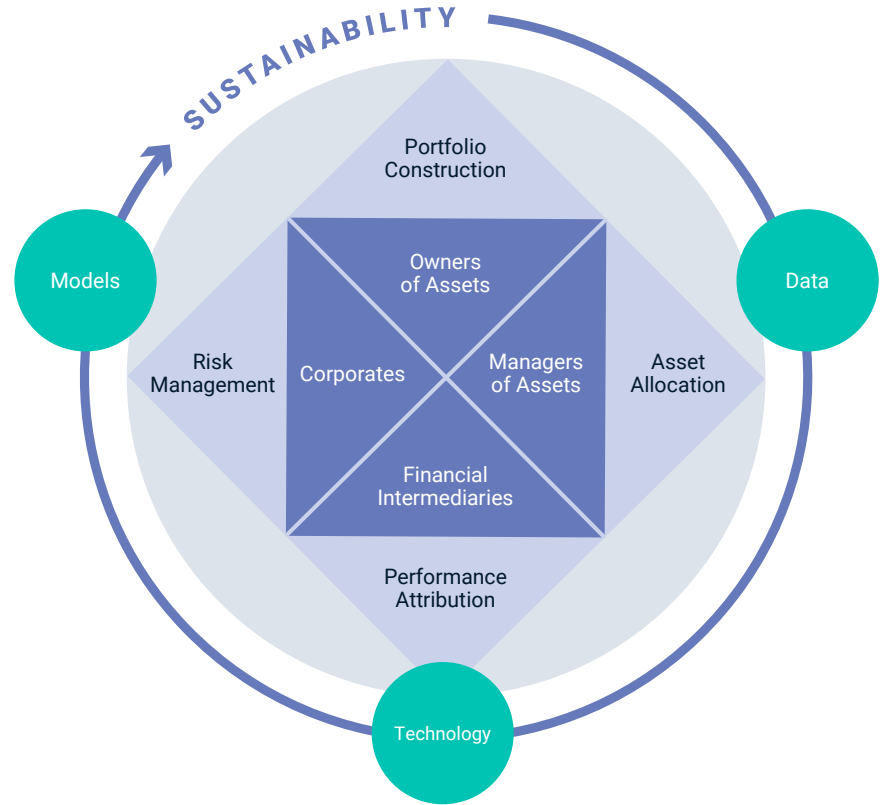


in AUM benchmarked to MSCI Indexes as of June 30, 2022

Extensive knowledge of the investment process

Our Strategy

Support the Investment Process
Needs of our Clients with Highly
Differentiated Solutions Supported
by Best-in-Class Capabilities



Helping Investors Navigate Increasingly Complex Global Landscape



\$110T+ Managed Assets

100,000+ Public Equities

Millions Fixed Income Instruments

12,500+ Private Equity (PE) Funds

185,000+ PE-owned Companies

\$11T+ Global Investment Properties

\$632T Notional Derivatives Contracts

\$150T+ Bank Assets



More:

Investors

- Proliferation of institutional and individual investors

Markets

- New geographies and markets are accessible

Choices

- Securities
- Instruments
- Asset classes

Styles

- Factors
- ESG percentage climate consideration
- Thematics and mega themes

Vehicles

- Funds
- Co-investing
- Direct investments

Scale

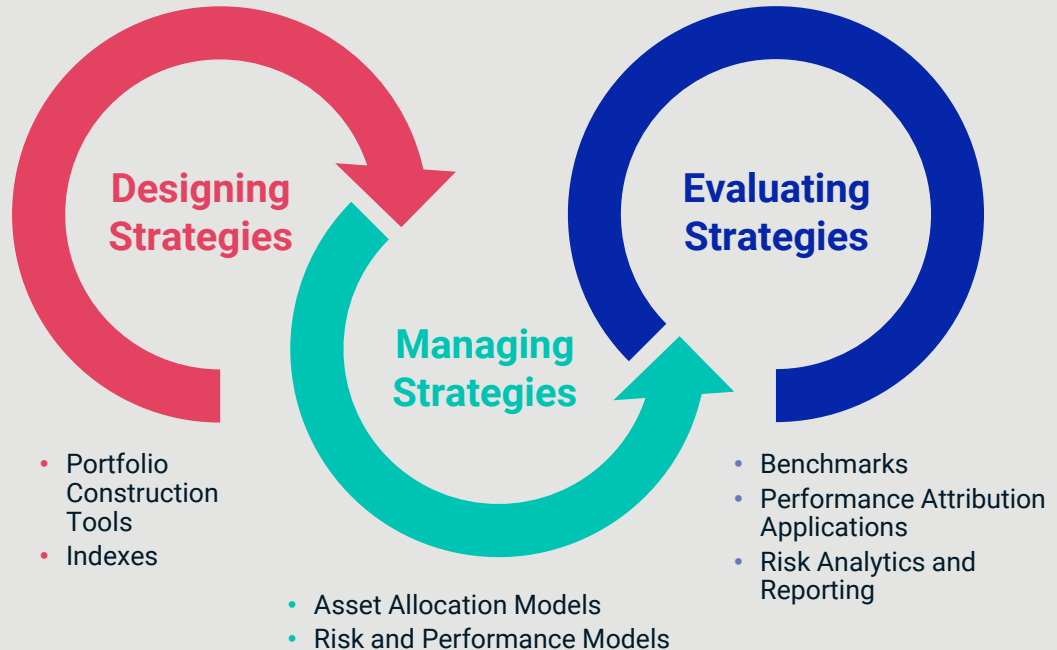
- Investable assets growing as a % of global economies
- Increased allocations to private markets

Addressing Client Needs to Power Better Investment Decisions

Investors rely on MSCI for

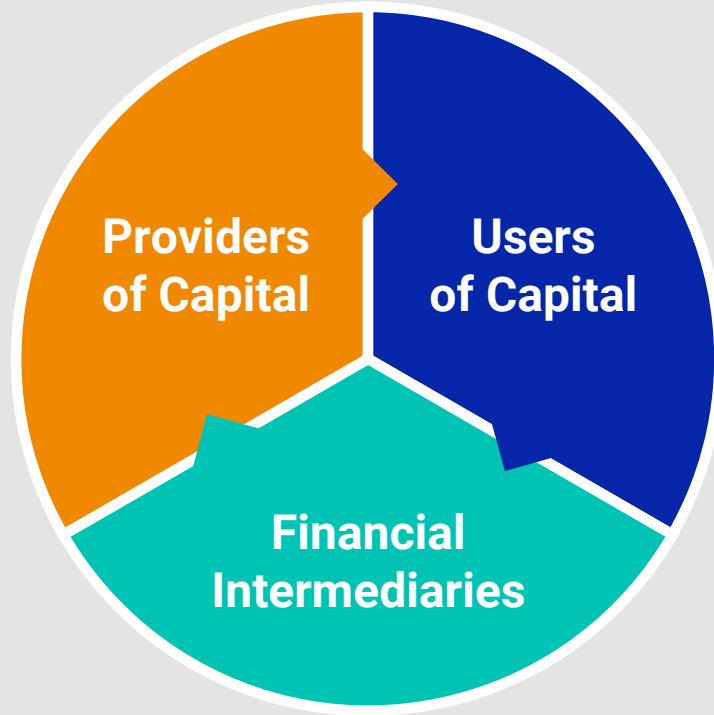
- Data- and research-driven insights into drivers of risk and performance
- Broad asset class coverage
- Innovative tools to help bring investment strategies to market
- Exceptional quality
- Reliability, technology and business continuity infrastructure

Supporting Investors' Needs in Every Part of the Investment Cycle



Enabling All Participants in the Investment Process

Enabling asset owners
and managers
**make better investment
decisions and build
better portfolios**



Enabling corporates
and others
**understand ESG and
climate risk, benchmark
against peers and inform
engagement with
shareholders**

Enabling banks, broker dealers, exchanges, custodians and others
improve the investment process with more transparency

Key Corporate Responsibility Achievements in 2022



Environmental Sustainability

Received approval from the Science Based Targets initiative for our greenhouse gas reduction targets*

- **Near-term:** Reduce absolute Scope 1 and 2 CO2e emissions by 80% and reduce absolute Scope 3 CO2e emissions by 50%, in each case by 2030
- **Net-zero:** Reach net-zero CO2e emissions across the value chain by 2040

Established 2025 milestones*

- 100% renewable electricity,
- Reduce our absolute Scope 1 and 2 CO2e emissions by 60%
- Increase to 60% by spend our suppliers with science-based targets

Published our first-ever Climate Transition Plan



Social Practices

Created a new Inclusion and Belonging Council to strengthen our focus on Inclusion

Introduced “Future of Work” which provides flexibility of when and where employees work via a hybrid-work mode

Continued to monitor employee engagement.

December 2022 employee engagement survey findings-

- Achieved a 78% response rate
- 74% of respondents characterized as fully engaged, the highest since we implemented the engagement survey.



Governance Practices

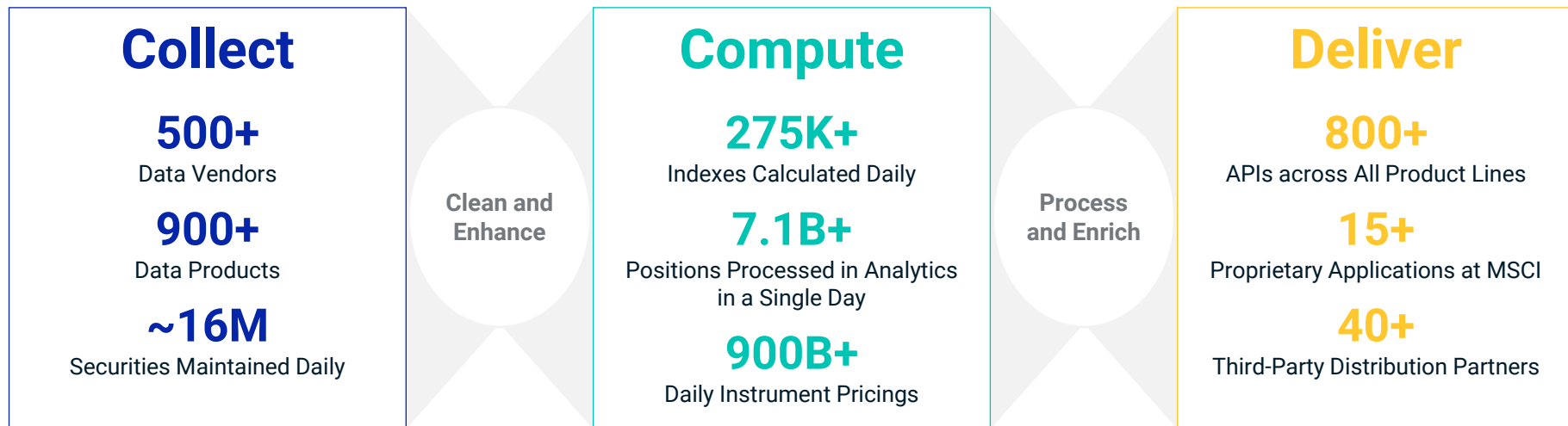
Increased transparency through:

- Disclosure of results of most recent pay equity review
- Enhanced disclosures on Board diversity and skills
- Expansion of disclosures on emissions and diversity data, including through CDP, TCFD, SASB and EEO-1 reporting

Continued focus on Board refreshment: appointed a new independent director with a strong background in marketing and digital transformation

MSCI Data and Technology Capabilities

Proven Ability to Handle Complex, Integrated and High-volume Workflows with Flexible and Scalable Solutions for Clients



To Stay Ahead of Client Demands, MSCI Will Deliver Everything We Do “As a Service”

Widespread Demand for MSCI's Offerings



Clients

- Asset managers
- Asset owners
- Broker-dealers
- Wealth managers
- Corporates
- Insurance companies
- Private asset managers
- Regions (Americas, EMEA, APAC)



Solutions for

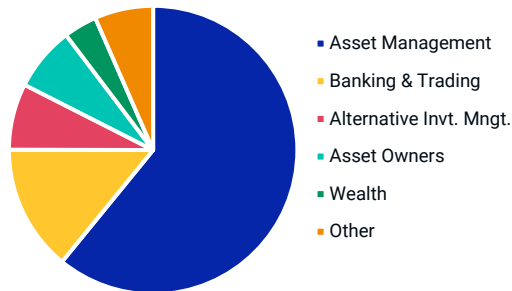
- ESG and climate investing
- Customized Indexes
- Derivatives
- Factor Investing
- Private Asset Investing
- Fixed income and liquidity
- Investment Themes



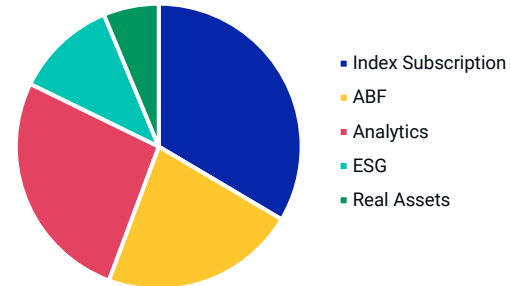
Capabilities

- Data
- Technology
- Talent

Client Segment Run Rate (\$2.3B)



Product Run Rate (\$2.3B)



Well Positioned In All Markets From All Weather Franchise

	Times of Strength	Times of Stress
	<ul style="list-style-type: none"> • 97% recurring revenue^{1,4} • ~75% recurring subscription⁴ • Retention rates >90% across products⁴ 	
REVENUE	AUM-Based Revenue	F&O Volumes
	Performance-oriented Products	Risk-oriented Products
	~84% of Revenue in USD ^{2, 4} ~Balances Non-USD Expense ^{1, 4}	
EXPENSES	Upturn Growth Investment	Expense Management
EPS	Refi Callable Debt	Share Repurchases

← **Diversified Geographic & Product Footprint** →



Upturn / Downturn Expense Levers		Approx. Annual Impact of ~10% or higher Flex ³
Upturn Priorities	Self-Adjusting Metric-based Annual Incentives Plans	+/- \$15M
	Pacing of Investments Reprioritization, Pace of Hiring Headcount Optimization	+/- \$20M
Downturn Priorities	Mostly Discretionary T&E Training Professional Fees Marketing	+/- \$20M

(1) Includes ABF and Subscription Recurring Revenue;
 (2) Remaining non-US dollar revenue exposure primarily in EUR, GBP or JPY
 (3) Based on respective categories of current expense base.
 (4) Financial numbers for the year ending December 31, 2022

Robust and Compelling Financial Model



Recurring, visible revenue model

~97% recurring revenues¹ as percent of total revenue from 2016 to 2022



Operating efficiency strength

Disciplined operating expense management



Triple-Crown investment opportunities to grow business

Investing in multiple strategic product areas, client segments and capabilities, including technology and partnerships, to drive growth



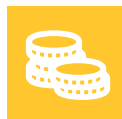
Attractive cash generation profile

High free cash flow conversion and growth driven by favorable working capital dynamics, capital-light business model and track record of operating leverage



Creating value for shareholders

Double digit annual adjusted EPS growth every year since 2014



Strong balance sheet and liquidity

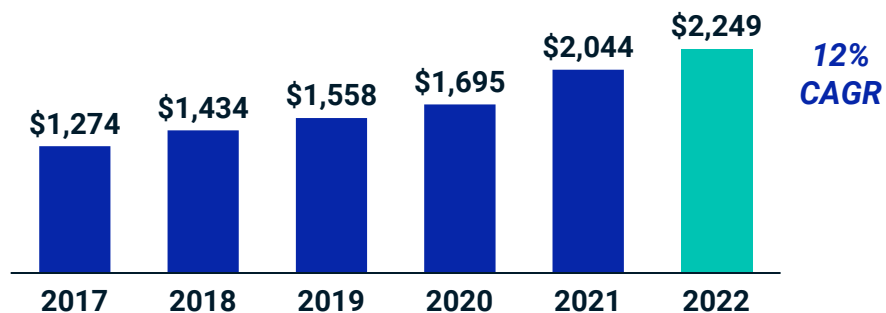
Total cash and equivalents of \$994M as of December 31, 2022

Financial review

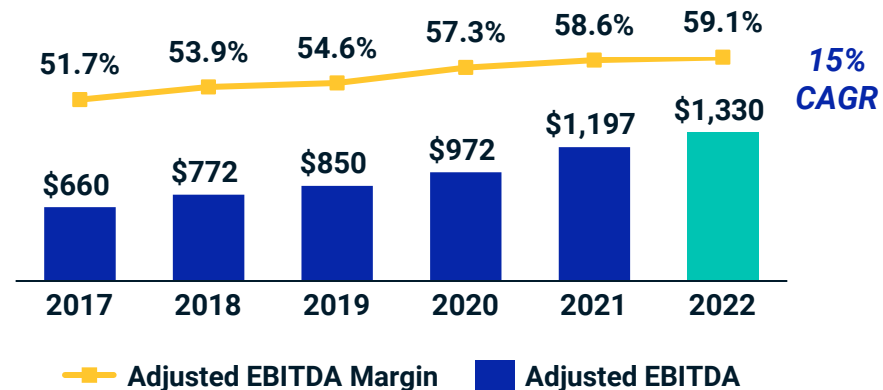


Exceptional Track Record of Financial Execution

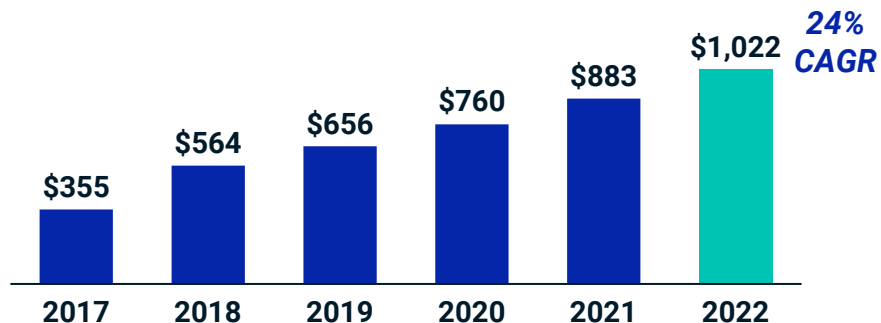
Revenue (\$m)



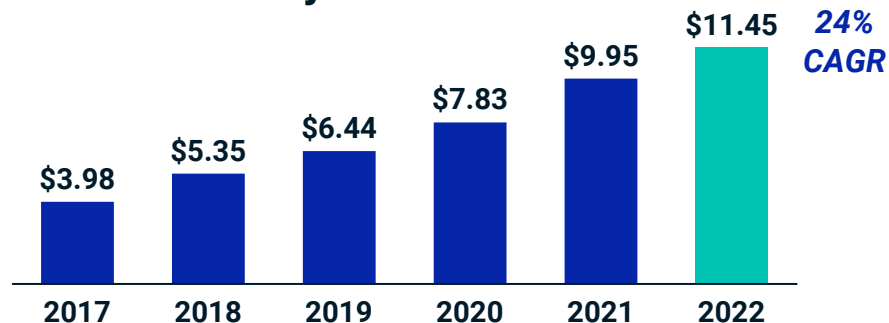
Adjusted EBITDA¹ (\$m)



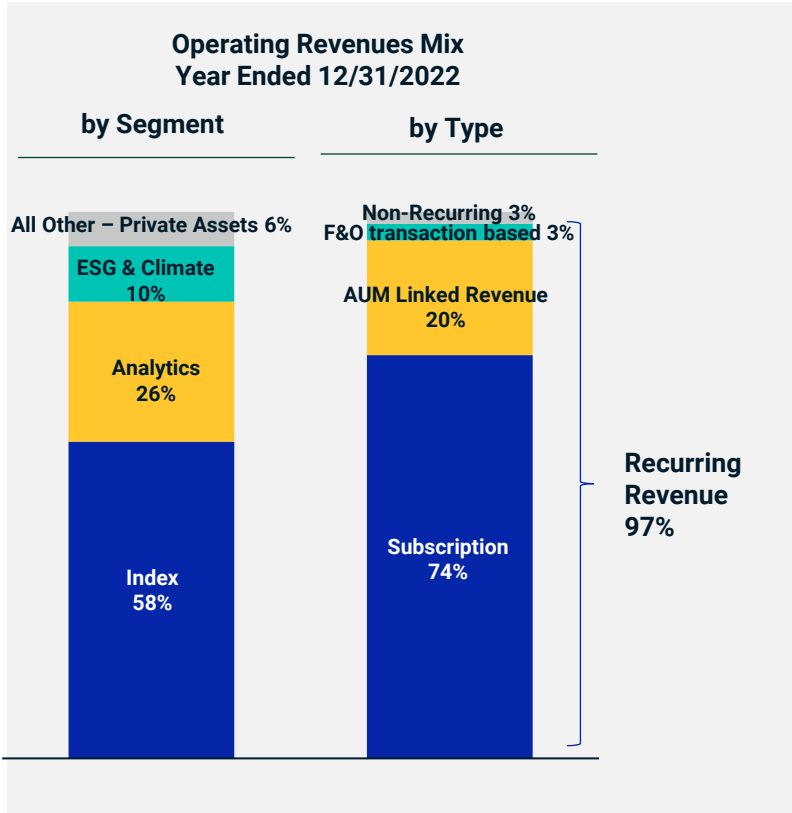
Free Cash Flow¹ (\$m)



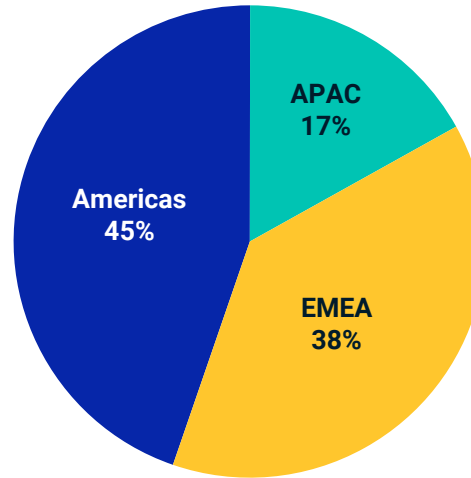
Adjusted EPS¹



Significant Recurring Revenue Model with Global Client Base



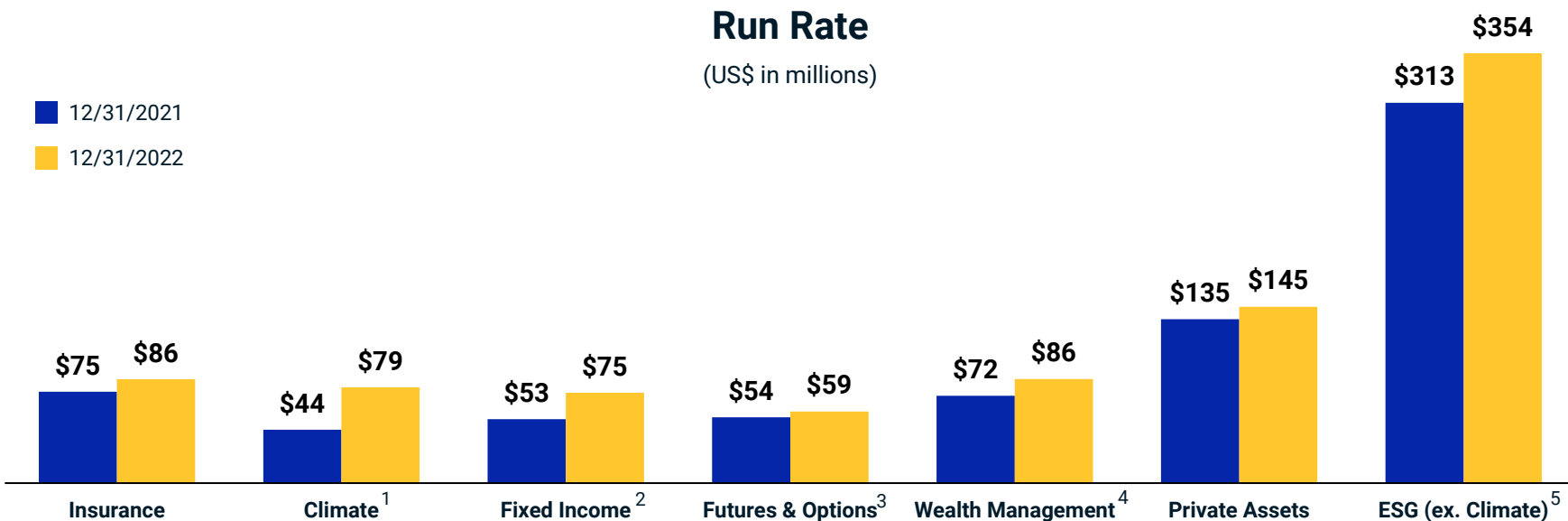
MSCI Subscription Run Rate as of 12/31/2022 by Geography



MSCI Subscription Run Rate as of 12/31/2022 by Client Base



Significant Demand and Growth Across Large Emerging Opportunities



Expanding in attractive additional addressable markets

Note: Run Rate totals may include overlap between different client segments. ¹Includes Climate run rate reported in Index, ESG & Climate, Analytics and Private Asset segments. ²Excludes Analytics Enterprise Risk & Performance. ³Listed only. ⁴Represents total subscription run rate from wealth management client base. ⁵Includes ESG (ex. Climate) Research Run Rate, reported in the ESG & Climate, Analytics and Real Assets Segments, and ESG (ex. Climate) related Index subscription and asset-based fees Run Rate reported in the Index segment.

Innovation and Investment in Key Growth Areas



New Growth

Drive new business capabilities through new products and services

Examples:

- Climate
- Thematic Indexes
- Fixed income Indexes
- Private Assets



Scale

Expand existing products and capabilities to accelerate growth

Examples:

- Innovative Factors & ESG Indexes
- ESG securities coverage expansion
- Expanding Futures and Options



Efficiencies

Avoid and/or repurpose costs; achieve productivity gains

Examples:

- Cloud migration
- Streamline technology development
- Data process improvements

Triple-Crown Investment Criteria



High Returns

Projects must have a high return (ROI)



Quick Payback <3 Years

Earlier payback preferred



Strong Valuation

Prefer investments with greater impact to MSCI's valuation

Rigorous metric-driven approach to allocate capital across different business areas



Strong Balance Sheet Provides Optionality

(US\$ in millions, unless otherwise noted)

Cash¹ and Debt as of 12/31/2022

Total Cash	\$994M
Total Debt ²	\$4,512M
Net Debt (total Debt less total cash)	\$3,518M
Total Debt / LTM Adjusted EBITDA	3.4x
Net Debt / LTM Adjusted EBITDA	2.6x

Unsecured Debt Maturity Profile

 Undrawn revolver facility³
 Drawn term loan A facility



- In 4Q22, returned \$170M to shareholders through share repurchases of \$70M and quarterly dividends of approximately \$100M.
- Strong balance sheet provides optionality
 - Next maturity not until 2027
- Disciplined and consistent approach to capital deployment
 - Triple-Crown framework to evaluate internal opportunities and MP&A (mergers, partnerships and acquisitions)

Credit Ratings as of 03/01/2023:

	Moody's	S&P	Fitch
Outlook	Stable	Stable	Stable
Long-term issuer rating	Ba1	BBB-	BBB-
Senior unsecured	Ba1	BBB-	BBB-

Note: Credit ratings reflect the views of the different agencies and are not a recommendation to buy, sell or hold any security including our common stock or debt securities. These ratings are subject to periodic review and may be raised upward, downward or revoked at the sole discretion of the agencies.

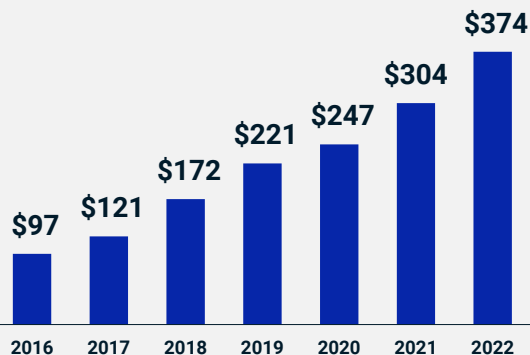
(1) MSCI typically seeks to maintain minimum cash balances globally of approximately \$225.0 million to \$275.0 million for general operating purposes

(2) Reflects gross debt, net of deferred financing fees and premium.

(3) Aggregate revolver commitments of \$500.0 million until February 2027. Reflects amendment to revolving credit agreement on June 9, 2022.

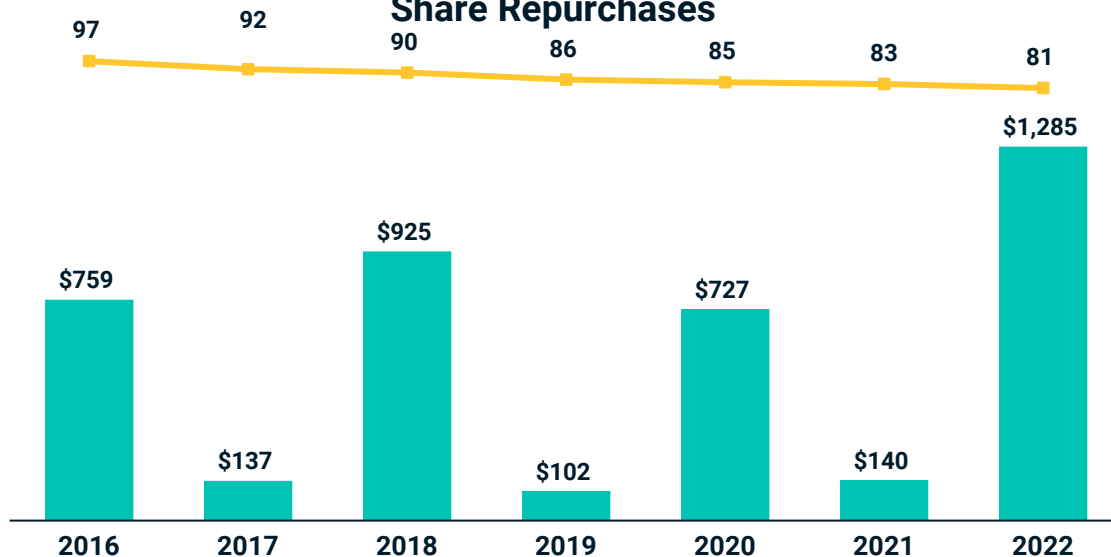
Disciplined Approach to Capital Deployment for Shareholders

Dividends (\$M)



- Meaningful dividend with strong historical growth
- Historical payout ratio target of 40% – 50% of Adjusted EPS
- In Q1 2023, cash dividend of \$1.38 per share declared by MSCI Board of Directors

Share Repurchases



— Weighted Average Diluted Shares Outstanding (in millions)

■ Aggregate Dollar Value of Shares Repurchased (\$ in millions)

Opportunistic Share Repurchases Capitalize on Attractive Values and Volatility

\$5.3B of Share Repurchases since 2012

Full-Year 2023 Guidance as of January 31, 2023

Full-Year 2023 Guidance Item	Current Guidance
Operating Expense	\$1,090 to \$1,130 million
Adjusted EBITDA Expense	\$965 to \$995 million
Interest Expense (including amortization of financing fees)	\$184 to \$187 million
Depreciation & Amortization Expense	\$125 to \$135 million
Effective Tax Rate	17.0% to 20.0%
Capital Expenditures	\$75 to \$85 million
Net Cash Provided by Operating Activities	\$1,145 to \$1,195 million
Free Cash Flow	\$1,060 to \$1,120 million

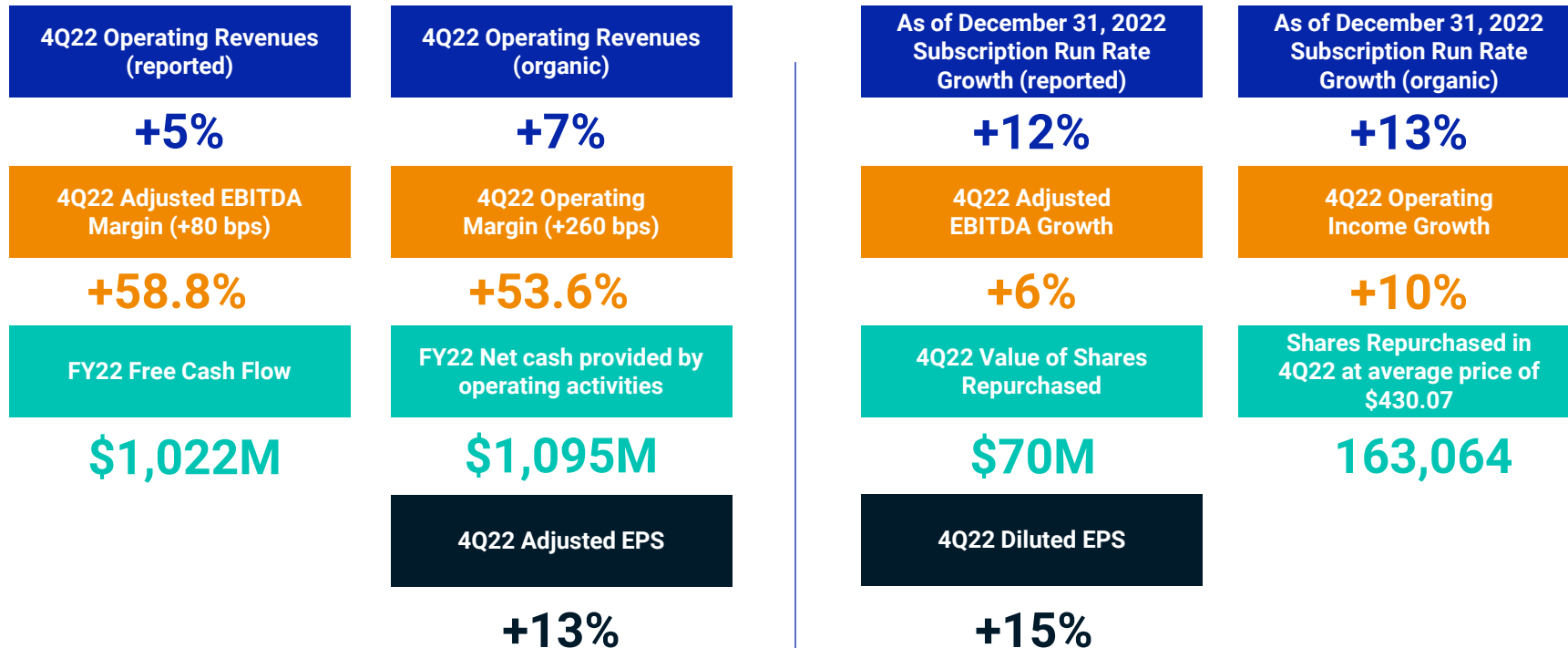
MSCI's guidance for the year ending December 31, 2023 ("Full-Year 2023") is based on assumptions about a number of macroeconomic and capital market factors, in particular related to equity markets. These assumptions are subject to uncertainty, and actual results for the year could differ materially from our current guidance, including as a result of the impact from changes in interest rates, the economic and market impacts of elevated inflation levels and Russia's invasion of Ukraine as well as the ongoing uncertainty related to the duration, magnitude and the impact of the ongoing COVID-19 pandemic. See "Forward-Looking Statements" on slide 2.

Long-term Targets

	Revenue Growth Rate ¹	Adj. EBITDA Expense Growth Rate	Adj. EBITDA Growth Rate	Adj. EBITDA Margin %
Index	Low Double Digit	Low Double Digit		
Analytics	High Single Digit	Mid Single Digit		
ESG & Climate	Mid to High 20s	Mid to High 20s		
All Other – Private Assets	High Teens	Mid Teens		
MSCI	Low Double Digit	High Single Digit to Low Double Digit	Low to Mid Teens	High 50s

4Q22 and FY22 Financial Results Snapshot

Robust earnings growth reflecting all weather franchise

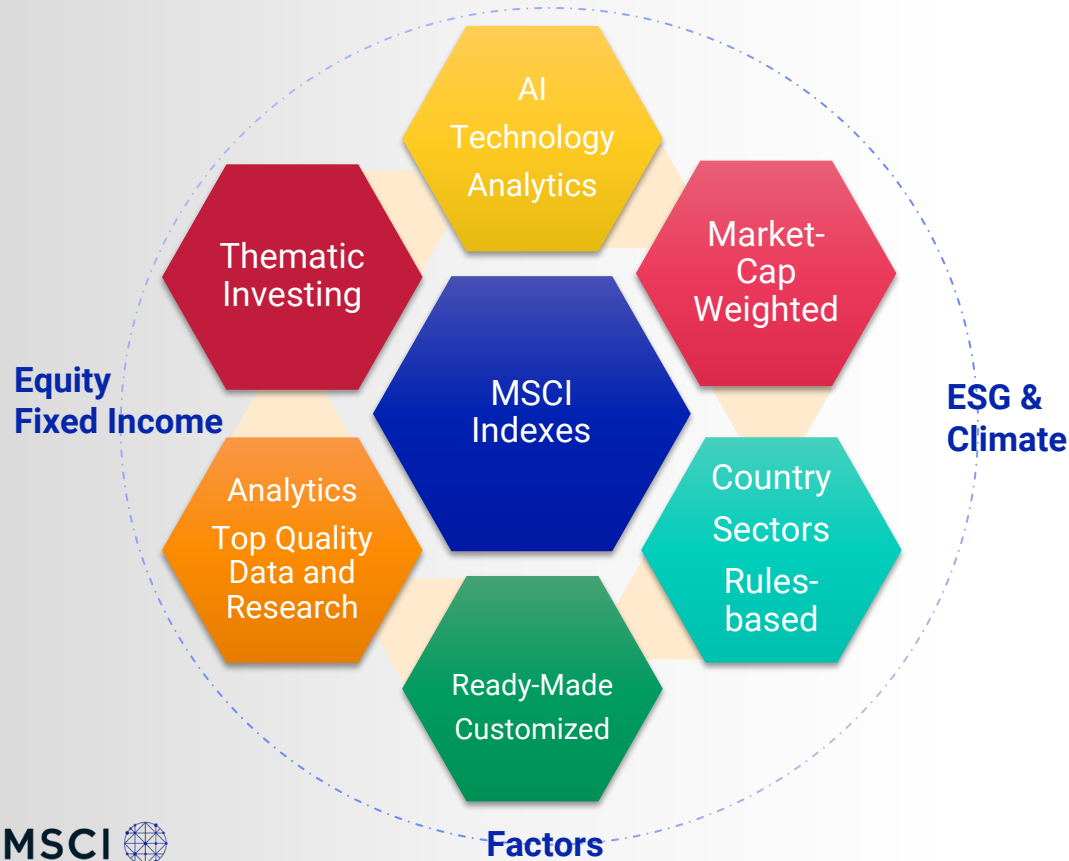


Segment highlights



Index: We are Uniquely Positioned to Meet the Industry's Needs

By Leveraging Our Entire Firm, We Offer Clients a Comprehensive Toolset



- MSCI Indexes are built using a **modular approach** with a **rules-based, consistent and transparent** methodology
- Indexes designed to represent **full opportunity set** across geographies and products with **no gaps or overlaps**
- Can be used as **building blocks for portfolio construction in indexed and active portfolios** representing the performance of investment strategies, using a consistent framework

Index: Ready-Made Indexes Across Market-Cap, Size and Geographic Exposures and Across Investment Thesis Areas for Equity and Fixed Income

Market Cap Weighted



Factors



ESG & Climate Indexes

Climate Integration

- MSCI Climate Change
- MSCI Climate Paris Aligned
- MSCI Low Carbon Target

ESG Integration

- MSCI ESG Leaders
- MSCI ESG Focus
- MSCI ESG Universal

Screening & Values

- MSCI Ex Controversial Weapons
- MSCI Ex Tobacco Involvement
- MSCI Ex Fossil Fuel
- MSCI Faith Based

Impact Investing

- MSCI Global Environment
- MSCI Sustainable Impact
- MSCI Women's Leadership

Thematic Indexes Aligned with Megatrends



Transformative Tech

Future mobility, robotics, digital economy, fintech innovation



Society & Lifestyle

Smart cities, ageing societies, future education, food revolution



Health & Healthcare

Genomic innovation, digital health



Environment & Resources

Efficient energy
Circular economy

Index: Ongoing Client Demand for Customized Indexes for Specified Needs

1

- Define your benchmark needs beyond MSCI core indexes

2

- Develop it through customizable options

3

- Choose deployment options (e.g. Real Time/End of the Day, File Format etc.)



Customized indexes for specific needs use cases

Client can use the MSCI Custom Indexes to:

- Avoid benchmark misfit by using an index that more accurately reflects the investment strategy or constraints
- Benchmark socially responsible investment strategies (environmental, political, social)
- Carry out bespoke reporting, performance and risk analysis
- Manage currency risk via custom hedged indexes
- Outsource the calculation of specialized in-house indexes
- Comply with regulatory guidelines through the application of certain capping criteria
- Construct and issue index-linked products to meet specific investment themes applying investability and liquidity criteria



Benefits



Broad Coverage

Clients can customize and adapt any MSCI index such as Market Cap, Factor, Thematic, ESG and Climate to reflect their specific benchmark or product requirements.



Data Reliability

Clients can make use of MSCI's well-established, reliable index administration and calculation process – same as used for calculating all MSCI Standard indexes.



Rigorous Methodology

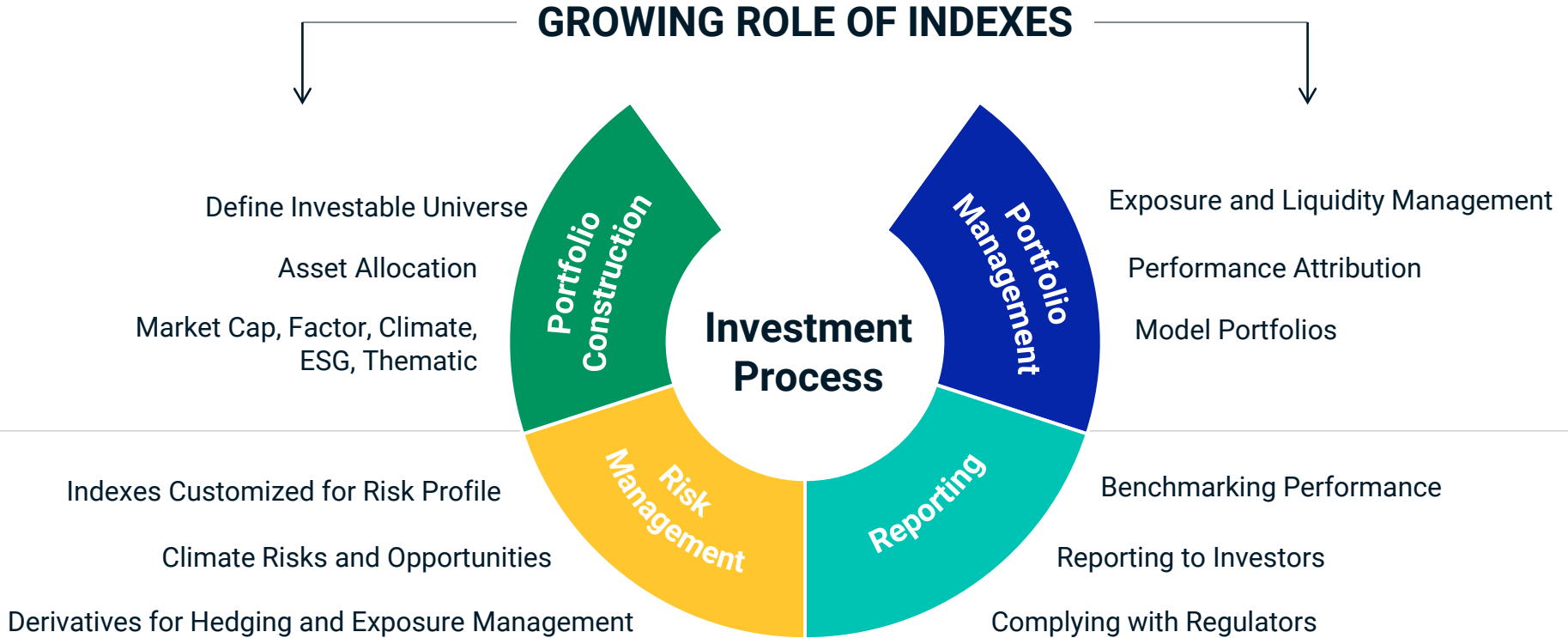
Investable, transparent and replicable indexes designed by clients, and with the same rigorous calculation and maintenance methodology as applied to the MSCI Standard Indexes.



Global Support

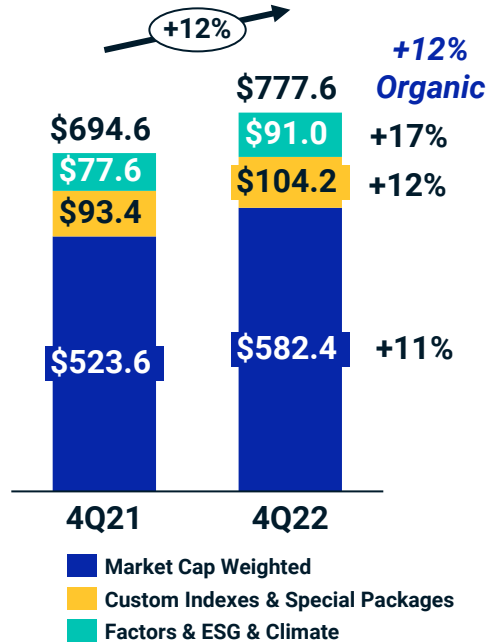
Cross-functional custom index team of experts in Research, Index Production, Technology and Product Management supports the administration of client-designed custom indexes.

Index: Helping Integrate Indexes at the Center of the Investment Process

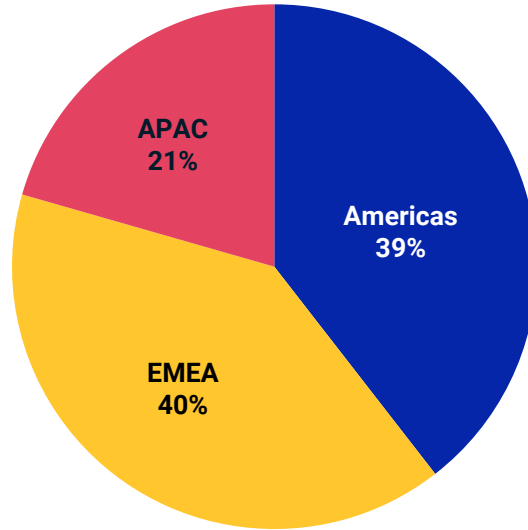


Index Subscription at a Glance

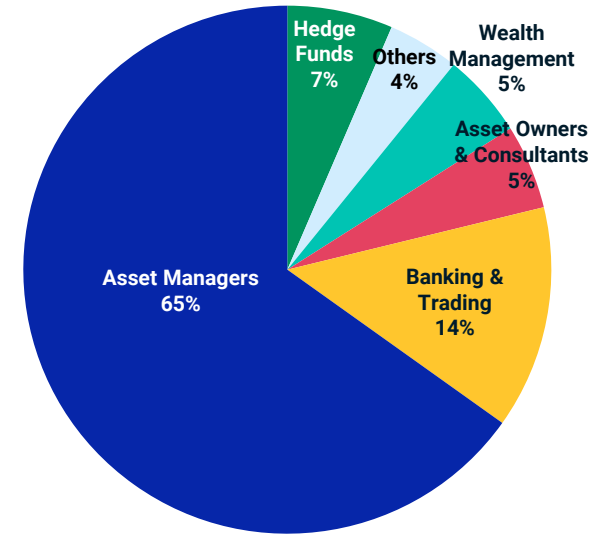
Index Subscription Run Rate



Index Subscription Run Rate as of 12/31/2022 by Geography

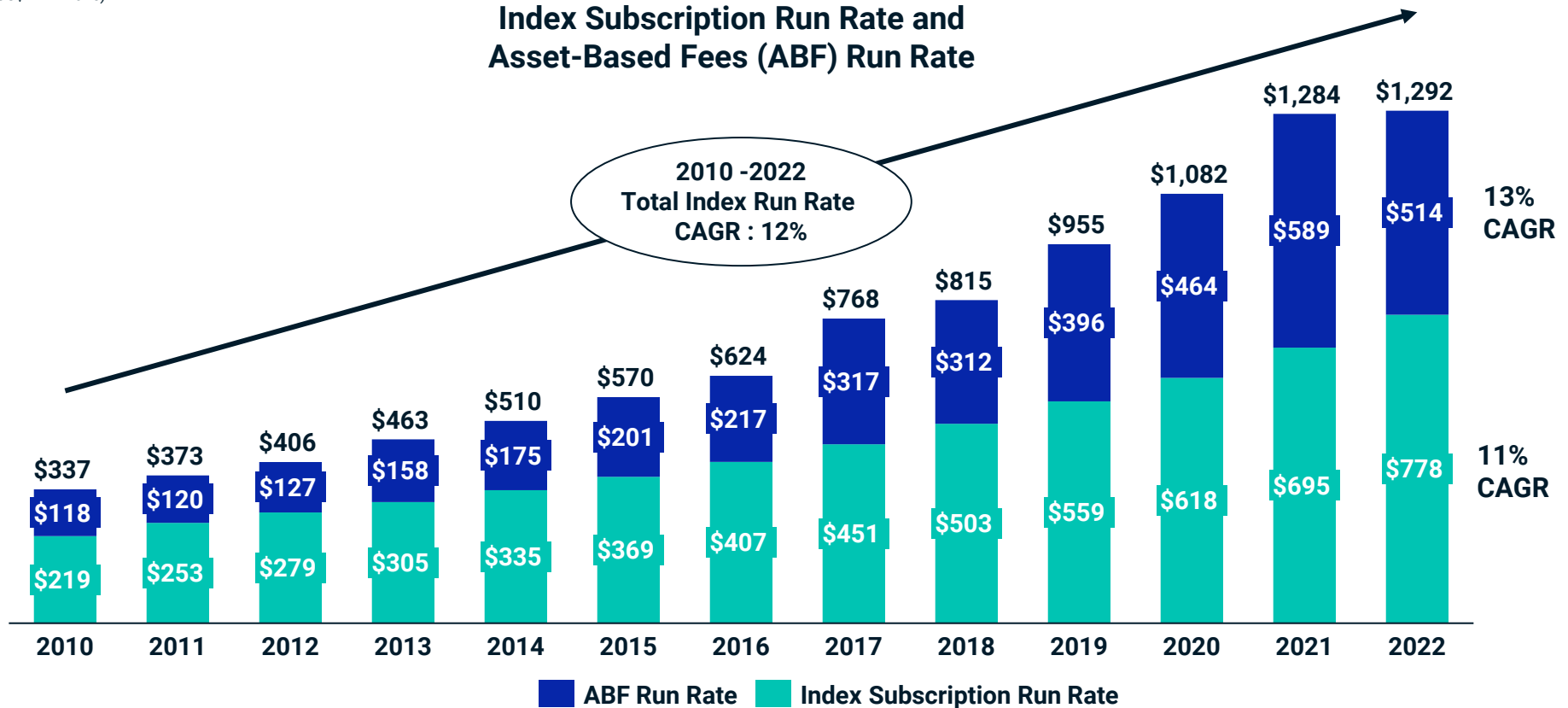


Index Subscription Run Rate as of 12/31/2022 by Client base



Index: Growth through the Index Revolution

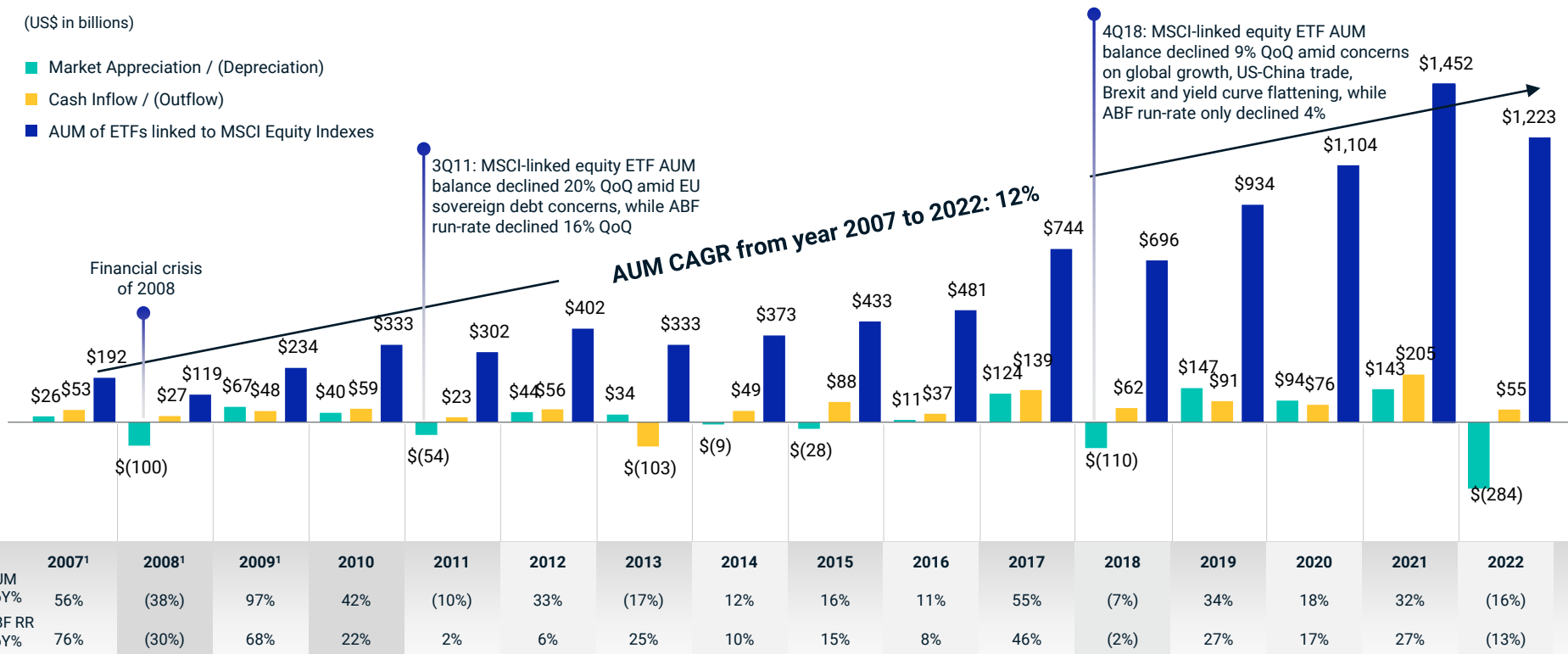
(US\$ in millions)



Market Movement Impacts AUM; Growth in F&O Helps Offset the Decrease

(US\$ in billions)

- Market Appreciation / (Depreciation)
- Cash Inflow / (Outflow)
- AUM of ETFs linked to MSCI Equity Indexes

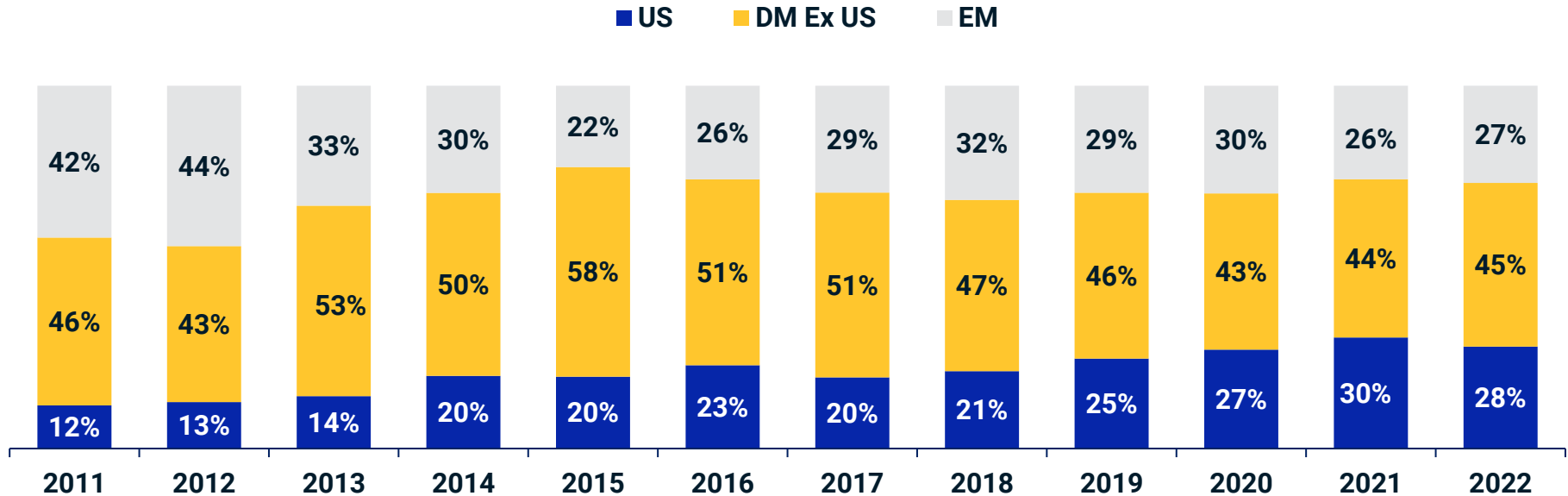


Positive annual cash inflows for all years in ETFs linked to MSCI indexes except 2013

	2007 ¹	2008 ¹	2009 ¹	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
AUM YoY%	56%	(38%)	97%	42%	(10%)	33%	(17%)	12%	16%	11%	55%	(7%)	34%	18%	32%	(16%)
ABF RR YoY%	76%	(30%)	68%	22%	2%	6%	25%	10%	15%	8%	46%	(2%)	27%	17%	27%	(13%)

Geographic Market Exposures Of MSCI-Linked ETFs Increasingly Diversified Over Time

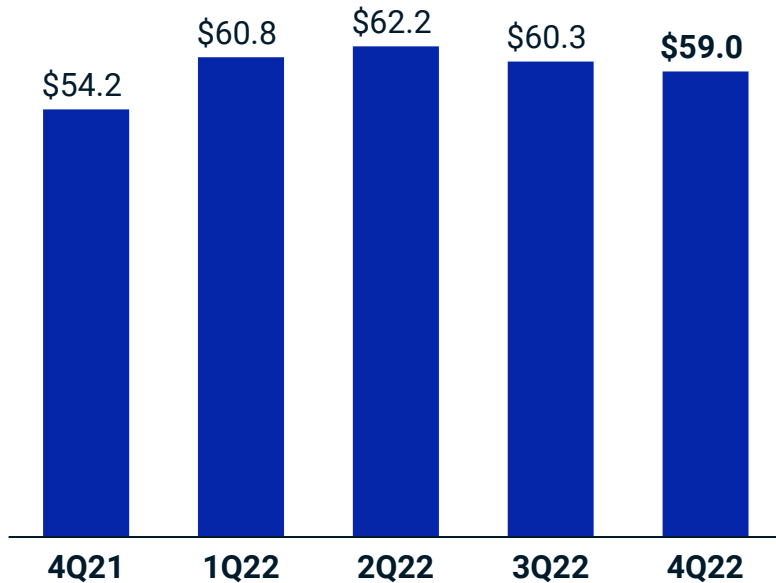
Mix of MSCI linked equity ETF AUM balance by geographic exposure %



Listed Futures & Options Linked to MSCI Indexes

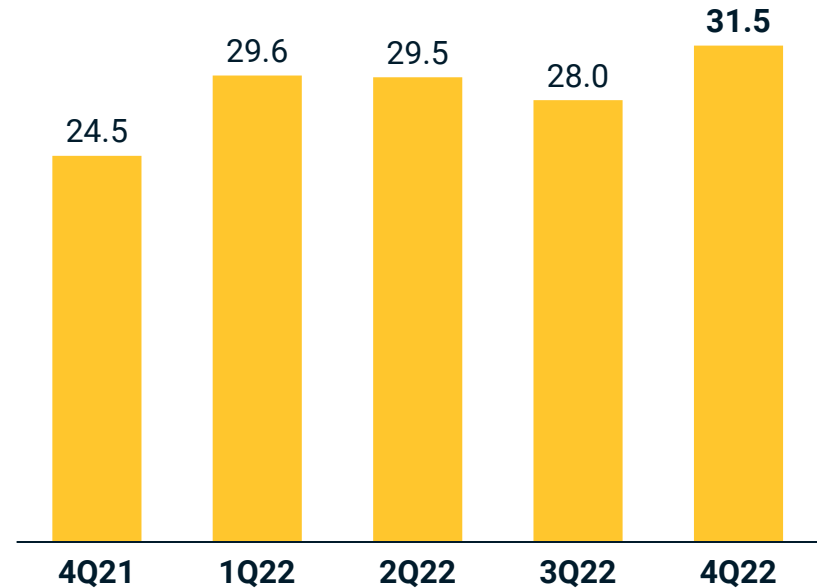
Run Rate From Listed Futures & Options Linked to MSCI Indexes

(US\$ in millions)



Futures & Options Volume Linked to MSCI Indexes

(in millions of contracts traded¹)



Analytics: Significant Opportunities in Equity Portfolio Management: \$1B+ TAM

Growth Drivers

Asset Owners

- **Increasingly using Factors** for portfolio construction and asset allocation

Asset Managers

- **Portfolio customization** through end-user applications

Hedge Funds and Broker Dealers

- **Large consumers of model data** to embed into their investment processes. Eager to consume all the new content we produce

Accelerators

Integration of **ESG and Climate** in portfolio construction

- **Client-facing applications**
- **ESG/climate/thematic** integration
- **Capabilities to customize indexes**

Content distribution through **APIs, partners and digital marketplaces**

Broad Adoption of Factors and Portfolio Customization Driving Growth

Analytics: Multi-Asset Class Solutions Well Positioned to Grow in a \$2B+ TAM

Growth Drivers

Multi-Asset Class Portfolio Management



Large demand for **multi-asset solutions** from **institutional and individual** investors

Multi-Asset Class Risk Management



Demand for solutions to new problems from **asset managers and asset owners**
Need to **innovate, decrease complexity and achieve scale**

Accelerators

- **Tools for multi-asset solution managers**
- **Asset allocation solutions for asset owners**
- **Mass portfolio personalization for wealth managers**
- Solutions for **liquidity, climate change, long horizon risk, private asset investing** and **new regulations**
- Models and analytics through **cloud-hosted APIs** and **integration with clients' infrastructure**

Solving Two Critical Needs: Building MAC Portfolios and Managing Portfolios across Asset Classes

Build Better Solutions with MSCI Multi-Asset Class Solutions

1

ESG & Climate Data

- Integrated **Climate** and **ESG** data to build solutions aligned with climate and ESG objectives
- Hundreds of data points covering carbon emissions, climate value at risk (**CVaR**), and ESG risks
- **Multi-asset class** coverage

2

Differentiated Content

- Across **global** geographies & asset classes
- **Differentiated**, for construction: factors, stress testing, optimization
- **Long-term risk** and return
- Models **customized** to the investment process
- Attribution of risk and performance on same factors

3

Enterprise Data Workflows

- High-performance, **high-availability workflows** to integrate with internal systems
- Leverage MSCI's automated data quality checks, results monitoring, and **established processes**
- Distribute **high-quality, standardized result sets** to multiple applications

Analytics: Fast Growth Potential in Fixed Income Portfolio Management

Key Drivers

- **Systematic investing in fixed income is growing** as data becomes widely available and price transparency improves
- Fixed income investors **need to integrate ESG/Climate considerations**

Key Opportunities

- **Estimated \$200M opportunity** to help **asset owners and asset managers** build fixed income portfolios
- Expansion into **insurance companies**

2022 Results

- **~25% YoY run rate growth as of December 31, 2022** for Fixed Income Analytics¹
- Resulted from **cross-selling** fixed income teams of our large **multi-asset class client base**, as well as **winning new clients**

MSCI is Offering Differentiated Solutions

Developed Closely with Clients to Solve Unmet Needs

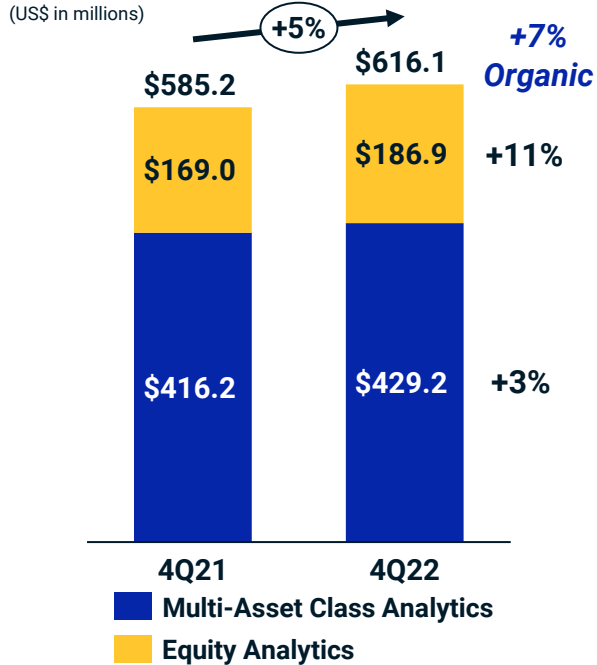
Distributed through Order Management System, which Simplifies Workflows and Creates Consistency

Integrated with MSCI Fixed Income Indexes and ESG/Climate Data, which are Competitive Differentiators

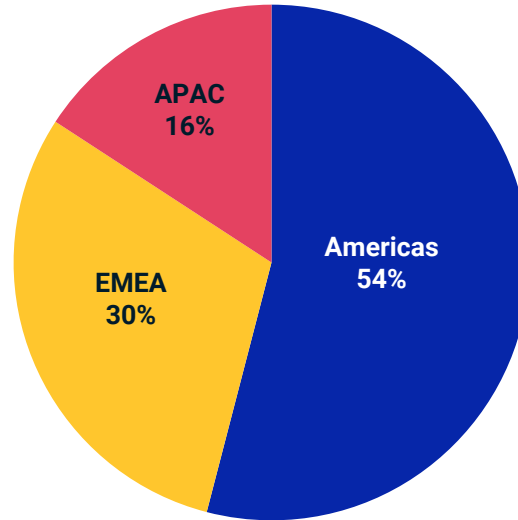
Investors are Demanding Innovative Solutions and Better Service

Analytics Segment at a Glance

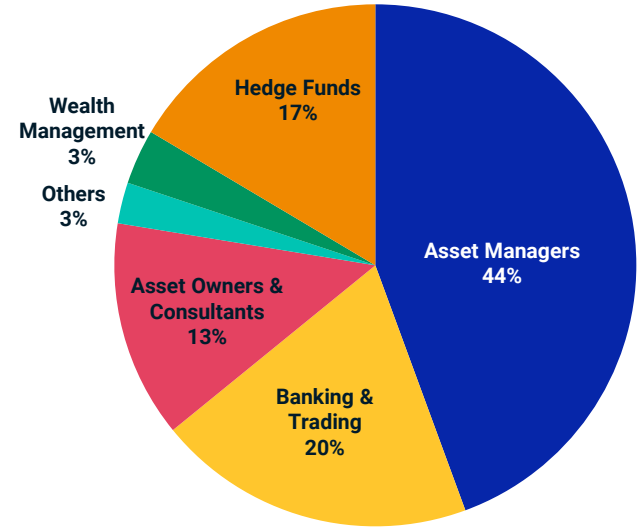
Analytics Run Rate



Analytics Run Rate as of 12/31/2022 by Geography



Analytics Run Rate as of 12/31/2022 by Client base



ESG & Climate: A Pioneer and Market Leader

Setting Standards and Providing a Common Language

45+ years experience in objectively measuring and modeling ESG characteristics¹

1,500+ MSCI ESG equity and fixed income indexes²

Deep integration across MSCI products catering to the investment value chain

1,100+ employees working on ESG & Climate matters, including experts and technologists providing the most efficient investment signals

Extensive set of solutions for ESG and Climate integration

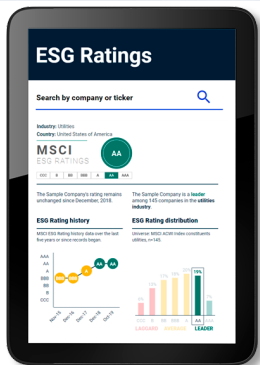
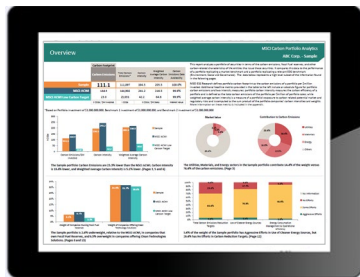
Leadership and Depth of Coverage:

- **ESG Indexes:**
 - #1 ESG Index Provider by Equity ETF Assets Linked to its ESG Indexes³;
 - \$644B in institutional, retail and ETF assets benchmarked to MSCI ESG & Climate Indexes as of 06/30/22
- **ESG Ratings & Data:**
 - 49 of the top 50 Asset Managers⁴ leverage MSCI ESG Research Products;
 - ~3,000 ESG Clients⁵ Globally with Coverage of 16,950 Issuers and 949,200+ Securities,
 - Approximately 20% penetration of UN-PRI signatories⁶
- **Climate Data & Analytics:**
 - Climate Data Provider to 46 of the World's Top 50 Asset Managers⁷;
 - 2,250+ Climate Change Metrics, Covering 18,000+ Issuers⁸
- **Climate Indexes:**
 - #1 Climate Index Provider by Equity Assets Linked to its Climate Indexes⁹

Multiple Years of Creating a Comprehensive Ecosystem

¹ Through MSCI legacy companies KLD, Innovent, IRR, and GMI Ratings; ² Source MSCI Inc. as of January 2023; ³ Data based on Refinitiv Universe as of December 2022, only primary listings, and not cross-listings; ⁴ MSCI ESG solutions are used by 49 of the top 50 world's largest Asset Managers as determined by the report "The world's largest 500 asset managers" – a Thinking Ahead Institute and Pensions & Investments joint study. AUM and rankings calculated as of December 2021. Report published October 2022. MSCI clients as of December 2022; ⁵ To calculate the number of clients, we use the shipping address of the ultimate customer utilizing the product, which counts affiliates, user locations or business units within a single organization as separate clients; ⁶ As of December 2022 Analysis includes ESG & Climate reportable segment ⁷ MSCI ESG Research's climate solutions are used by 46 of the top 50 world's largest Asset Managers as determined by the report "The world's largest 500 asset managers" – a Thinking Ahead Institute and Pensions & Investments joint study. AUM and rankings calculated as of December 2021. Report published October 2022. MSCI clients as of December 2022 ⁸ Source: MSCI ESG Research as of Feb 2023 ⁹ Data as of June 30, 2022, based on eVestment for Institutional funds, Morningstar for Retail funds and Refinitiv Universe for ETFs

ESG & Climate: Comprehensive Solutions Backed by Unique Capabilities



Financial Materiality ¹

- One of the first ESG provider to assess companies based on industry financial materiality, dating back to 1999¹
- Focus on the issues that are most relevant to a company's core business model

Deep Knowledge

- Team of 350+ analysts vets, validates and transforms data into meaningful insight⁴
- Deep climate expertise with dedicated MSCI Climate Risk Center

Alternative data beyond corporate disclosure

- On average, 37% of the data to determine a corporate MSCI ESG Rating is derived from alternative sources²
- Leverage technology and AI to increase timeliness and precision of data collection and analysis

Broad ESG and Climate coverage

- Broad ESG Ratings coverage with 90% of equity and fixed income market value³
- Provide consistent solutions across investment instruments

Leading Technology

- Approximately 300 Technologists dedicated to ESG and Climate⁴
- 100+ data scientists develop robust models turning unstructured data into meaningful output⁴

Unique Track Record⁵

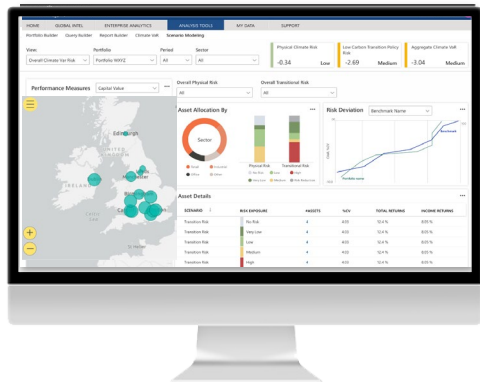
- Extensive track record, analyzed by multiple academic studies
- Tried and tested solution

“One way out of the dilemma of uncorrelated ratings is to use the one with the most predictive power, which they found to be MSCI ESG Ratings” Linda-Eling Lee⁶

¹ Origins of MSCI ESG Ratings from 1999; Financial materiality - ratings focus key ESG issues that could become financially material over the medium to long term ² MSCI ESG Research: 2,879 constituents of the MSCI ACWI Index as of January 2021; ³ Source: MSCI ESG Research as of as of February 2023, coverage subject to change; ⁴ Source: MSCI ESG Research as of December 2022. Includes full time employees, employees of foreign affiliates providing investment advisory services to MSCI ESG Research LLC, and global allocated staff performing non-investment advisory tasks; ⁵ Serafeim, G & Yoon, A, (2021). [Stock Price Reactions to ESG News: The Role of ESG Ratings and Disagreement](#) Harvard Business School Accounting & Management Unit; ⁶ Linda-Eling Lee's February 2021 comment on the results of the Serafeim, G & Yoon, A, (2021) paper

Climate: Tools to Help Investors Identify, Measure and Monitor Risks and Opportunities from Climate Change and the Net Zero Revolution

Integration and Analysis of Climate Exposure

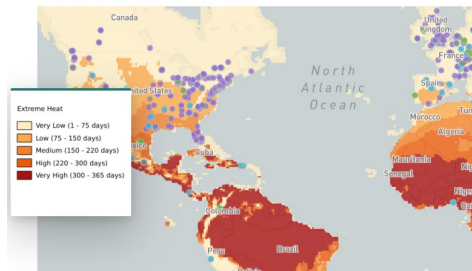
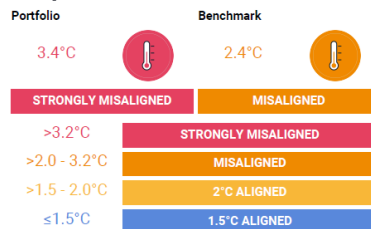


- **Measure and monitor the carbon emissions of issuers and portfolio companies**
- Broad asset class offering through **Total Portfolio Footprinting** covering 4m+ securities and coverage via on demand services.
- Tools to help investors monitor **climate transition** and **physical risks**, including leaders and laggards in the portfolio, and advance their net zero strategy

Forward-Looking Climate Insights

Implied Temperature Rise (ITR) provides a forward-looking portfolio level metric in degrees Celsius demonstrating how aligned the companies in the portfolio are to global temperature targets

Implied Temperature Rise



Cloud-native platforms Climate Models and Metrics



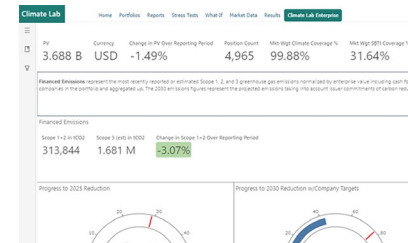
Carbon Emissions & Footprinting



Physical Risk Assessment Low Carbon Transition Risk



MSCI Climate Scenario Analysis (Climate VaR)



MSCI Climate Lab - an application that provides investors with the data and tools to track and assess companies' progress towards net-zero commitments and align their portfolios with climate targets

MSCI ESG Research: Large and Comprehensive Universe of Data

Robust metrics & scores, building blocks and data sets to provide more transparency into the underlying inputs into our models and offer clients tools to address their key data needs.

Source Data and Documents (L0)

Unstructured source-level data – includes document extracts, “as-reported” data (no additional QC).

Sustainability Report excerpt, information on company website, news article

Mandatory
ESG
Disclosures

Voluntary
ESG
Disclosures

Alternative
Data Sources



Standardized Data (L1)

Structured qualitative and quantitative data. Converted to comparable units, subject to QC. Includes estimates and simple calculations.

Carbon Emissions (t), Fossil Fuel Revenue (USD), Women on Board (%)



Derived Data and Scores (L2)

Rules-based derived data calculated using L1 input data and proprietary MSCI ESG Research models and methodologies.

Key Issue Scores

MSCI Ratings and Assessments (L3)

MSCI assessments combining aggregation of scores, MSCI ESG Research analyst view, and committee approval (including overrides, truncations).

MSCI ESG Rating, MSCI ESG Controversies Flag

MSCI ESG Research undertakes extensive work to normalize, standardize and clean up data so that disclosed information is comparable between issuers and usable in a dataset.

Global Issuers and Securities

**Rates 10,000+
issuers from 95
countries**

**Rates 16,900+
issuers through
subsidiary mapping**

**ESG data mapped to
949,000+ securities**

**175+ Government
Fixed Income issuers
covered**

**Covers 90%¹ of the
equity and fixed
income market value**

MSCI ESG & Climate Standardized Data

Production and Capacity Data

Standardized production and capacity data including fossil fuels, reserves, fuel mix, etc.

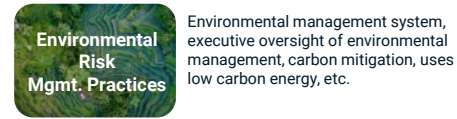


Company Targets and Commitments Data

Forward-looking company-reported targets and commitments and companies' progress toward achieving those targets.



Environmental and Social Qualitative Data



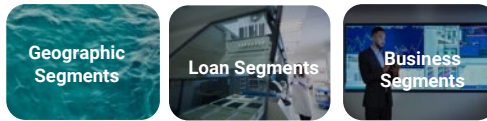
Environmental management system, executive oversight of environmental management, carbon mitigation, uses low carbon energy, etc.



Labour policies, certified health and safety management system, diversity initiatives, product safety measures, etc.

Company Segment Data

Business and geographic revenue and asset segments mapped to key ESG risk exposures

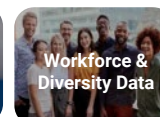
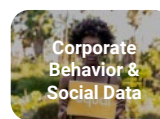


Governance Data

Company level board, pay, ownership and accounting characteristics



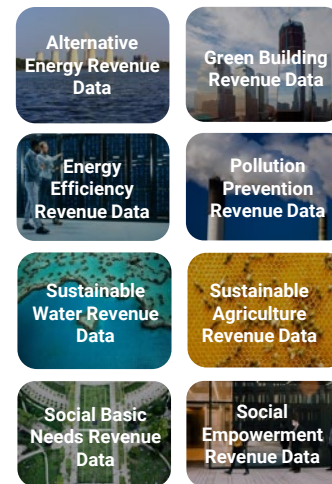
Environmental and Social Quantitative Data



Toxic emissions, water consumption, fatalities, layoffs, complaints, product recalls, regulatory warnings, workforce diversity, etc.

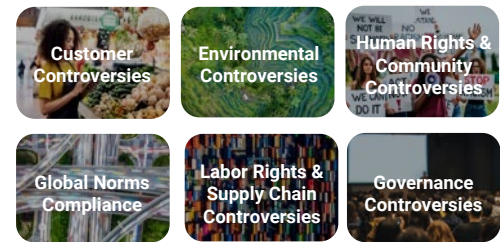
Sustainable Activity Revenue Data

Revenue from products / services with positive impact on the society and the environment.



Controversies and Global Norms Data

Controversies involving the impact of company operations, governance practices, and/or products and services.



Controversial Activity Involvement Data

Involvement in Tobacco, Alcohol, Nuclear Weapons, Cannabis, Abortion etc.



Global Sanctions Data

Datapoints relating to existing global sanctions – typically measuring involvement



MSCI ESG Research: Data to Help Clients with Critical Investing Decisions

Drill down into MSCI model

Helping clients understand the components that drive an MSCI ESG Research top level assessment by diving into the data.

Data to report on the ESG characteristics of portfolios

MSCI ESG data sets and specific metrics to report on portfolio exposures to different ESG issues.

Data to build thematic strategies

Helping clients optimize their portfolios by specific ESG themes and exposures.



Data to measure and communicate the impact of portfolios

Assess and communicate the net impact of portfolios on each of the 17 UN SDGs.

Data for shareholder engagement

Helping clients identify outliers that lag on specific ESG related risks to inform their engagement strategy.

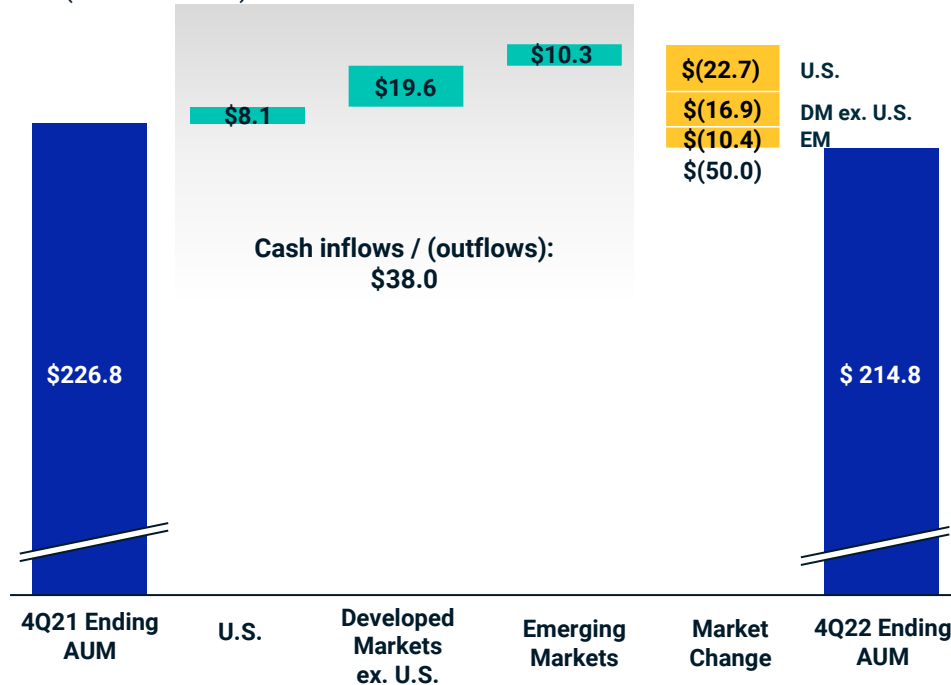
Data to Build House Views

Helping clients build models based on weighing issues and themes they consider aligned to their ESG integration strategies.

Significant Growth Across ESG and Climate Franchise

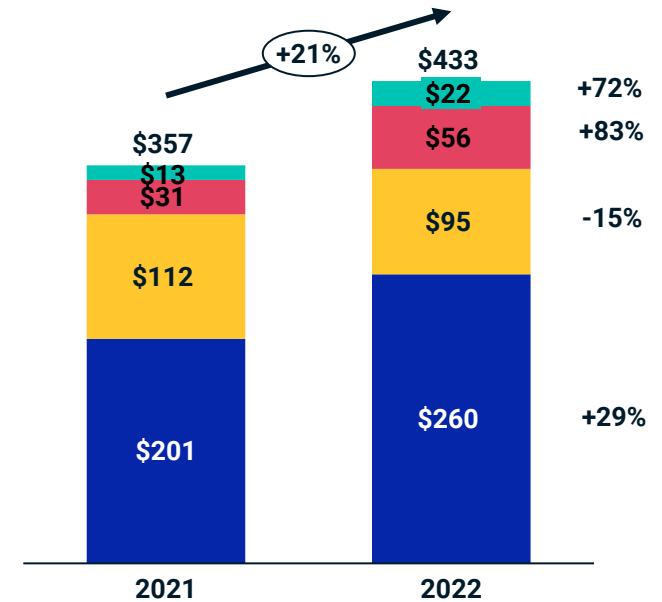
AUM in ETFs linked to MSCI ESG and Climate Equity Indexes

(US\$ in billions)



Growing Firmwide ESG & Climate Run Rates¹

■ ESG Subscription ■ Climate Subscription
■ ESG ABF ■ Climate ABF

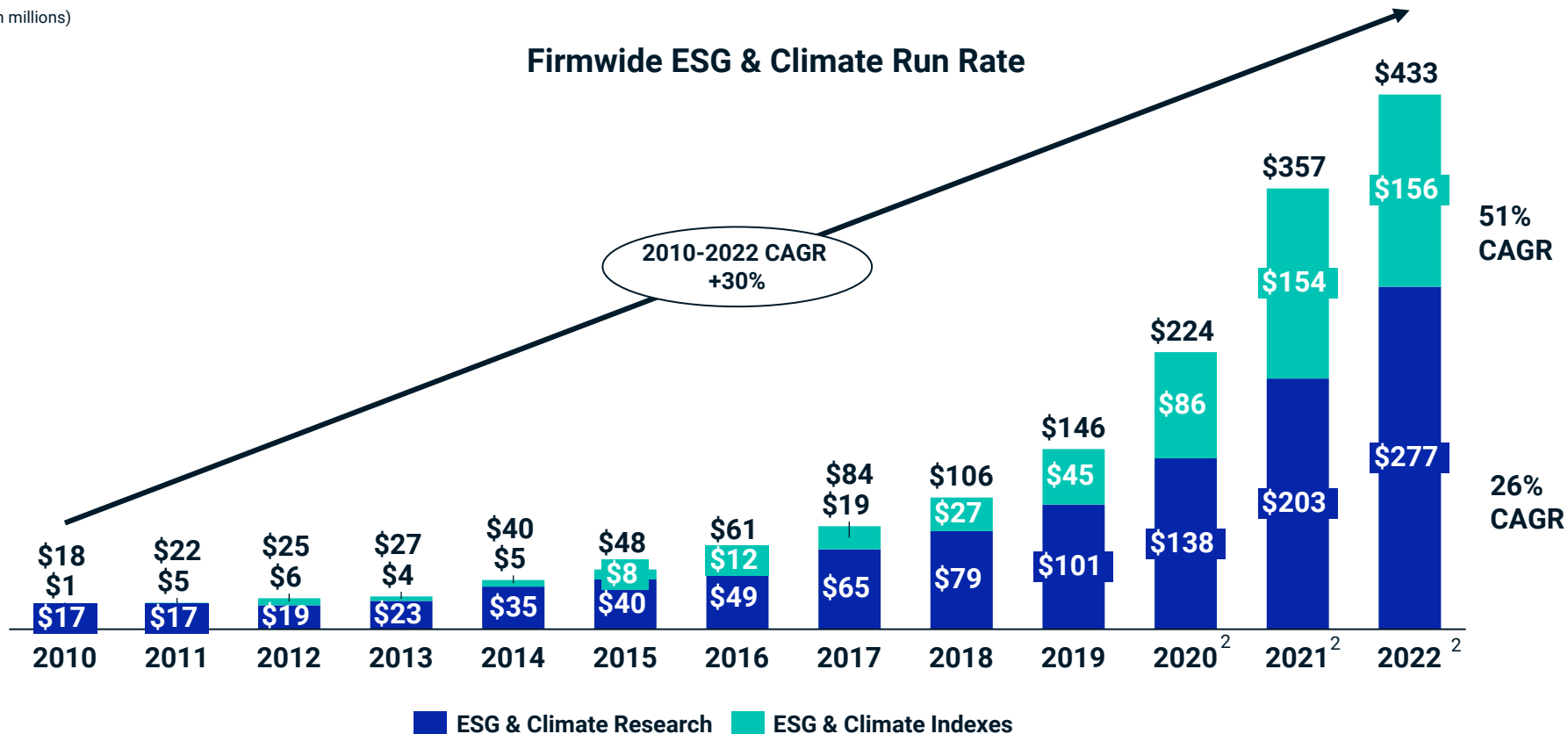


ESG & Climate: Continued Growth Across Firmwide Franchise

(US\$ in millions)

Firmwide ESG & Climate Run Rate

2010-2022 CAGR
+30%



■ ESG & Climate Research ■ ESG & Climate Indexes

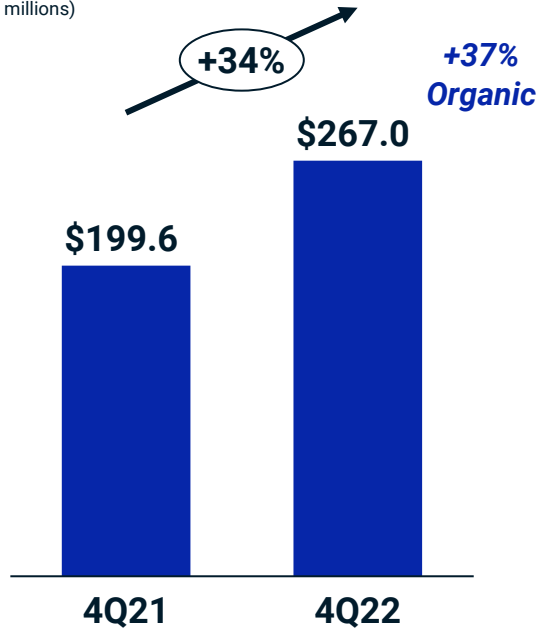
(1) Includes ESG & Climate Research Run Rate, reported in the ESG & Climate segment, and ESG & Climate related Index subscription and asset-based fees Run Rate reported in the Index segment.

(2) Includes ESG & Climate Run Rate in Analytics and Real Assets Segments

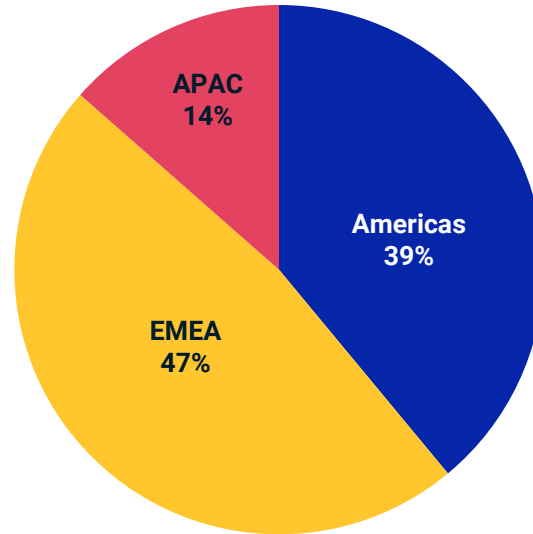
ESG & Climate Segment at a Glance

ESG & Climate Segment Run Rate

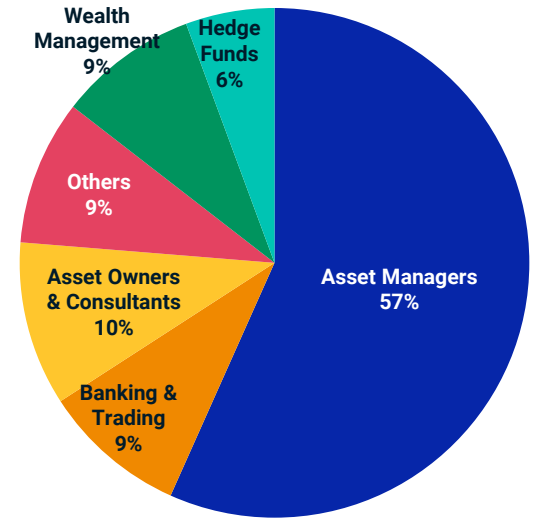
(US\$ in millions)



ESG & Climate Run Rate as of 12/31/2022 by Geography



ESG & Climate Run Rate as of 12/31/2022 by Client base



Our Real Assets Solutions

Market Data Products

Timely and reliable source of truth for CRE pricing, capital flows, investment trends and broker ranking

- SaaS-based platform integrated into daily workflow of brokers & agents, investors & owners and lenders & originators
- Measuring \$40T+ of capital transactions covering property transactions, Mortgage Debt Intelligence® and Construction Starts Data
- Profiles on over 200,000+ investors, lenders, brokers and deal participants
- MSCI Real Capital Analytics CPPI™ Commercial Property Prices Indexes
- Leasing details in selected countries

Portfolio Services Products

Analytics and reporting solutions for private portfolio & market benchmark fundamentals and investment metrics spanning:

- Headline Performance & Risk compared with industry standard or custom benchmarks
- Attribution of Property Portfolio, Fund, Asset and Tenancy performance
- Real Estate Climate Value-at-Risk (Climate VaR), providing forward-looking return-based valuation assessment and systematic disclosure tools
- Forward-looking Income Risk Monitoring and Property or Tenant Due Diligence assessment (INCANS)

MSCI Property Indexes and Property Fund Indexes

Enable investors to measure performance and risk of direct real estate investments from \$2T of underlying assets

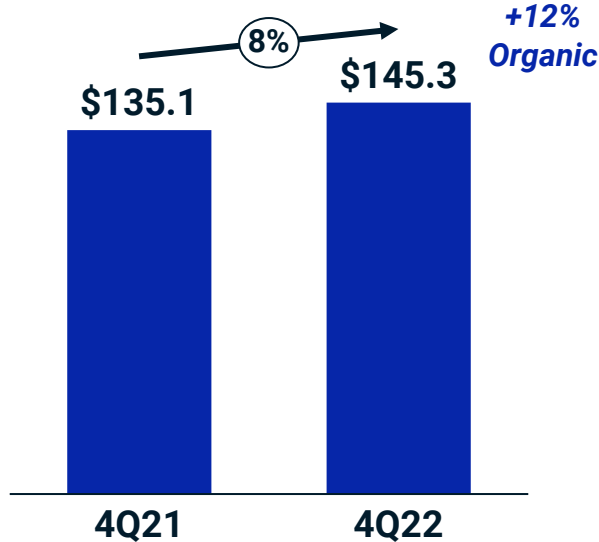
- MSCI Global Property Index (GPI)
- Asia Pacific, North America, EMEA regional indexes plus sub-regional composites
- MSCI Property Indexes for 30+ countries

60+ headlined indexes • 2000+ clients • 170+ countries • 600+ data contributors

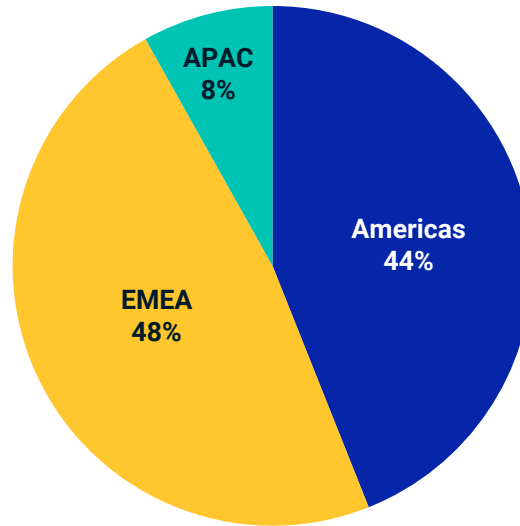
All Other – Private Assets Segment at a Glance

All Other – Private Assets Run Rate

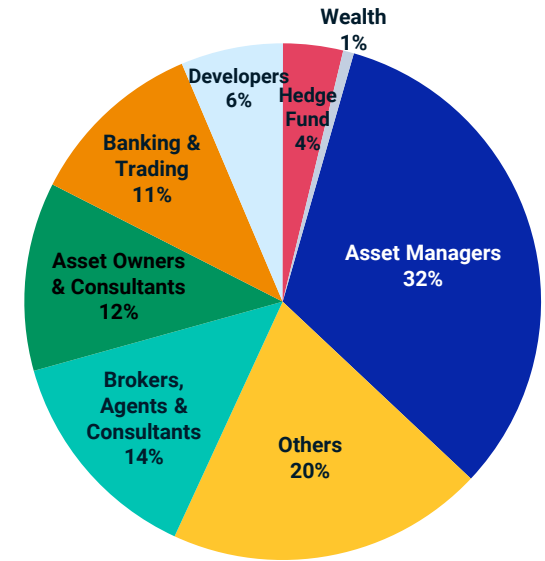
(US\$ in millions)



All other- Private Assets Run Rate as of 12/31/2022 by Geography



All other- Private Assets Run Rate as of 12/31/2022 by Client base



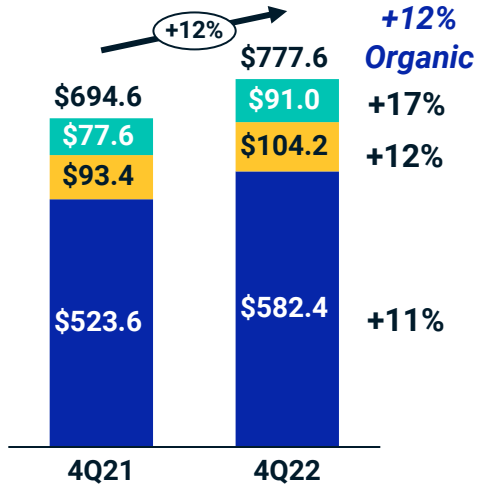
Appendix



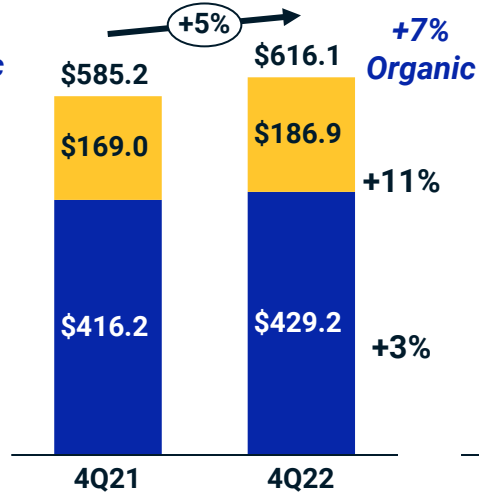
4Q22: Organic Subscription Run Rate Growth of 13%

(US\$ in millions)

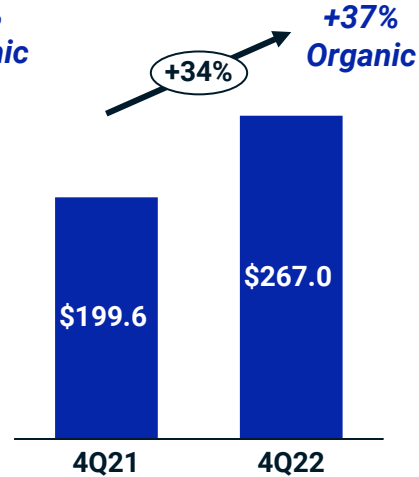
Index Subscription



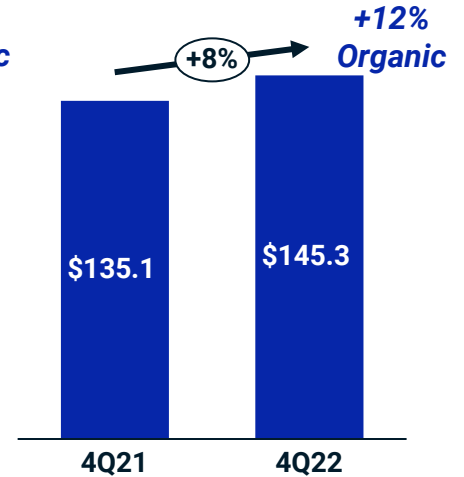
Analytics



ESG & Climate



All Other – Private Assets

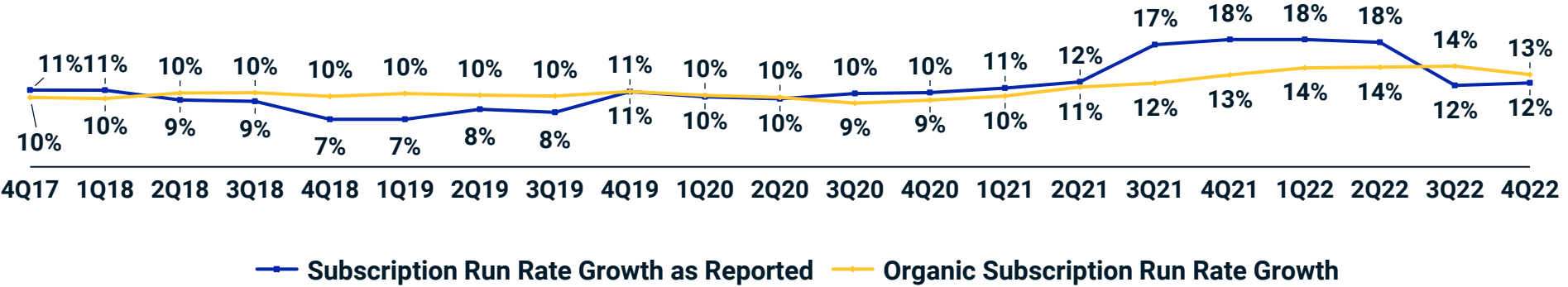


- Market Cap Weighted
- Custom Indexes & Special Packages
- Factors and ESG & Climate

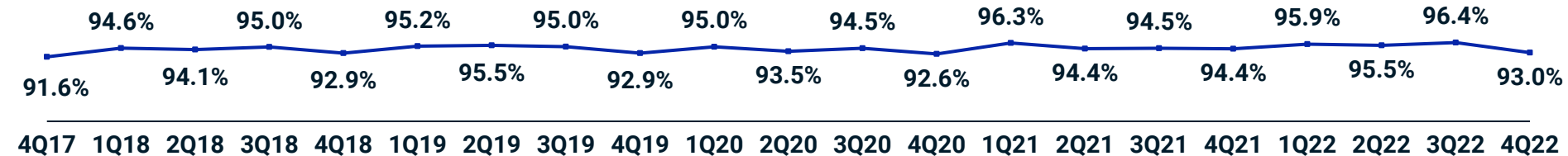
- Multi-Asset Class Analytics
- Equity Analytics

Continued Resilient Key Operating Metrics

YoY Subscription Run Rate Growth (as Reported and Organic)

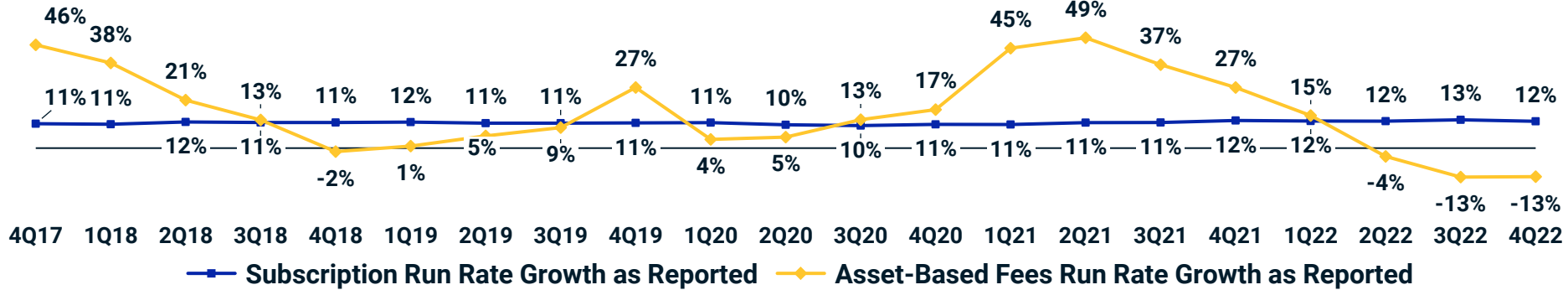


Quarterly Retention Rate Trends

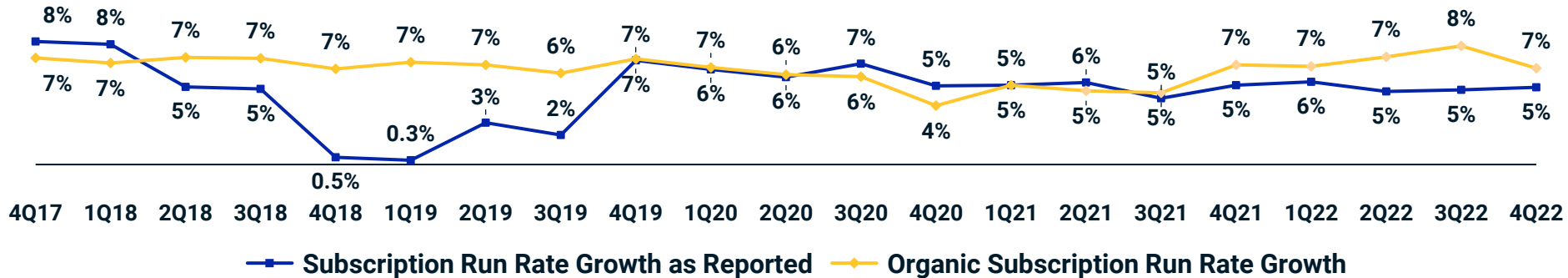


4Q17 to 4Q22 YoY Segment Run Rate Growth

Index

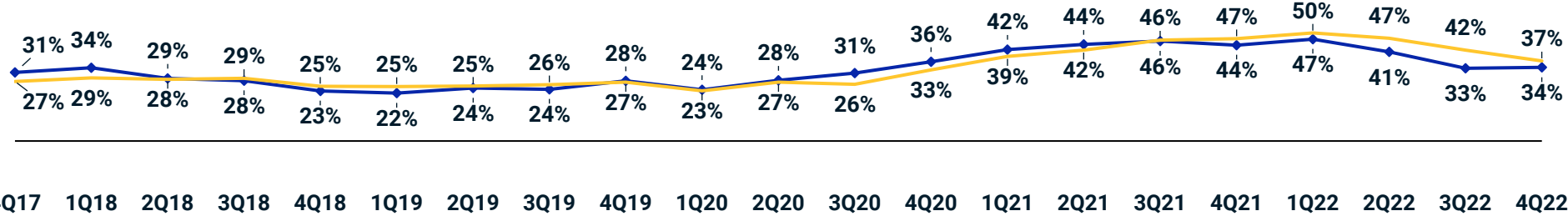


Analytics



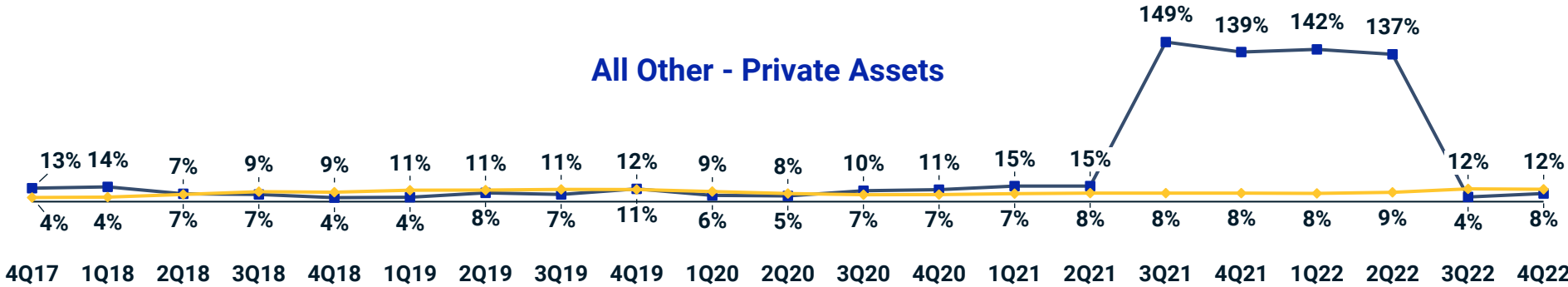
4Q17 to 4Q22 YoY Segment Run Rate Growth

ESG & Climate



◆ Subscription Run Rate Growth as Reported
 —◆ Organic Subscription Run Rate Growth

All Other - Private Assets

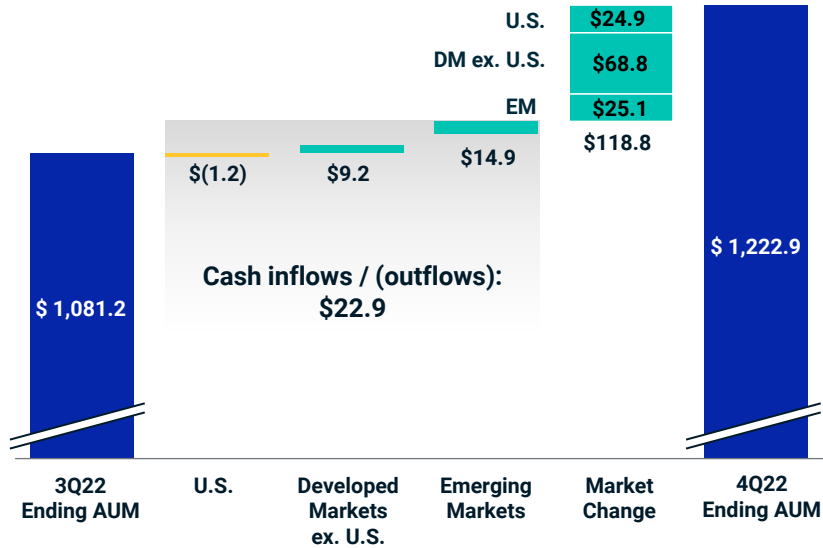


■ Subscription Run Rate Growth as Reported
 —◆ Organic Subscription Run Rate Growth

4Q22 QoQ AUM Drivers: MSCI-Linked Equity ETFs

(US\$ in billions)

By Geographic Exposure



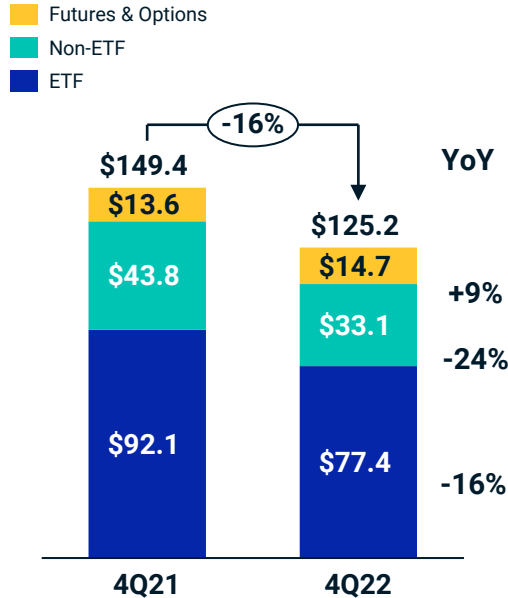
By Product



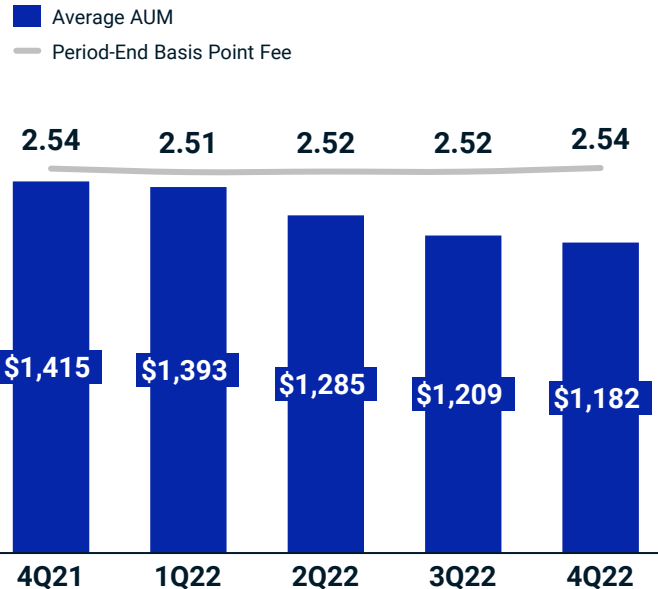
Index Segment: Asset-Based Fees Details

(US\$ in millions, except AUM in billions and Average BPS)

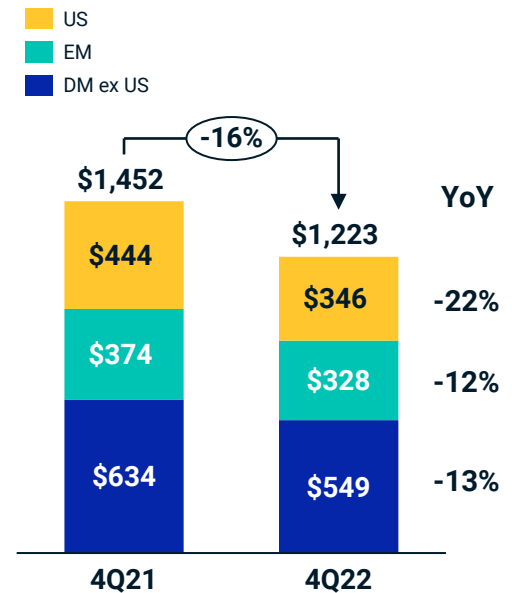
Asset-based Fees (ABF) Revenue



Quarterly Average AUM and Period-End Basis Point Fee¹ of ETFs linked to MSCI Equity Indexes



Quarter-End AUM by Market Exposure² of ETFs linked to MSCI Equity Indexes



¹Based on period-end Run Rate for ETFs linked to MSCI equity indexes using period-end AUM. Please refer to Table 7: AUM in ETFs Linked to MSCI equity Indexes (unaudited) of the press release reporting MSCI's financial results for fourth quarter and full year 2022.

²US = ETFs linked to MSCI equity indexes, the majority of whose weight is comprised of securities in MSCI Developed Market (DM) countries, primarily or exclusively in the US; DM ex US = ETFs linked to MSCI equity indexes, the majority of whose weight is comprised of securities in MSCI DM countries other than the US; EM = ETFs linked to MSCI equity indexes, the majority of whose weight is comprised of securities that are not in MSCI DM countries. Note: The AUM in equity ETFs also includes AUM in Exchange Traded Notes, the value of which is less than 1% of the AUM amounts presented.

Use of Non-GAAP Financial Measures

- MSCI has presented supplemental non-GAAP financial measures as part of this earnings presentation. Reconciliations are provided in the following slides that reconcile each non-GAAP financial measure with the most comparable GAAP measure. The non-GAAP financial measures presented in this earnings release should not be considered as alternative measures for the most directly comparable GAAP financial measures. The non-GAAP financial measures presented in this earnings release are used by management to monitor the financial performance of the business, inform business decision-making and forecast future results.
- “Adjusted EBITDA” is defined as net income before (1) provision for income taxes, (2) other expense (income), net, (3) depreciation and amortization of property, equipment and leasehold improvements, (4) amortization of intangible assets and, at times, (5) certain other transactions or adjustments, including, when applicable, impairment related to sublease of leased property and certain non-recurring acquisition-related integration and transaction costs.
- “Adjusted EBITDA expenses” is defined as operating expenses less depreciation and amortization of property, equipment and leasehold improvements and amortization of intangible assets and, at times, certain other transactions or adjustments, including, when applicable, impairment related to sublease of leased property and certain non-recurring acquisition-related integration and transaction costs.
- “Adjusted EBITDA margin” is defined as adjusted EBITDA divided by operating revenues.
- “Adjusted net income” and “adjusted EPS” are defined as net income and diluted EPS, respectively, before the after-tax impact of: the amortization of acquired intangible assets, including the amortization of the basis difference between the cost of the equity method investment and MSCI’s share of the net assets of the investee at historical carrying value and, at times, certain other transactions or adjustments, including, when applicable, the impact related to costs associated with debt extinguishment, the impact related to certain non-recurring acquisition-related integration and transaction costs, the impact from the write-off of internally developed capitalized software, the impact from impairment related to sublease of leased property and the impact related to gain from changes in ownership interest of equity method investee.
- “Capex” is defined as capital expenditures plus capitalized software development costs.
- “Free cash flow” is defined as net cash provided by operating activities, less Capex.
- “Organic operating revenue growth” is defined as operating revenue growth compared to the prior year period excluding the impact of acquired businesses, divested businesses and foreign currency exchange rate fluctuations.
- Asset-based fees ex-FX does not adjust for the impact from foreign currency exchange rate fluctuations on the underlying assets under management (“AUM”).
- We believe adjusted EBITDA, adjusted EBITDA margin and adjusted EBITDA expenses are meaningful measures of the operating performance of MSCI because they adjust for significant one-time, unusual or non-recurring items as well as eliminate the accounting effects of certain capital spending and acquisitions that do not directly affect what management considers to be our ongoing operating performance in the period.
- We believe adjusted net income and adjusted EPS are meaningful measures of the performance of MSCI because they adjust for the after-tax impact of significant one-time, unusual or non-recurring items as well as eliminate the impact of any transactions that do not directly affect what management considers to be our ongoing operating performance in the period. We also exclude the after-tax impact of the amortization of acquired intangible assets and amortization of the basis difference between the cost of the equity method investment and MSCI’s share of the net assets of the investee at historical carrying value, as these non-cash amounts are significantly impacted by the timing and size of each acquisition and therefore not meaningful to the ongoing operating performance in the period.
- We believe that free cash flow is useful to investors because it relates the operating cash flow of MSCI to the capital that is spent to continue and improve business operations, such as investment in MSCI’s existing products. Further, free cash flow indicates our ability to strengthen MSCI’s balance sheet, repay our debt obligations, pay cash dividends and repurchase shares of our common stock.
- We believe organic operating revenue growth is a meaningful measure of the operating performance of MSCI because it adjusts for the impact of foreign currency exchange rate fluctuations and excludes the impact of operating revenues attributable to acquired and divested businesses for the comparable prior year period, providing insight into our ongoing operating performance for the period(s) presented.
- We believe that the non-GAAP financial measures presented in this earnings presentation facilitate meaningful period-to-period comparisons and provide a baseline for the evaluation of future results.
- Adjusted EBITDA expenses, adjusted EBITDA, adjusted EBITDA margin, adjusted net income, adjusted EPS, Capex, free cash flow and organic operating revenue growth are not defined in the same manner by all companies and may not be comparable to similarly-titled non-GAAP financial measures of other companies. These measures can differ significantly from company to company depending on, among other things, long-term strategic decisions regarding capital structure, the tax jurisdictions in which companies operate and capital investments. Accordingly, the Company’s computation of these measures may not be comparable to similarly-titled measures computed by other companies.

Use of Operating Metrics

- MSCI has presented supplemental key operating metrics as part of this earnings presentation, including Retention Rate, Run Rate, subscription sales, subscription cancellations and non-recurring sales.
- Retention Rate is an important metric because subscription cancellations decrease our Run Rate and ultimately our future operating revenues over time. The annual Retention Rate represents the retained subscription Run Rate (subscription Run Rate at the beginning of the fiscal year less actual cancels during the year) as a percentage of the subscription Run Rate at the beginning of the fiscal year.
- The Retention Rate for a non-annual period is calculated by annualizing the cancellations for which we have received a notice of termination or for which we believe there is an intention not to renew or discontinue the subscription during the non-annual period, and we believe that such notice or intention evidences the client's final decision to terminate or not renew the applicable agreement, even though such notice is not effective until a later date. This annualized cancellation figure is then divided by the subscription Run Rate at the beginning of the fiscal year to calculate a cancellation rate. This cancellation rate is then subtracted from 100% to derive the annualized Retention Rate for the period.
- Retention Rate is computed by operating segment on a product/service-by-product/service basis. In general, if a client reduces the number of products or services to which it subscribes within a segment, or switches between products or services within a segment, we treat it as a cancellation for purposes of calculating our Retention Rate except in the case of a product or service switch that management considers to be a replacement product or service. In those replacement cases, only the net change to the client subscription, if a decrease, is reported as a cancellation. In the Analytics and the ESG and Climate operating segments, substantially all product or service switches are treated as replacement products or services and netted in this manner, while in our Index and Real Assets operating segments, product or service switches that are treated as replacement products or services and receive netting treatment occur only in certain limited instances. In addition, we treat any reduction in fees resulting from a down-sell of the same product or service as a cancellation to the extent of the reduction. We do not calculate Retention Rate for that portion of our Run Rate attributable to assets in index-linked investment products or futures and options contracts, in each case, linked to our indexes.
- Run Rate estimates at a particular point in time the annualized value of the recurring revenues under our client license agreements ("Client Contracts") for the next 12 months, assuming all Client Contracts that come up for renewal, or reach the end of the committed subscription period, are renewed and assuming then-current currency exchange rates, subject to the adjustments and exclusions described below. For any Client Contract where fees are linked to an investment product's assets or trading volume/fees, the Run Rate calculation reflects, for ETFs, the market value on the last trading day of the period, for futures and options, the most recent quarterly volumes and/or reported exchange fees, and for other non-ETF products, the most recent client-reported assets. Run Rate does not include fees associated with "one-time" and other non-recurring transactions. In addition, we add to Run Rate the annualized fee value of recurring new sales, whether to existing or new clients, when we execute Client Contracts, even though the license start date, and associated revenue recognition, may not be effective until a later date. We remove from Run Rate the annualized fee value associated with products or services under any Client Contract with respect to which we have received a notice of termination, non-renewal or an indication the client does not intend to continue their subscription during the period and have determined that such notice evidences the client's final decision to terminate or not renew the applicable products or services, even though such notice is not effective until a later date.
- "Organic subscription Run Rate growth" is defined as the period over period Run Rate growth, excluding the impact of changes in foreign currency and the first year impact of any acquisitions. It is also adjusted for divestitures. Changes in foreign currency are calculated by applying the currency exchange rate from the comparable prior period to current period foreign currency denominated Run Rate.
- Sales represents the annualized value of products and services clients commit to purchase from MSCI and will result in additional operating revenues. Non-recurring sales represent the actual value of the customer agreements entered into during the period and are not a component of Run Rate. New recurring subscription sales represent additional selling activities, such as new customer agreements, additions to existing agreements or increases in price that occurred during the period and are additions to Run Rate. Subscription cancellations reflect client activities during the period, such as discontinuing products and services and/or reductions in price, resulting in reductions to Run Rate. Net new recurring subscription sales represent the amount of new recurring subscription sales net of subscription cancellations during the period, which reflects the net impact to Run Rate during the period.
- Total gross sales represent the sum of new recurring subscription sales and non-recurring sales. Total net sales represent the total gross sales net of the impact from subscription cancellations.

Reconciliation of Net Income to Adjusted EBITDA (Unaudited)

In thousands	Year Ended				
	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
Net income	\$ 870,573	\$ 725,983	\$ 601,822	\$ 563,648	\$ 507,885
Provision for income taxes	173,268	132,153	84,403	39,670	122,011
Other expense (income), net	163,799	214,589	198,539	152,383	57,002
Operating income	\$ 1,207,640	\$ 1,072,725	\$ 884,764	\$ 755,701	\$ 686,898
Amortization of intangible assets	91,079	80,592	56,941	49,410	54,189
Depreciation and amortization of property, equipment and leasehold improvements	26,893	28,901	29,805	29,999	31,346
Impairment related to sublease of leased property	—	7,702	—	—	—
Acquisition-related integration and transaction costs(1)	4,059	6,870	—	—	—
Multi-Year PSU payroll tax expense	—	—	—	15,389	—
Consolidated adjusted EBITDA	\$ 1,329,671	\$ 1,196,790	\$ 971,510	\$ 850,499	\$ 772,433

(1) Incremental and non-recurring costs attributable to acquisitions directly related to the execution of the transaction and integration of the acquired business that have occurred no later than 12 months after the close of the transaction.

Reconciliation of Net Income to Adjusted EBITDA (cont'd) (Unaudited)

In thousands	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
Net income	\$ 214,971	\$ 193,865	\$ 870,573	\$ 725,983
Provision for income taxes	50,691	51,898	173,268	132,153
Other expense (income), net	43,088	34,824	163,799	214,589
Operating income	308,750	280,587	1,207,640	1,072,725
Amortization of intangible assets	23,805	21,023	91,079	80,592
Depreciation and amortization of property, equipment and leasehold improvements	6,467	7,929	26,893	28,901
Impairment related to sublease of leased property	—	7,702	—	7,702
Acquisition-related integration and transaction costs(1)	—	1,419	4,059	6,870
Consolidated adjusted EBITDA	\$ 339,022	\$ 318,660	\$ 1,329,671	\$ 1,196,790
Index adjusted EBITDA	\$ 248,395	\$ 252,378	\$ 985,407	\$ 951,312
Analytics adjusted EBITDA	66,411	52,963	247,895	198,799
ESG and Climate adjusted EBITDA	18,760	9,163	61,094	29,748
All Other - Private Assets adjusted EBITDA	5,456	4,156	35,275	16,931
Consolidated adjusted EBITDA	\$ 339,022	\$ 318,660	\$ 1,329,671	\$ 1,196,790
Operating Revenue	\$ 576,208	\$ 549,842	\$ 2,248,598	\$ 2,043,544
Operating Margin	53.6%	51.0%	53.7%	52.5%
Adjusted EBITDA Margin	58.8%	58.0%	59.1%	58.6%

(1) Incremental and non-recurring costs attributable to acquisitions directly related to the execution of the transaction and integration of the acquired business that have occurred no later than 12 months after the close of the transaction.

Reconciliation of Operating Expenses to Adjusted EBITDA Expenses (Unaudited)

In thousands	Three Months Ended		Year Ended		Full-Year
	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021	2023 Outlook(1)
Total operating expenses	\$ 267,458	\$ 269,255	\$ 1,040,958	\$ 970,819	\$1,090,000 - \$1,130,000
Amortization of intangible assets	23,805	21,023	91,079	80,592	
Depreciation and amortization of property, equipment and leasehold improvements	6,467	7,929	26,893	28,901	\$125,000 - \$135,000
Impairment related to sublease of leased property	—	7,702	—	7,702	
Acquisition-related integration and transaction costs(2)	—	1,419	4,059	6,870	
Consolidated adjusted EBITDA expenses	\$ 237,186	\$ 231,182	\$ 918,927	\$ 846,754	\$965,000 - \$995,000
Index adjusted EBITDA expenses	\$ 80,866	\$ 79,429	\$ 317,802	\$ 300,452	
Analytics adjusted EBITDA expenses	83,300	85,119	328,212	345,500	
ESG and Climate adjusted EBITDA expenses	44,799	39,280	167,217	136,444	
All Other - Private Assets adjusted EBITDA expenses	28,221	27,354	105,696	64,358	
Consolidated adjusted EBITDA expenses	\$ 237,186	\$ 231,182	\$ 918,927	\$ 846,754	\$965,000 - \$995,000

(1) We have not provided a full line-item reconciliation for total operating expenses to adjusted EBITDA expenses for this future period because we believe such a reconciliation would imply a degree of precision and certainty that could be confusing to investors and we are unable to reasonably predict certain items contained in the GAAP measure without unreasonable efforts. This is due to the inherent difficulty of forecasting the timing or amount of various items that have not yet occurred and are out of the Company's control or cannot be reasonably predicted. For the same reasons, the Company is unable to address the probable significance of the unavailable information. Forward-looking non-GAAP financial measures provided without the most directly comparable GAAP financial measures may vary materially from the corresponding GAAP financial measures. See "Forward-Looking Statements" above.

(2) Incremental and non-recurring costs attributable to acquisitions directly related to the execution of the transaction and integration of the acquired business that have occurred no later than 12 months after the close of the transaction.

Reconciliation of Net Income and Diluted EPS to Adjusted Net Income and Adjusted EPS (Unaudited)

In thousands, except per share data	Year Ended				
	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
Net income	\$ 870,573	\$ 725,983	\$ 601,822	\$ 563,648	\$ 507,885
Plus: Amortization of acquired intangible assets and equity method investment basis difference	67,373	47,001	37,413	34,773	43,981
Plus: Multi-Year PSU payroll tax expense	—	—	—	15,389	—
Less: Discrete excess tax benefit related to Multi-Year PSU vesting	—	—	—	(66,581)	—
Plus: Debt extinguishment costs associated with the 2024, 2025, 2026 and 2027 Senior Notes Redemptions	—	59,104	44,930	16,794	—
Plus: Write-off of internally developed capitalized software	—	16,013	—	—	—
Plus: Impairment related to sublease of leased property(1)	—	8,702	—	—	—
Plus: Acquisition-related integration and transaction costs(2)(3)	4,220	7,041	—	—	—
Less: Gain from changes in ownership interest of equity method investee	—	(6,972)	—	—	—
Less: Gain on sale of FEA (not tax effected)	—	—	—	—	(10,646)
Less: Gain on sale of InvestorForce	—	—	—	—	(46,595)
Less: Valuation Allowance released related to InvestorForce disposition	—	—	—	—	(7,758)
Less: Tax Reform adjustments	—	—	(6,256)	—	(8,272)
Less: Income tax effect	(11,883)	(26,462)	(16,490)	(13,226)	1,678
Adjusted net income	\$ 930,283	\$ 830,410	\$ 661,419	\$ 550,797	\$ 480,273
Diluted EPS	\$ 10.72	\$ 8.70	\$ 7.12	\$ 6.59	\$ 5.66
Plus: Amortization of acquired intangible assets and equity method investment basis difference	0.83	0.56	0.44	0.41	0.49
Plus: Multi-Year PSU payroll tax expense	—	—	—	0.18	—
Less: Discrete excess tax benefit related to Multi-Year PSU vesting	—	—	—	(0.78)	—
Plus: Debt extinguishment costs associated with the 2024, 2025, 2026 and 2027 Senior Notes Redemptions	—	0.71	0.53	0.20	—
Plus: Write-off of internally developed capitalized software	—	0.19	—	—	—
Plus: Impairment related to sublease of leased property(1)	—	0.10	—	—	—
Plus: Acquisition-related integration and transaction costs(2)(3)	0.05	0.08	—	—	—
Less: Gain from changes in ownership interest of equity method investee	—	(0.08)	—	—	—
Less: Gain on sale of FEA (not tax effected)	—	—	—	—	(0.12)
Less: Gain on sale of InvestorForce	—	—	—	—	(0.52)
Less: Valuation Allowance released related to InvestorForce disposition	—	—	—	—	(0.09)
Plus: Tax Reform adjustments	—	—	(0.07)	—	(0.09)
Less: Income tax effect	(0.15)	(0.31)	(0.19)	(0.16)	0.02
Adjusted EPS	\$ 11.45	\$ 9.95	\$ 7.83	\$ 6.44	\$ 5.35

Reconciliation of Net Income and Diluted EPS to Adjusted Net Income and Adjusted EPS (cont'd) (Unaudited)

In thousands, except per share data	Three Months Ended		Year Ended	
	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2022	Dec. 31, 2021
Net income	\$ 214,971	\$ 193,865	\$ 870,573	\$ 725,983
Plus: Amortization of acquired intangible assets and equity method investment basis difference	16,809	17,086	67,373	47,001
Plus: Debt extinguishment costs associated with the 2024, 2025, 2026 and 2027 Senior Notes Redemptions	—	—	—	59,104
Plus: Write-off of internally developed capitalized software	—	—	—	16,013
Plus: Impairment related to sublease of leased property	—	8,702	—	8,702
Plus: Acquisition-related integration and transaction costs(1)(2)	—	1,590	4,220	7,041
Less: Gain from changes in ownership interest of equity method investee	—	(6,972)	—	(6,972)
Less: Income tax effect(3)	(3,218)	(4,497)	(11,883)	(26,462)
Adjusted net income	\$ 228,562	\$ 209,774	\$ 930,283	\$ 830,410
Diluted EPS	\$ 2.67	\$ 2.32	\$ 10.72	\$ 8.70
Plus: Amortization of acquired intangible assets and equity method investment basis difference	0.21	0.20	0.83	0.56
Plus: Debt extinguishment costs associated with the 2024, 2025, 2026 and 2027 Senior Notes Redemptions	—	—	—	0.71
Plus: Write-off of internally developed capitalized software	—	—	—	0.19
Plus: Impairment related to sublease of leased property	—	0.10	—	0.10
Plus: Acquisition-related integration and transaction costs(1)(2)	—	0.02	0.05	0.08
Less: Gain from changes in ownership interest of equity method investee	—	(0.08)	—	(0.08)
Less: Income tax effect(3)	(0.04)	(0.05)	(0.15)	(0.31)
Adjusted EPS	\$ 2.84	\$ 2.51	\$ 11.45	\$ 9.95
Diluted weighted average common shares outstanding	80,424	83,578	81,215	83,479

(1) Acquisition-related integration and transaction costs of \$4.1 million are presented within "General and administrative" expenses and \$0.2 million are presented within "Depreciation and amortization of property, equipment and leasehold improvements" expenses for the year ended Dec. 31, 2022.

(2) Incremental and non-recurring costs attributable to acquisitions directly related to the execution of the transaction and integration of the acquired business that have occurred no later than 12 months after the close of the transaction.

(3) Adjustments relate to the tax effect of non-GAAP adjustments, which were determined based on the nature of the underlying non-GAAP adjustments and their relevant jurisdictional tax rates.

Reconciliation of Net Cash Provided by Operating Activities to Free Cash Flow (Unaudited)

In thousands	Year Ended				
	Dec. 31, 2022	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018
Net cash provided by operating activities	\$ 1,095,369	\$ 936,069	\$ 811,109	\$ 709,523	\$ 612,762
Capital expenditures	(13,617)	(13,509)	(21,826)	(29,116)	(30,257)
Capitalized software development costs	(59,278)	(39,285)	(29,149)	(24,654)	(18,704)
Capex	(72,895)	(52,794)	(50,975)	(53,770)	(48,961)
Free cash flow	\$ 1,022,474	\$ 883,275	\$ 760,134	\$ 655,753	\$ 563,801

In thousands	Three Months Ended		Full-Year
	Dec. 31, 2022	Dec. 31, 2021	2023 Outlook(1)
Net cash provided by operating activities	\$ 315,427	\$ 279,664	\$1,145,000 - \$1,195,000
Capital expenditures	(5,605)	(6,390)	
Capitalized software development costs	(14,853)	(10,207)	
Capex	(20,458)	(16,597)	(\$85,000 - \$75,000)
Free cash flow	\$ 294,969	\$ 263,067	\$1,060,000 - \$1,120,000

(1) We have not provided a line-item reconciliation for free cash flow to net cash from operating activities for this future period because we believe such a reconciliation would imply a degree of precision and certainty that could be confusing to investors and we are unable to reasonably predict certain items contained in the GAAP measure without unreasonable efforts. This is due to the inherent difficulty of forecasting the timing or amount of various items that have not yet occurred and are out of the Company's control or cannot be reasonably predicted. For the same reasons, the Company is unable to address the probable significance of the unavailable information. Forward-looking non-GAAP financial measures provided without the most directly comparable GAAP financial measures may vary materially from the corresponding GAAP financial measures. See "Forward-Looking Statements" above.

Fourth Quarter 2022 Reconciliation of Operating Revenue Growth to Organic Operating Revenue Growth (UNAUDITED)

	Comparison of the Three Months Ended December 31, 2022 and 2021			
	Total	Recurring Subscription	Asset-Based Fees	Non-Recurring Revenues
	Change Percentage	Change Percentage	Change Percentage	Change Percentage
Index				
Operating revenue growth	(0.8)%	11.7%	(16.2)%	14.6%
Impact of acquisitions and divestitures	—%	—%	—%	—%
Impact of foreign currency exchange rate fluctuations	0.4%	0.6%	0.2%	—%
Organic operating revenue growth	(0.4)%	12.3%	(16.0)%	14.6%
	Total	Recurring Subscription	Asset-Based Fees	Non-Recurring Revenues
	Change Percentage	Change Percentage	Change Percentage	Change Percentage
Analytics				
Operating revenue growth	8.4%	9.8%	—%	(35.4)%
Impact of acquisitions and divestitures	—%	—%	—%	—%
Impact of foreign currency exchange rate fluctuations	1.1%	1.1%	—%	1.5%
Organic operating revenue growth	9.5%	10.9%	—%	(33.9)%
	Total	Recurring Subscription	Asset-Based Fees	Non-Recurring Revenues
	Change Percentage	Change Percentage	Change Percentage	Change Percentage
ESG and Climate				
Operating revenue growth	31.2%	31.5%	—%	20.1%
Impact of acquisitions and divestitures	—%	—%	—%	—%
Impact of foreign currency exchange rate fluctuations	11.8%	11.9%	—%	6.4%
Organic operating revenue growth	43.0%	43.4%	—%	26.5%
	Total	Recurring Subscription	Asset-Based Fees	Non-Recurring Revenues
	Change Percentage	Change Percentage	Change Percentage	Change Percentage
All Other - Private Assets				
Operating revenue growth	6.9%	6.7%	—%	26.1%
Impact of acquisitions and divestitures	—%	—%	—%	—%
Impact of foreign currency exchange rate fluctuations	6.9%	7.0%	—%	7.9%
Organic operating revenue growth	13.8%	13.7%	—%	34.0%
	Total	Recurring Subscription	Asset-Based Fees	Non-Recurring Revenues
	Change Percentage	Change Percentage	Change Percentage	Change Percentage
Consolidated				
Operating revenue growth	4.8%	13.1%	(16.2)%	3.2%
Impact of acquisitions and divestitures	—%	—%	—%	—%
Impact of foreign currency exchange rate fluctuations	2.0%	2.7%	0.2%	0.8%
Organic operating revenue growth	6.8%	15.8%	(16.0)%	4.0%

Full Year 2022 Reconciliation of Operating Revenue Growth to Organic Operating Revenue Growth (UNAUDITED)

	Comparison of the Years Ended December 31, 2022 and 2021			
	Total	Recurring Subscription	Asset-Based Fees	Non-Recurring Revenues
	Change Percentage	Change Percentage	Change Percentage	Change Percentage
Index				
Operating revenue growth	4.1 %	12.2 %	(4.7)%	(3.8)%
Impact of acquisitions and divestitures	— %	— %	— %	— %
Impact of foreign currency exchange rate fluctuations	0.4 %	0.5 %	0.2 %	— %
Organic operating revenue growth	4.5 %	12.7 %	(4.5)%	(3.8)%
	Total	Recurring Subscription	Asset-Based Fees	Non-Recurring Revenues
	Change Percentage	Change Percentage	Change Percentage	Change Percentage
Analytics				
Operating revenue growth	5.8 %	6.3 %	— %	(18.1)%
Impact of acquisitions and divestitures	— %	— %	— %	— %
Impact of foreign currency exchange rate fluctuations	1.0 %	0.9 %	— %	2.8 %
Organic operating revenue growth	6.8 %	7.2 %	— %	(15.3)%
	Total	Recurring Subscription	Asset-Based Fees	Non-Recurring Revenues
	Change Percentage	Change Percentage	Change Percentage	Change Percentage
ESG and Climate				
Operating revenue growth	37.4 %	37.2 %	— %	43.8 %
Impact of acquisitions and divestitures	— %	— %	— %	— %
Impact of foreign currency exchange rate fluctuations	10.1 %	10.2 %	— %	7.2 %
Organic operating revenue growth	47.5 %	47.4 %	— %	51.0 %
	Total	Recurring Subscription	Asset-Based Fees	Non-Recurring Revenues
	Change Percentage	Change Percentage	Change Percentage	Change Percentage
All Other - Private Assets				
Operating revenue growth	73.4 %	75.4 %	— %	(20.6)%
Impact of acquisitions and divestitures	(70.9)%	(72.4)%	— %	— %
Impact of foreign currency exchange rate fluctuations	10.0 %	10.1 %	— %	4.9 %
Organic operating revenue growth	12.5 %	13.1 %	— %	(15.7)%
	Total	Recurring Subscription	Asset-Based Fees	Non-Recurring Revenues
	Change Percentage	Change Percentage	Change Percentage	Change Percentage
Consolidated				
Operating revenue growth	10.0 %	16.4 %	(4.7)%	(4.0)%
Impact of acquisitions and divestitures	(2.8)%	(4.1)%	— %	— %
Impact of foreign currency exchange rate fluctuations	1.7 %	2.3 %	0.2 %	1.0 %
Organic operating revenue growth	8.9 %	14.6 %	(4.5)%	(3.0)%