



MSCI Inc.

INVESTOR PRESENTATION

February 17, 2022



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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 2022 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, 2021 filed with the Securities and Exchange Commission ("SEC") on February 11, 2022 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 2020, unless otherwise noted.
- All financial figures for the three months and year ended December 31, 2021 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



MSCI at a Glance



What We Do

Provide products and services that global investors can use to build **better portfolios** for a better world

4,303
employees²

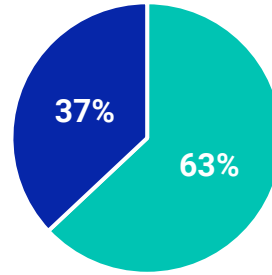
~\$2.2B

Total Run Rate²

↑ 20% YoY

30+ Office locations

Must-have investment data, tools, models and technology
across asset classes for performance and risk



37% of employees located in developed market centers

63% of employees located in emerging market centers

~\$16.3T
in assets under management

benchmarked to MSCI Indexes as of 6/30/21

Extensive knowledge of the investment process

6,300+ clients¹
in **95+** countries²

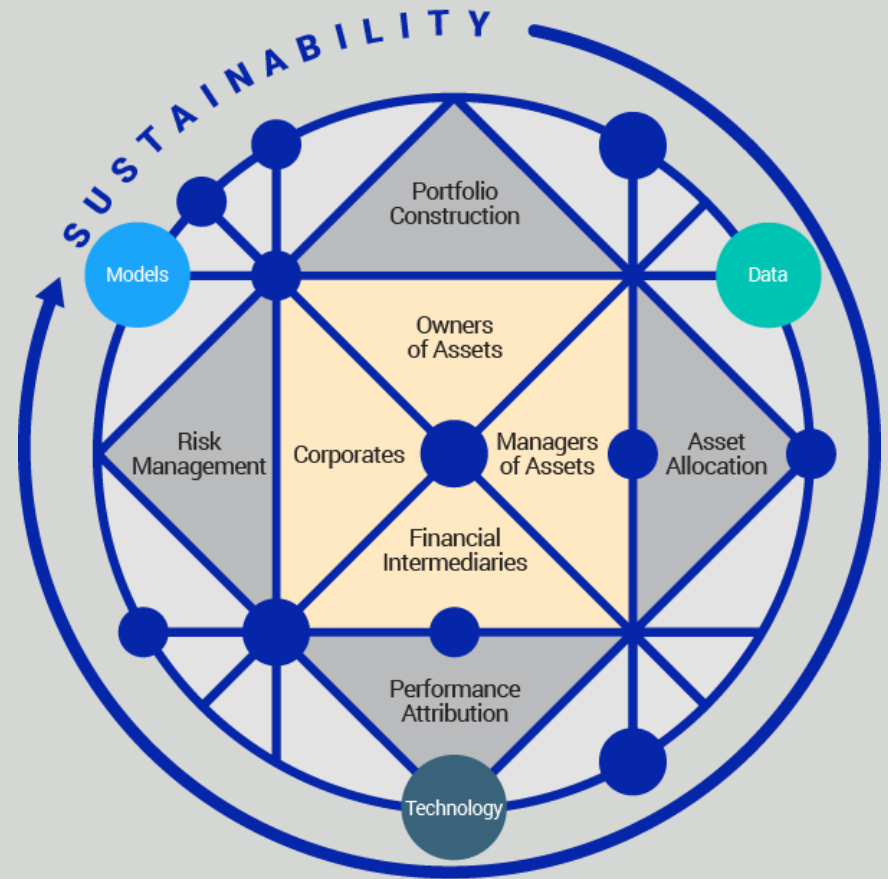
- Providing solutions to enable all participants in the investment process
- Driving innovation for industry-leading solutions
- 50+ years of establishing standards in the investment industry

¹Represents the aggregate of all related clients under their respective parent entity, excluding clients of Real Capital Analytics, Inc. ("RCA") which were not previously MSCI's clients.

²As of December 31, 2021.

Our Strategy

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



Our Vision: An Increasingly Complex Investment Industry Creates Opportunity

\$100T+ Managed Assets

100,000+ Public Equities

Millions Fixed Income Instruments

11,000+ Private Equity (PE) Funds

120,000+ PE-owned Companies

\$10.5T+ Global Investment Properties

\$610T+ Notional Derivatives Contracts

\$148T+ 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

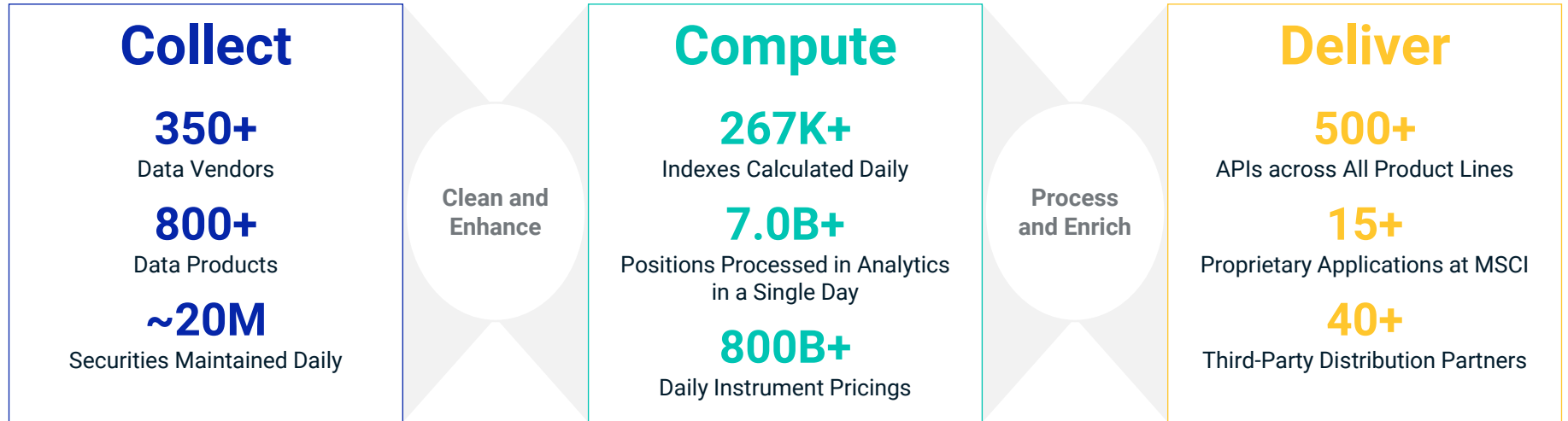
- Data- and research-driven insights into drivers of risk and performance
- Broad asset class coverage
- Innovative tools to help bring investment strategies to market
- Exceptional quality
- Reliability, technology and business continuity infrastructure

Supporting Investors' Needs in Every Part of the Investment Cycle



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

2020-2021 Corporate Responsibility Highlights & Key Enhancements



New Commitments & Policies

- **Announced Net-Zero commitment** to achieve goal by 2040
- **Founding member** of the Net Zero Service Provider Alliance
- Commitment to support the **UN SDGs**
- Published a **Global Human Rights Policy**
- Updated our **Environmental Policy** to include our net-zero commitment
- **Updated Supplier Code of Conduct** to reflect our net-zero commitment



New Actions & Solutions

- Expanded our climate actions including **aligning suppliers with MSCI's commitments**
- **Included Climate and DE&I** into our risk management system
- Enhanced our **Corporate Responsibility Governance** by creating a CR Policy Committee
- Conducted **Board education sessions** on climate
- Conducted **corporates & pensions roundtables** to discuss CR trends and challenges
- **Develop new solutions** (e.g., Implied Temperature Rise, Net-Zero Tracker)



New Reports & Filings

- **First time Task Force on Climate-related Financial Disclosures (TCFD) Report**
- **First time Sustainability Accounting Standard Board (SASB) guide**
- **First time Sustainable Finance Disclosure Regulation (SFDR) report**
- **New webpage** dedicated to Sustainability Reports & Policies
- Third CDP report
- Fifth UN PRI questionnaire
- Published MSCI's **Net-Zero Revolution paper**

Source: MSCI's CR Website, Sustainability Reports and Policies: <https://www.msci.com/who-we-are/corporate-responsibility/sustainability-reports-policies>
MSCI's CR Website, Corporate Responsibility, Our Commitment (SDGs) : <https://www.msci.com/who-we-are/corporate-responsibility>
Net Zero Revolution PDF: <https://www.msci.com/documents/1296102/24586122/Role-of-Capital-in-the-Net-Zero-Revolution.pdf/20b604be-5658-08c7-aa4e-c78f5d49cd73>

Net Zero Service: <https://www.msci.com/documents/1296102/15233886/A-Mandatory-Common-Language-for-Climate-Disclosure.pdf>
Risk Management System: [2021 MSCI CDP Survey](https://www.msci.com/documents/1296102/15233886/A-Mandatory-Common-Language-for-Climate-Disclosure.pdf)

Robust and Compelling Financial Model



Recurring, visible revenue model

~97% or higher recurring revenues¹ as percent of total revenue from 2016 – 2021



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

Our business is not highly capital intensive and, as such, we convert a high percentage of our profits into excess cash



Strong balance sheet and liquidity

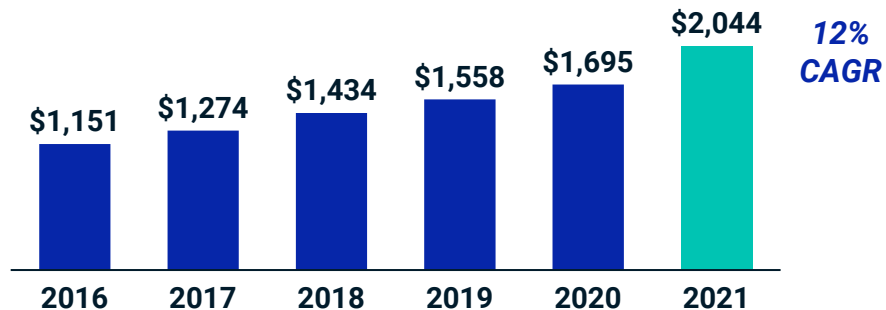
Total cash and equivalents of \$1.4B as of December 31, 2021

Financial review

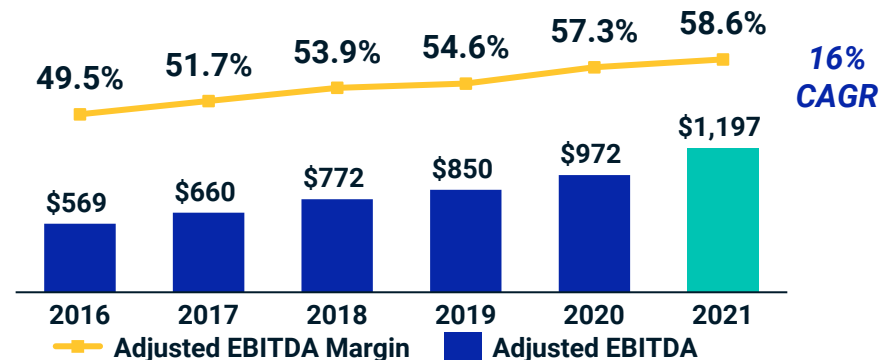


Exceptional Track Record of Financial Execution

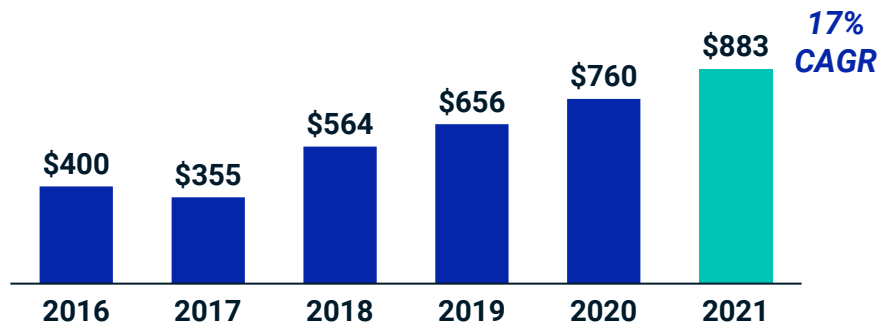
Revenue (\$m)



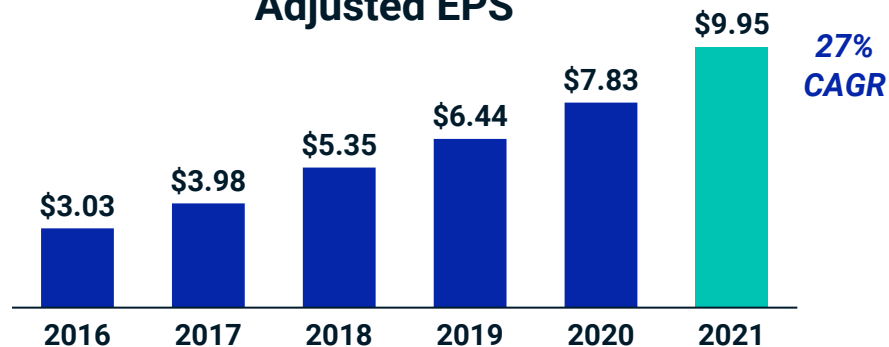
Adjusted EBITDA (\$m)



Free Cash Flow (\$m)



Adjusted EPS



Significant Recurring Revenue Model with Global Client Base

Operating Revenues Mix
Full Year Ended 12/31/2021

by Segment

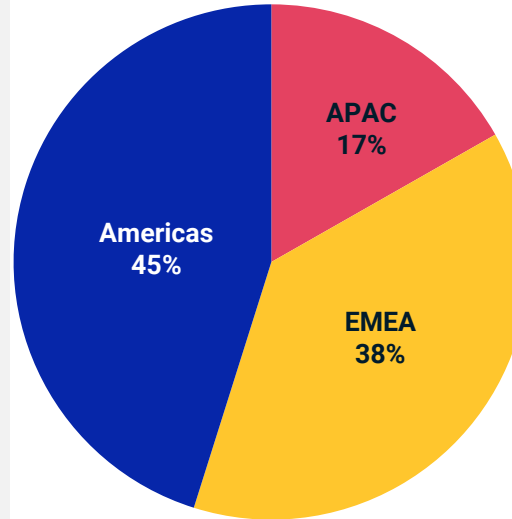
by Type

All Other – Private Assets 4%

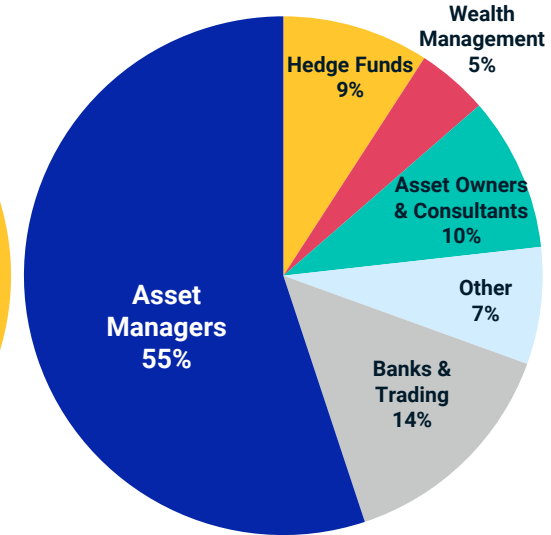
Non-Recurring 3%



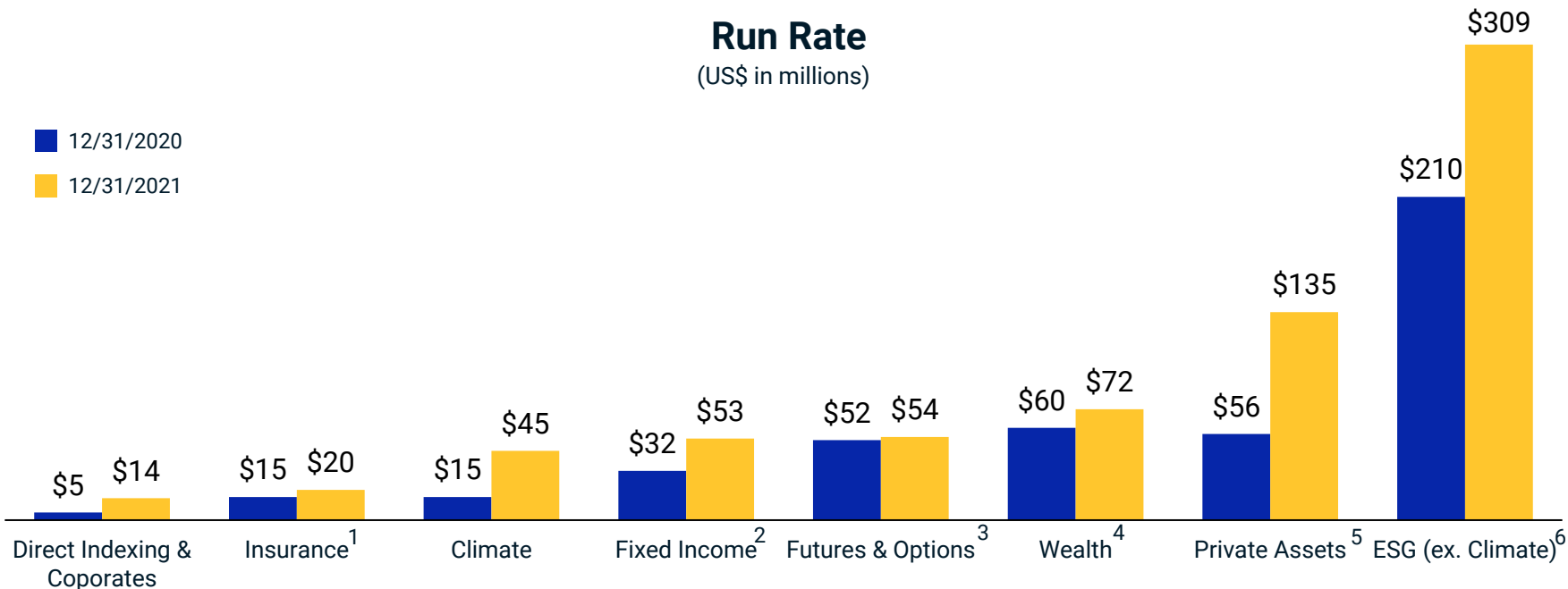
MSCI Subscription Run Rate
as of 12/31/2021 by Geography



MSCI Subscription Run Rate
as of 12/31/2021 by Client Base



Significant demand and growth across large emerging opportunities



Rapidly expanding in attractive additional addressable markets

Note: Run Rate totals may include overlap between different client segments. ¹Excludes amounts from Asset Manager and Asset Owner affiliates of Insurance companies. ²Excludes Analytics Enterprise Risk & Performance. ³Listed only. ⁴Represents total subscription run rate from wealth management client base.

⁵Excluding Burgiss and includes RCA in 12/31/21 run rate. ⁶Includes ESG Indexes reported in Index segment and ESG Research, data, ratings and tools reported in ESG & Climate segment.

Innovation and Investment in Key Growth Areas



New Growth

Drive new business capabilities through new products and

Examples:

- Climate and Corporates client segments
- Thematic Indexes
- Fixed income Indexes and ESG



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 12/31/2021

Total Cash	\$1,421M
Total Debt ²	\$4,161M
Net Debt (total Debt less total cash)	\$2,740M
Total Debt / 2021 Adjusted EBITDA	3.5x
Net Debt / 2021 Adjusted EBITDA	2.3x

Unsecured Debt Maturity Profile²



- In 4Q21, returned \$91M to shareholders through quarterly dividends of \$85.8M and \$5.2M of share repurchases during 4Q21
 - YTD through trade date of February 10, 2022, share repurchases of \$634.1 million or 1.2 million shares at an average price of \$515.83; continued opportunistic approach to MP&A and buybacks
- Strong balance sheet provides optionality
 - Next maturity not until 2029
- Disciplined and consistent approach to deployment
 - Triple-Crown framework to evaluate internal opportunities and MP&A (mergers, partnerships and acquisitions)

Credit Ratings as of 2/17/2022:

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

¹MSCI typically seeks to maintain minimum cash balances globally of approximately \$200.0 million to \$250.0 million for general operating purposes

²Reflects gross debt, inclusive of deferred financing fees and premium.

³Aggregate commitments of \$500.0 million until November 2024, at which point the aggregate commitments will be reduced to \$467.5 million until March 2026

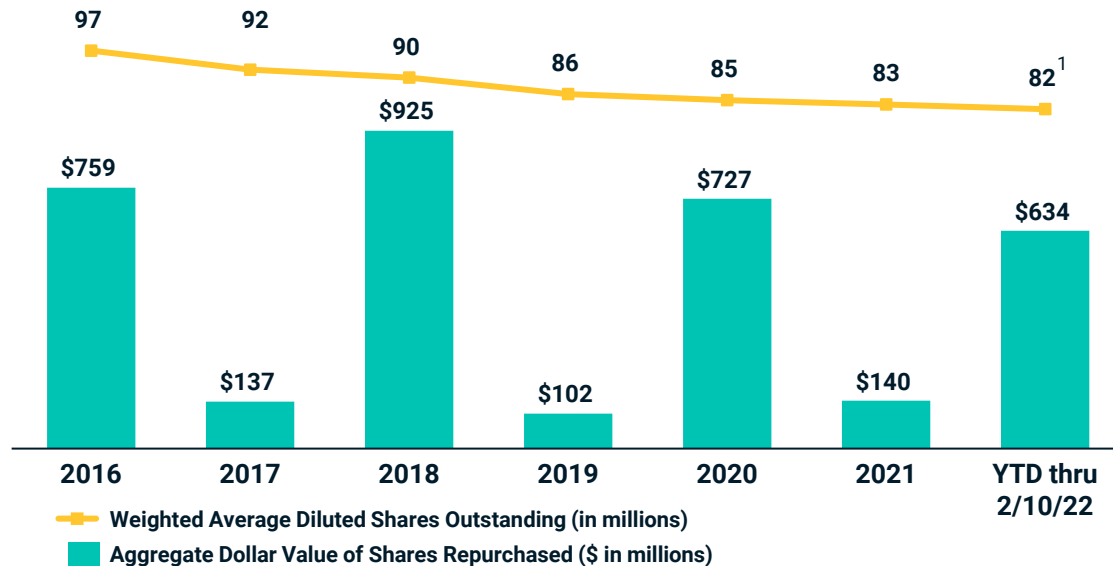
Disciplined Approach to Capital Deployment for Shareholders

Dividends (\$M)



- Meaningful dividend with strong historical growth
- Payout ratio target of 40% – 50% of Adjusted EPS
- In Q1 2022, cash dividend of \$1.04 per share declared by MSCI Board of Directors

Share Repurchases



Opportunistic Share Repurchases Capitalizes on Attractive Values and Volatility

\$4.7B of Share Repurchases since 2012

Full-Year 2022 Guidance as of January 27, 2022

Guidance Item	Current Guidance for Full-Year 2022
Operating Expense	\$1,075 to \$1,115 million
Adjusted EBITDA Expense	\$975 to \$1,005 million
Interest Expense (including amortization of financing fees) ¹	~\$162 million
Depreciation & Amortization Expense	\$100 to \$110 million
Effective Tax Rate	15.5% to 18.5%
Capital Expenditures	\$60 to \$70 million
Net Cash Provided by Operating Activities	\$1,120 to \$1,160 million
Free Cash Flow	\$1,050 to \$1,100 million

Note: MSCI's guidance for 2022 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 ongoing uncertainty related to the duration, magnitude and impact of the COVID-19 pandemic.

The guidance provided above assumes, among other things, that MSCI maintains its current debt levels. On January 26, 2022, the MSCI Board of Directors authorized management to opportunistically explore financing options that would increase the Company's leverage ratio and interest expense. Any potential financing is subject to market and other conditions, and there can be no assurance as to the timing or certainty of a transaction.

(1) Interest income will continue to be impacted by the lower rates available on cash balances.

Long-term Targets as of January 27, 2022

	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

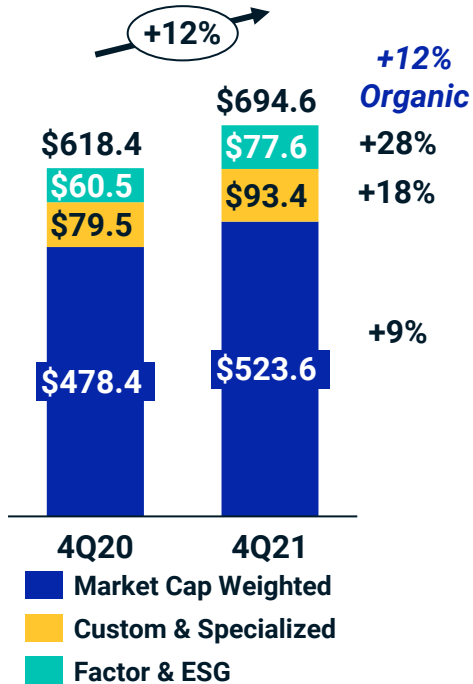
¹ Excludes Asset-Based Fees.

Segment highlights

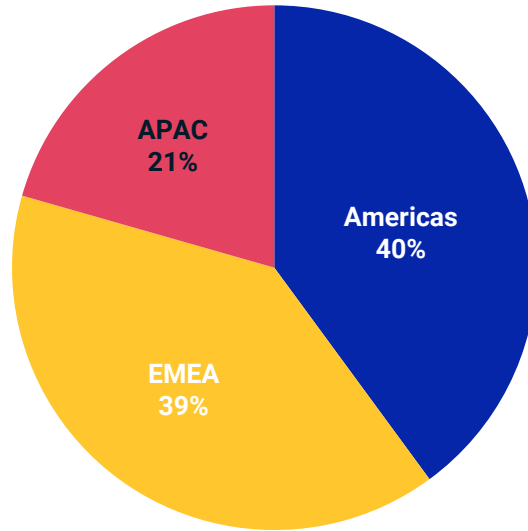


Index subscription at a glance

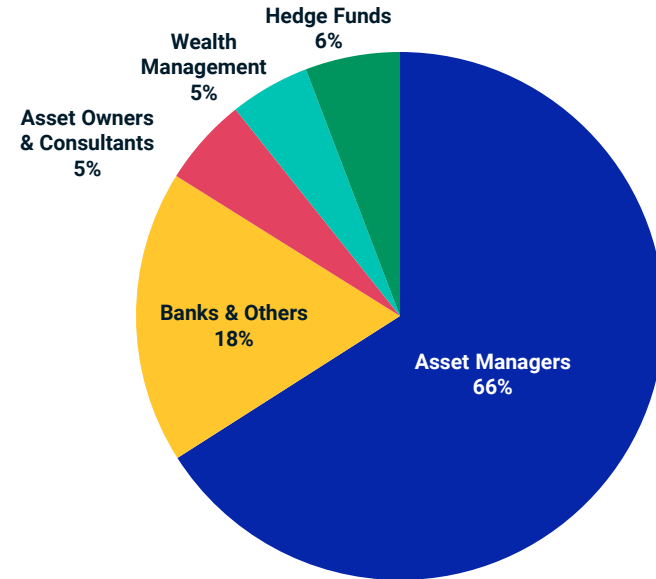
Index Subscription Run Rate



Index Subscription Run Rate as of 12/31/2021 by Geography



Index Subscription Run Rate as of 12/31/2021 by Client base



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



Custom Indexes

Any MSCI Index as a starting point

- Regional and Country Selection
- GICS Selection
- Rule-based security selection
- Equity Screening
- Custom Weighting
- Custom Special Tax rates
- Stock Exclusions
- Custom ESG & Climate Overlay
- Custom Factors Overlay
- Custom Thematic Overlay
- Custom Delivery and File Format

Client use cases:

- Construct and issue index-linked products such as ETFs or derivatives to meet specific investment themes
- Help clients including asset owners avoid benchmark misalignment by using an index that more accurately reflects their investment strategy, thesis or constraints
- Support wealth managers in delivering personalized portfolios at scale using Direct indexing



Benefits



Broad Coverage

Customize any MSCI index such as Market Cap, Factor, Thematic, ESG and Climate to reflect specific benchmark or product requirements.



Data Reliability

Well-established, reliable index production process – same as used for calculating all MSCI Standard indexes.



Rigorous Methodology

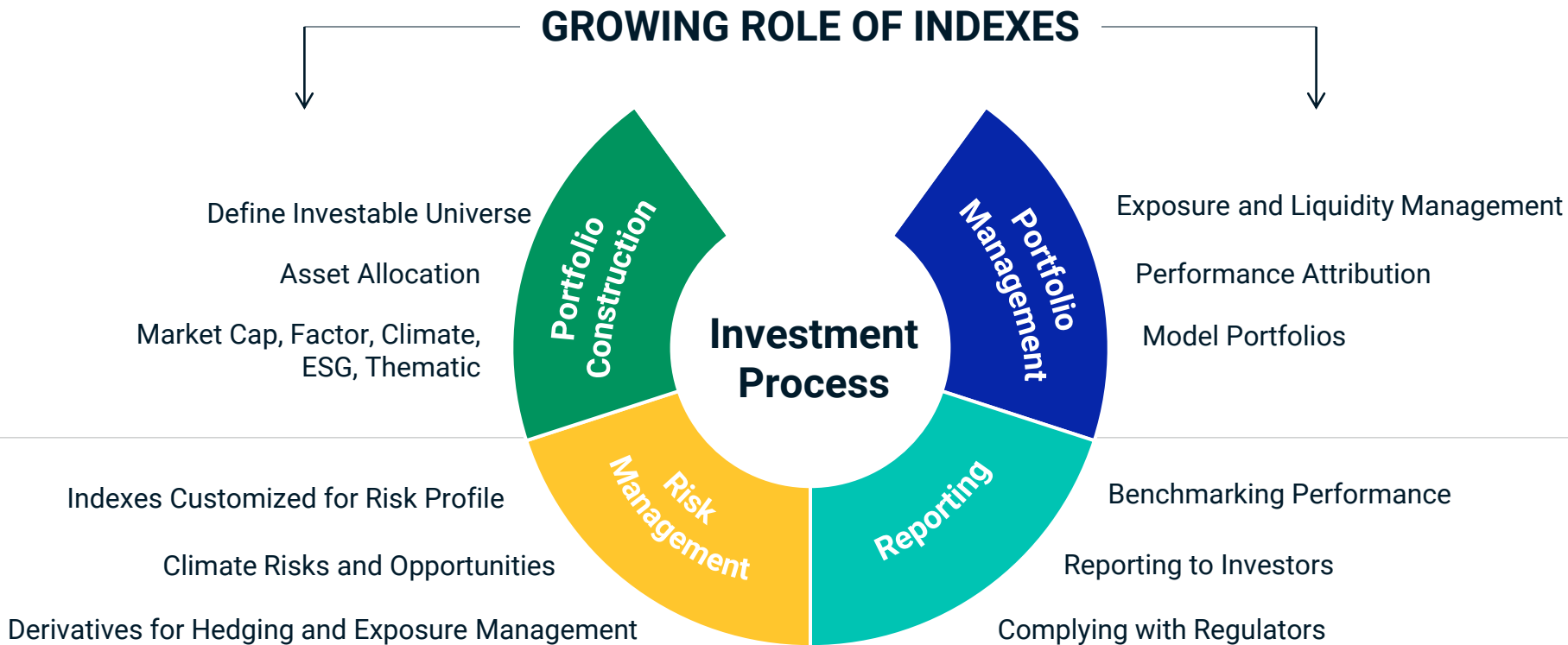
Investable, transparent and replicable indexes designed with the same rigorous calculation and maintenance methodology as applied to the MSCI Standard Indexes.



Global Support

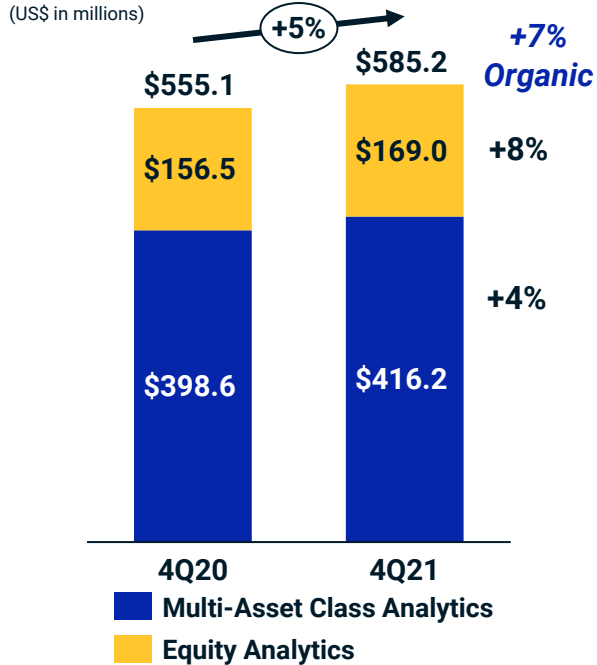
Cross-functional custom indexes team of experts in Research, Index Production, Technology and Product Management.

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

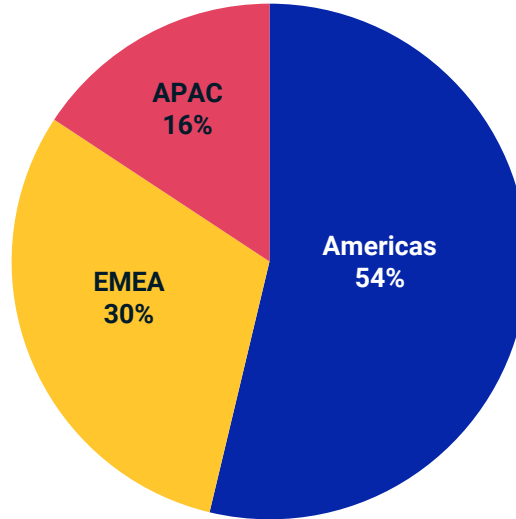


Analytics segment at a glance

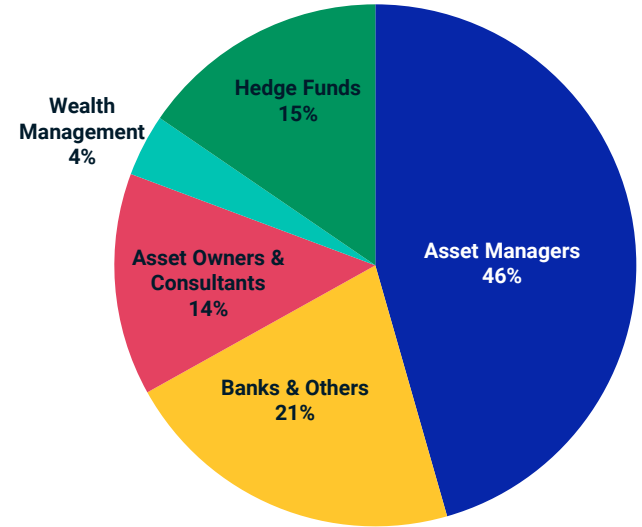
Analytics Run Rate



Analytics Run Rate as of 12/31/2021 by Geography



Analytics Run Rate as of 12/31/2021 by Client base



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

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**

2021 Results

- **48% YoY run rate growth in 2021**
- 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 OMS, which Simplifies Workflows and Creates Consistency

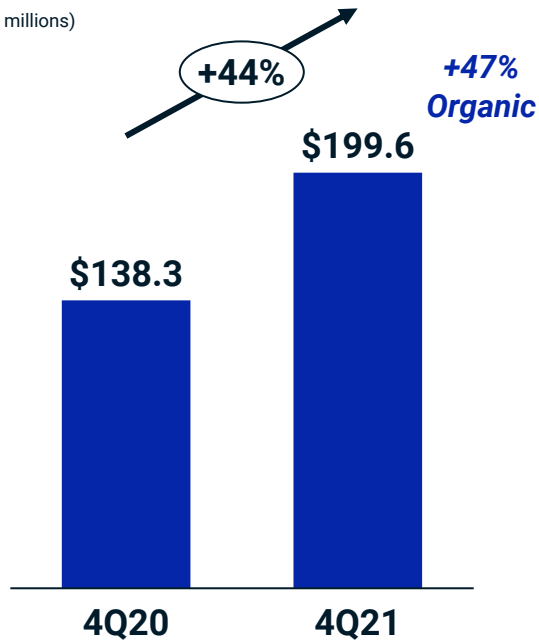
Will be Integrated with MSCI Fixed Income Indexes and ESG/Climate Data, which are Competitive Differentiators

Investors are Demanding Innovative Solutions and Better Service

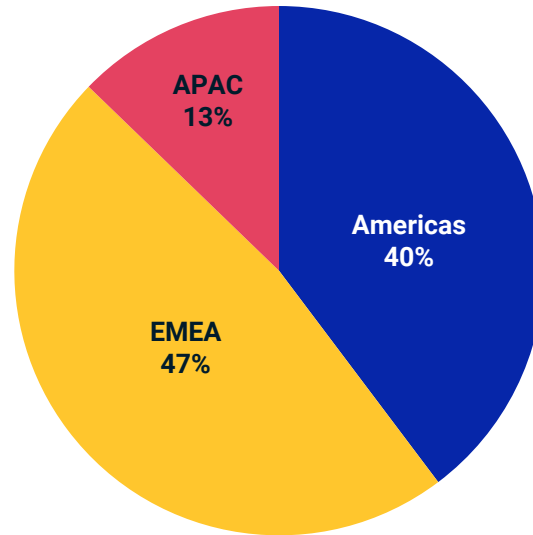
ESG & Climate segment at a glance

ESG & Climate Segment Run Rate

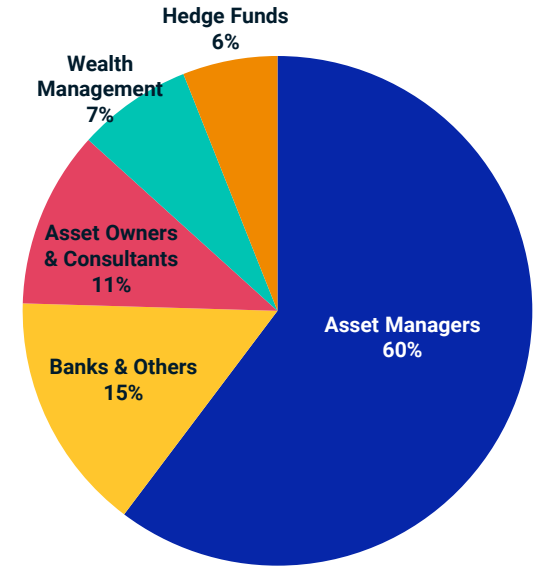
(US\$ in millions)



ESG & Climate Run Rate as of 12/31/2021 by Geography



ESG & Climate Run Rate as of 12/31/2021 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

800+ ESG & Climate 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; \$579B in institutional, retail and ETF assets benchmarked to MSCI ESG & Climate Indexes as of 6/30/21
- **ESG Ratings & Data:** 49 of the top 50 Asset Managers leverage MSCI ESG Research⁴; ~2,600 ESG Clients⁵ Globally with Coverage of 16,350+ Issuers and 753,450+ Securities
- **Climate Data & Analytics:** Climate Data Provider to 44 of the World's Top 50 Asset Managers⁶; 900+ Climate Change Metrics, Covering 10,000+ Issuers⁷
- **Climate Indexes:** #1 Climate Index Provider by Equity Assets Linked to its Climate Indexes⁸

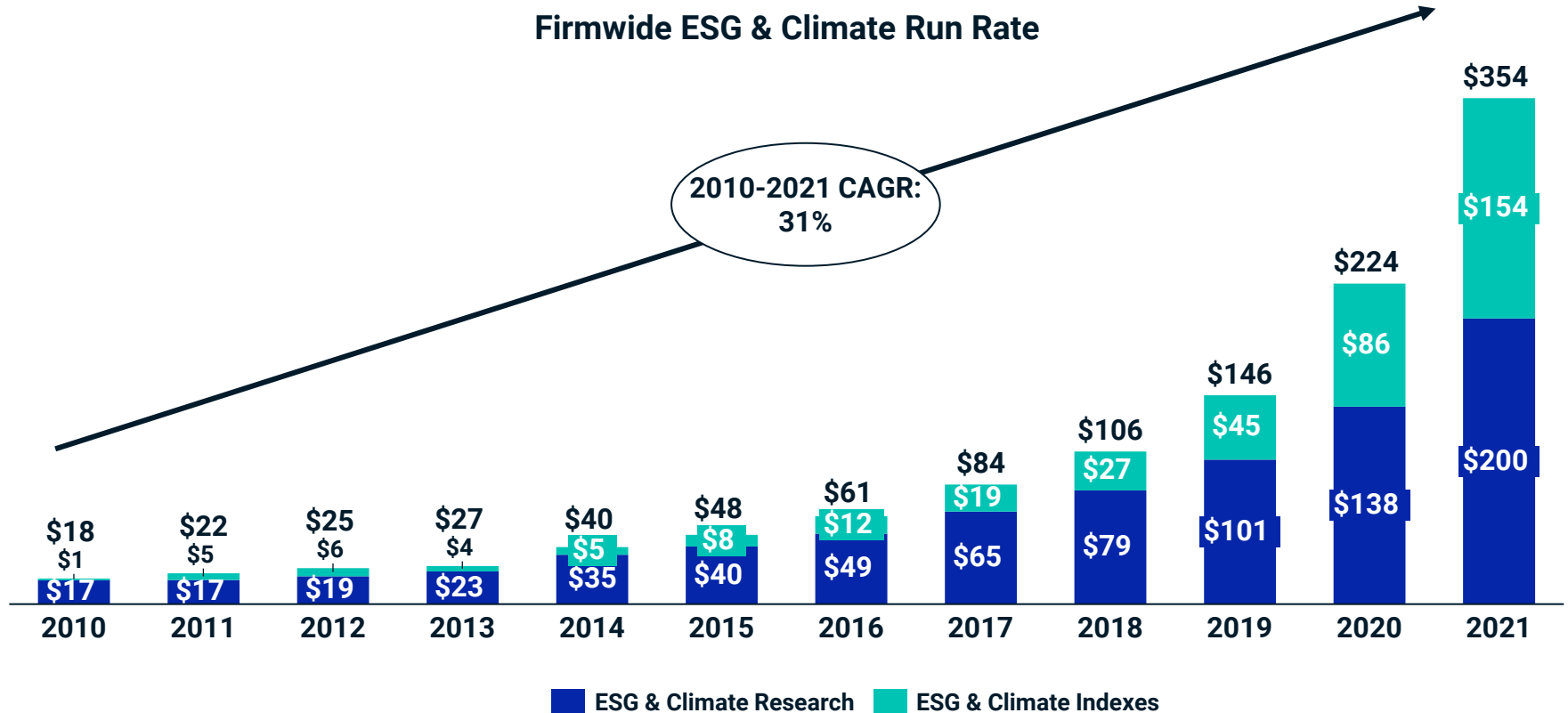
Multiple Years of Creating a Comprehensive Ecosystem

¹ Through MSCI legacy companies KLD, Innovest, IRRIC, and GMI Ratings; ² Source MSCI Inc. as of December 2021; ³ Data based on Refinitiv Universe as of December 2021, 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 Willis Towers Watson report "The world's largest 500 asset managers, Joint study with Pensions & Investments." AUM and rankings calculated as of December 2020. Report published October 2021; 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 MSCI ESG Research's climate solutions are used by 44 of the top 50 world's largest Asset Managers as determined by Willis Towers Watson report "The world's largest 500 asset managers, Joint study with Pensions & Investments." AUM and rankings calculated as of December 2020. Report published October 2021. ⁷ Source: MSCI ESG Research as of February 2022⁸ Data as of June 30, 2021, based on eVestment for Institutional funds, Morningstar for Retail funds and Refinitiv Universe for ETFs

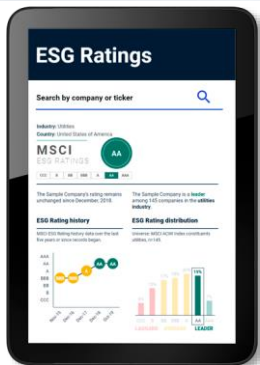
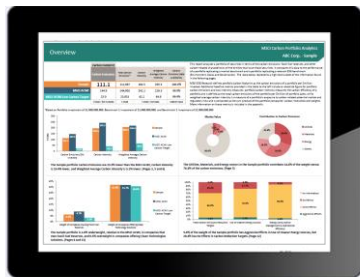
ESG & Climate: Continued Growth Across Firmwide Franchise

(US\$ in millions)

Firmwide ESG & Climate Run Rate



ESG & Climate: Comprehensive Solutions Backed by Unique Capabilities



Financial Materiality ¹

- 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 300+ 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, 45% 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

- 220+ Technologists dedicated to ESG and Climate
- 90+ data scientists develop robust models turning unstructured data into meaningful output

Unique Track Record⁵

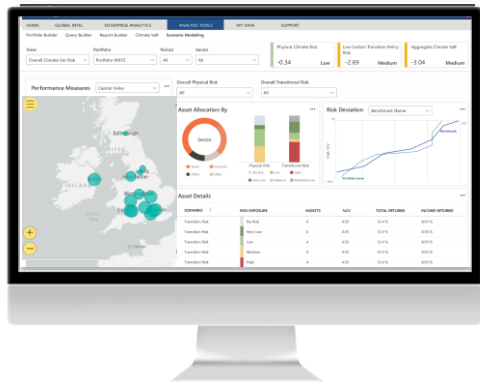
- Extensive track record, analyzed by multiple academic studies
- Tried and tested solution

“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: 2,434 constituents of the MSCI ACWI Index as of November 30, 2017; ³ Source: MSCI ESG Research as of as of February 2021, coverage subject to change; ⁴ Source: MSCI ESG Research as of December 2021. 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 including **Carbon Footprinting of Private Equity and Debt Funds** launched by MSCI and The Burgiss Group, LLC
- 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

Portfolio

2.06°C

LAGGING
above 3.85°C

Benchmark

1.5°C 2.96°C

MISALIGNED
between 2°C and 3.85°C

2°C ALIGNED
below 2°C



Cloud-native platforms Climate Models and Metrics



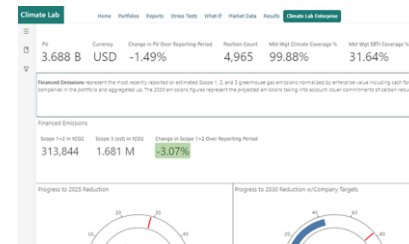
Carbon Emissions & Foot Printing



Physical Risk Assessment Low Carbon Transition Risk



MSCI Climate Scenario Analysis (Climate VaR)

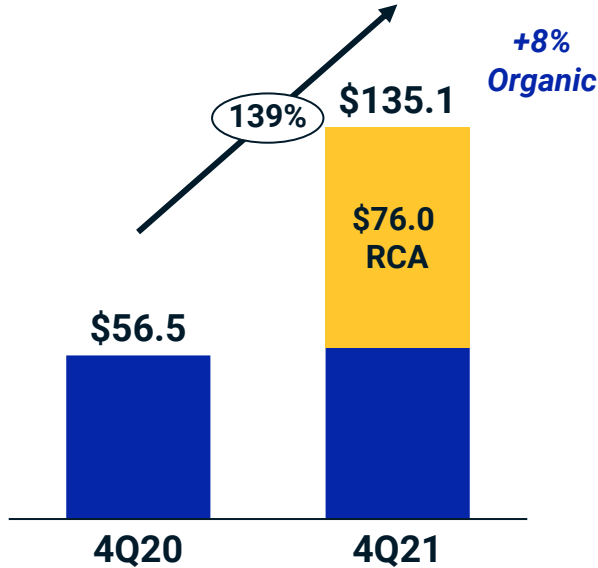


MSCI Climate Lab - a new application that provides investors with the data and tools to track and assess companies' progress towards net-zero commitments and align their portfolios with climate targets

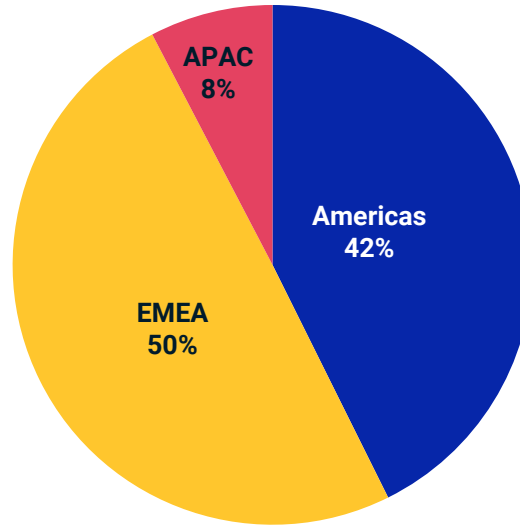
All Other– Private Assets segment at a glance

All Other – Private Assets Run Rate

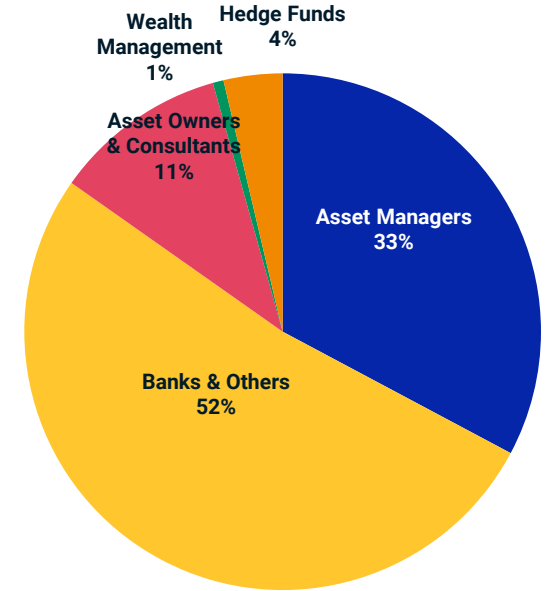
(US\$ in millions)



All other- Private Assets Run Rate as of 12/31/2021 by Geography



All other- Private Assets Run Rate as of 12/31/2021 by Client base



All Other – Private Assets: MSCI’s Current Real Estate Offerings



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



Real Estate Portfolio Analytics and Market Data 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)



Real Capital Analytics and Datscha products

Timely and reliable source for Commercial Real Estate pricing, capital flows, investment trends, broker ranking, ownership and lease terms.

- 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
- RCA CPPI™ Commercial Property Prices Indexes
- Leasing details in selected countries
- Footfall data across England and Wales

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

MSCI Completes Acquisition of Real Capital Analytics (RCA)

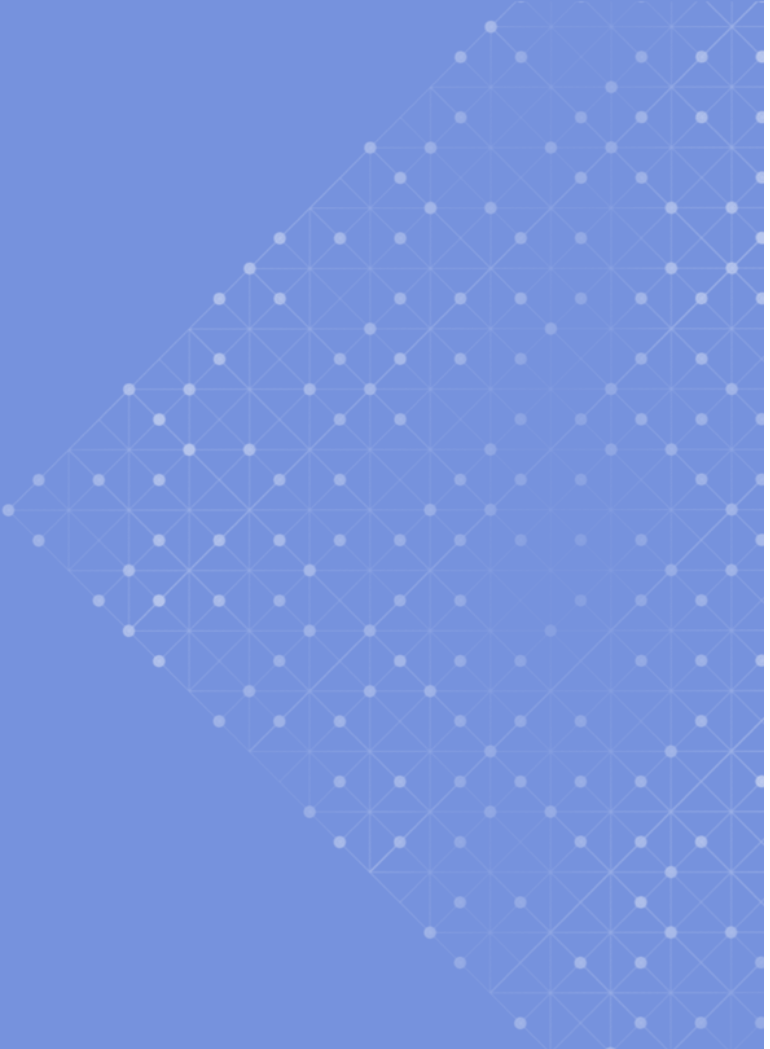
Financial Overview

- As of December 31, 2021, RCA had **~\$76 million of Run Rate**
- In **4Q21**, **revenue** contributions from RCA were **\$18.7 million**
- Expect annualized **Adjusted EBITDA margin for the All Other Private Assets segment** likely **closer to the mid-teens in 2022**, taking into account:
 - Investments in near-term to integrate the business
 - Employee retention expenses that are included in Adjusted EBITDA
 - The allocation of certain internal costs to the segment
- RCA's results are presented within MSCI's All Other – Private Assets reportable segment
- Certain transaction-related and integration costs are excluded from MSCI's Adjusted EBITDA Expenses, Adjusted EBITDA and Adjusted EPS (refer to reconciliation tables in Appendix)

Transaction Overview

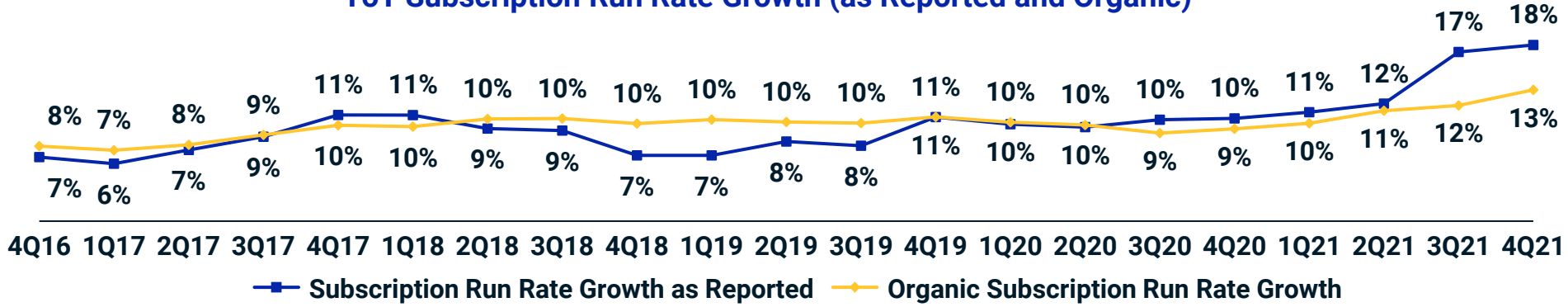
- Purchase price of \$949.0 million, funded with cash on hand
- Transaction announced on August 3, 2021 and completed on September 13, 2021

Appendix

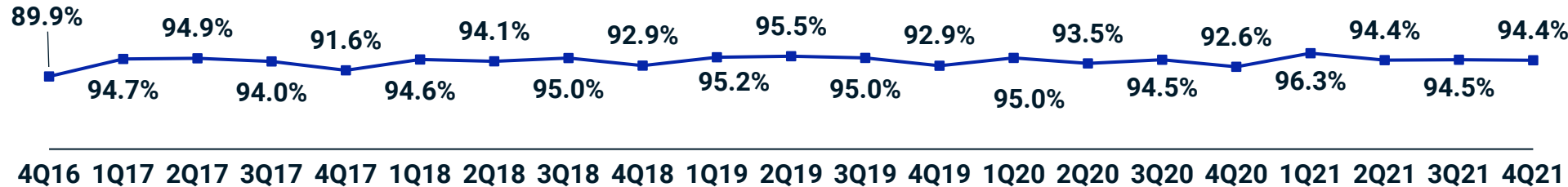


Continued Resilient Key Operating Metrics

YoY Subscription Run Rate Growth (as Reported and Organic)

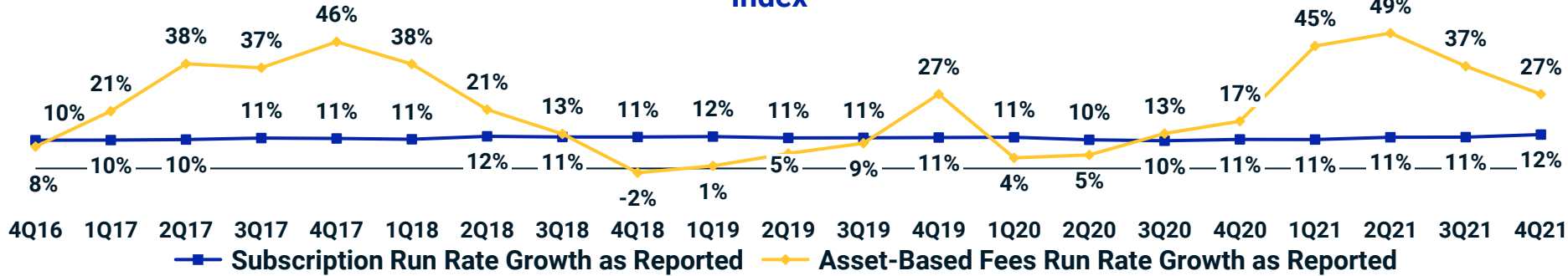


Quarterly Retention Rate Trends

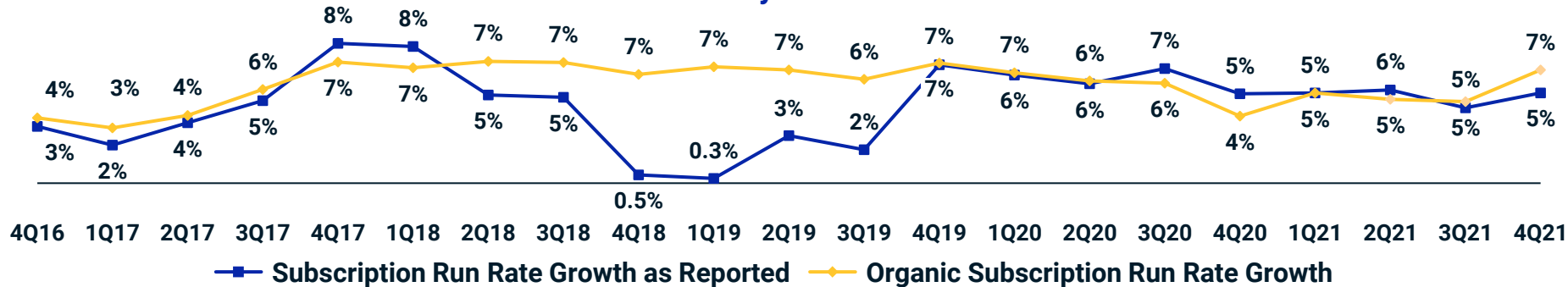


4Q16 to 4Q21 YoY Segment Run Rate Growth

Index

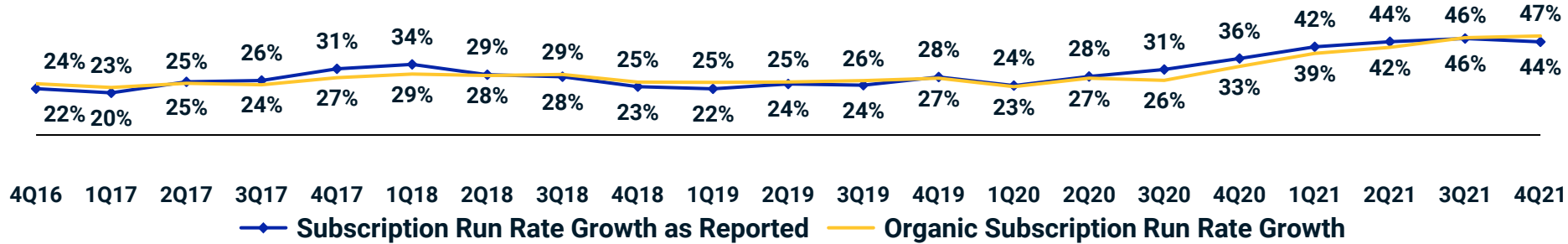


Analytics

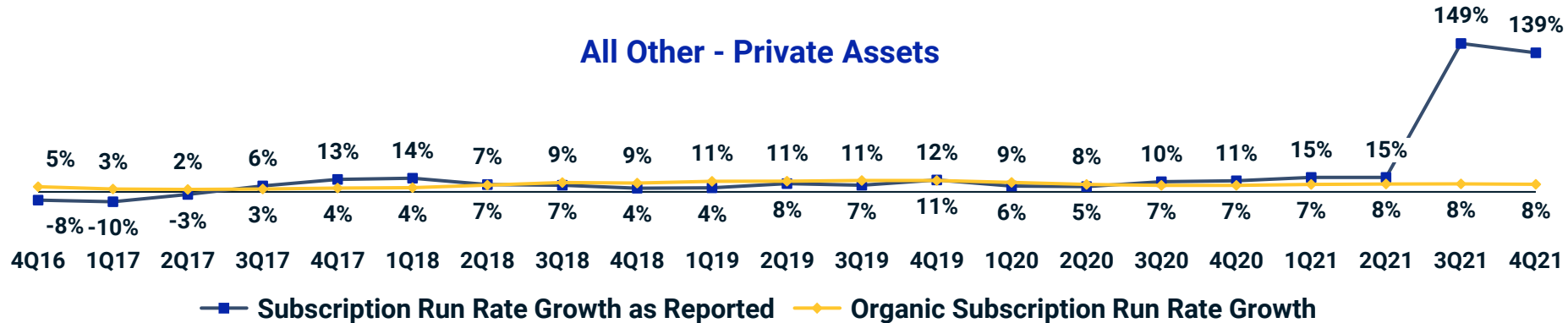


4Q16 to 4Q21 YoY Segment Run Rate Growth

ESG & Climate



All Other - Private Assets

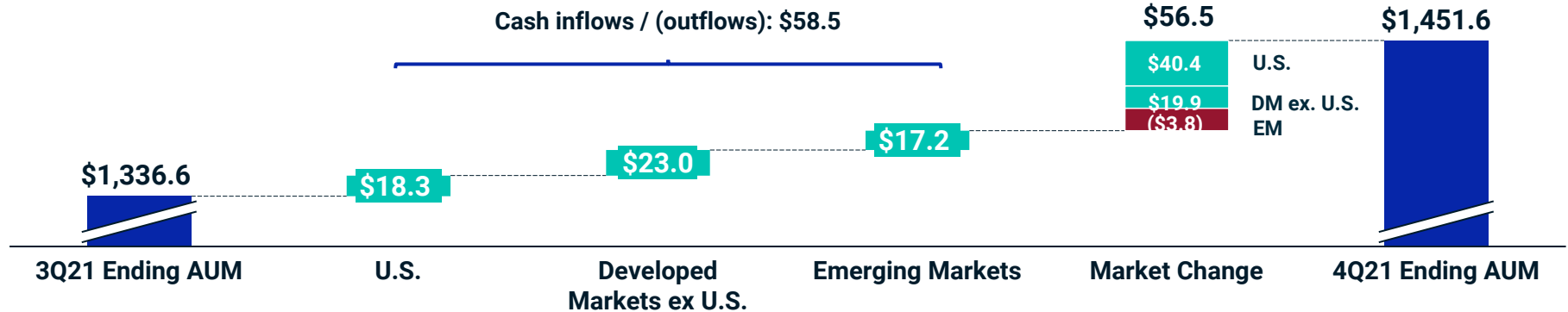


4Q21 QoQ AUM Drivers: MSCI-Linked Equity ETFs

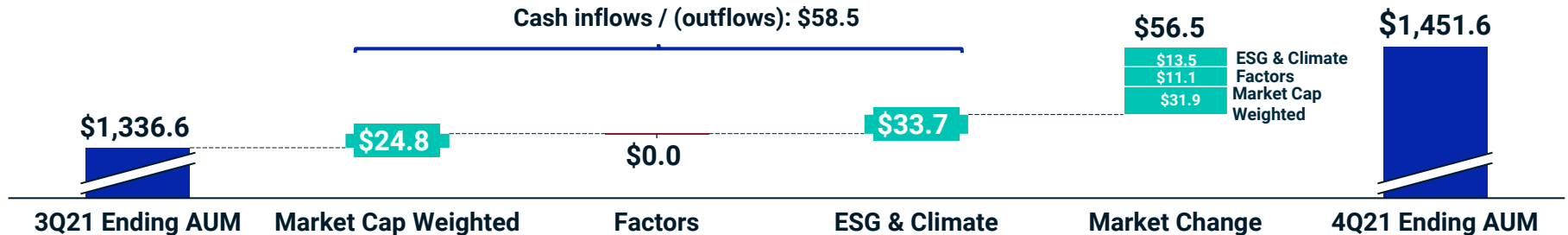
Continued cash inflows in market cap weighted and ESG & Climate products and across all regions

(US\$ in billions)

By Geographic Exposure



By Product

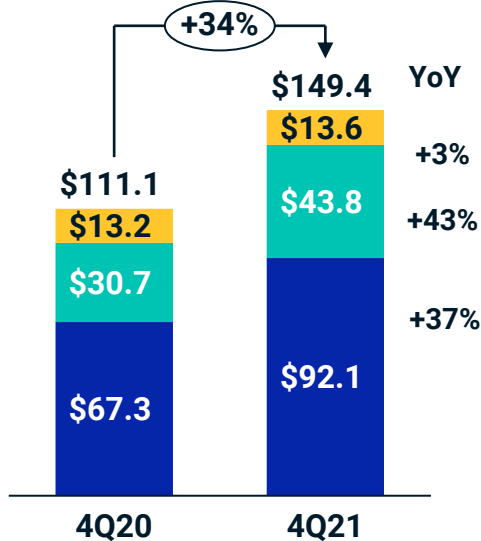


Index Segment: Asset-Based Fees Details

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

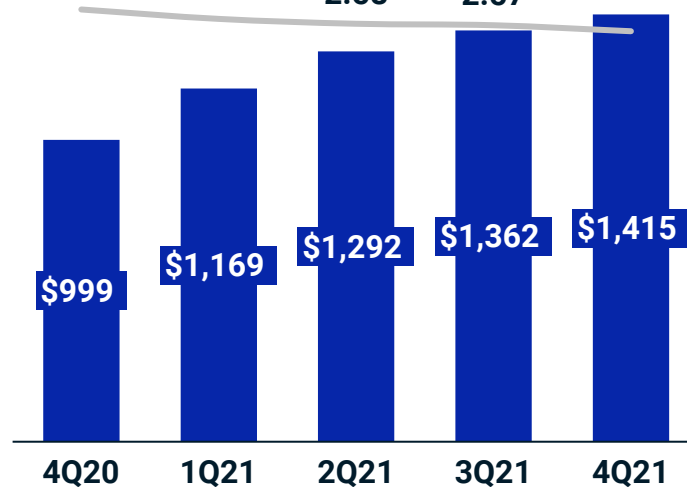
Asset-based Fees (ABF) Revenue

■ Futures & Options
 ■ ETF
 ■ Non-ETF



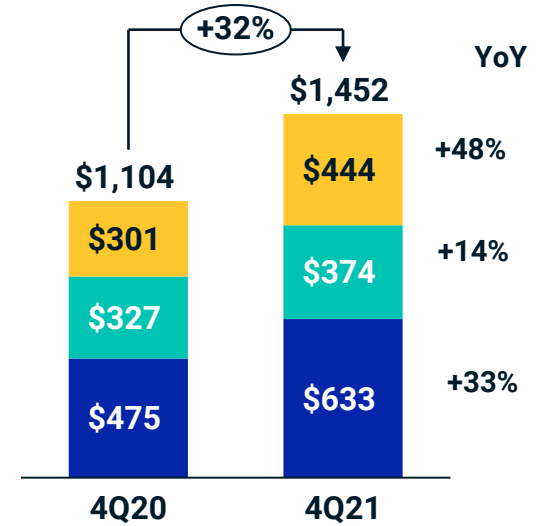
Quarterly Average AUM and Period-End Basis Point Fee¹ of ETFs linked to MSCI Equity Indexes

■ Average AUM
 — Period-End Basis Point Fee



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

■ US
 ■ EM
 ■ DM ex US



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 2021.

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. Prior periods have been reclassified to conform to the current period classification. Note: The AUM in equity ETFs also includes AUM in Exchange Traded Notes, the value of which is less than 1.0% of the AUM amounts presented.

Listed Futures & Options Linked to MSCI Indexes

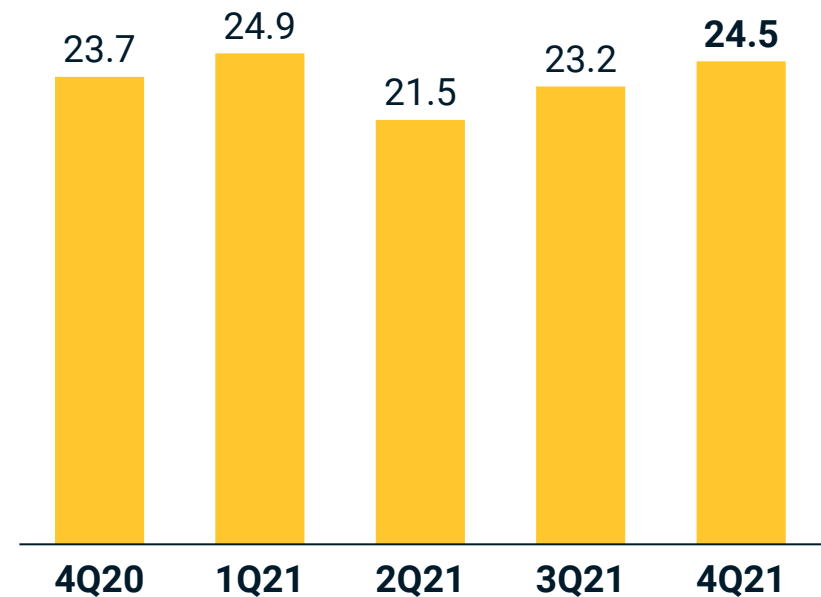
Run Rate From Listed Futures & Options Linked to MSCI Indexes

(US\$ in millions)



Futures & Options Volume Linked to MSCI Indexes

(in millions of contracts traded)



Use of Non-GAAP Financial Measures

- MSCI has presented supplemental non-GAAP financial measures as part of this 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 presentation should not be considered as alternative measures for the most directly comparable GAAP financial measures. The non-GAAP financial measures presented in this presentation 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 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 impairment related to sublease of leased property and certain non-recurring acquisition-related integration and transaction costs.
- “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, 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 impairment related to sublease of leased property, the impact related to gain from changes in ownership interest of equity method investee, and, at times, certain other transactions or adjustments. We also exclude the tax impact of adjustments for the Tax Cuts and Jobs Act that was enacted on December 22, 2017 (“Tax Reform”), except for certain amounts associated with active tax planning implemented as a result of Tax Reform.
- “Adjusted tax rate” is defined as the effective tax rate excluding the impact of Tax Reform adjustments (except for certain amounts associated with active tax planning implemented as a result of Tax Reform).
- “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 AUM.
- We believe adjusted EBITDA 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 adjusted tax rate is useful to investors because it increases the comparability of period-to-period results by adjusting for the estimated net impact of Tax Reform.
- 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 presentation facilitate meaningful period-to-period comparisons and provide a baseline for the evaluation of future results.
- Adjusted EBITDA expenses, adjusted EBITDA, adjusted net income, adjusted EPS, adjusted tax rate, 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 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 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 cancel. 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 Estate 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-sale 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, including the acquisition of RCA completed on September 13, 2021. 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 Adjusted EBITDA to Net Income (Unaudited)

In thousands	Year Ended					
	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2016
Consolidated adjusted EBITDA	1,196,790	971,510	850,499	772,433	659,757	569,457
Amortization of intangible assets	80,592	56,941	49,410	54,189	44,547	47,033
Depreciation and amortization of property, equipment and leasehold improvements	28,901	29,805	29,999	31,346	35,440	34,320
Impairment related to sublease of leased property	7,702					
Acquisition-related integration and transaction costs(1)	6,870	—	—	—	—	—
Multi-Year PSU payroll tax expense	-	—	15,389	—	—	—
Operating income	1,072,725	884,764	755,701	686,898	579,770	488,104
Other expense (income), net	214,589	198,539	152,383	57,002	112,871	102,166
Provision for income taxes	132,153	84,403	39,670	122,011	162,927	125,083
Net income	\$ 725,983	\$ 601,822	\$ 563,648	\$ 507,885	\$ 303,972	\$ 260,855

Three Months Ended

In thousands	Dec. 31, 2021	Dec. 31, 2020
	Consolidated adjusted EBITDA	318,660
Amortization of intangible assets	21,023	14,770
Depreciation and amortization of property, equipment and leasehold improvements	7,929	7,281
Impairment related to sublease of leased property	7,702	—
Acquisition-related integration and transaction costs(1)	1,419	—
Operating income	280,587	234,085
Other expense (income), net	34,824	38,919
Provision for income taxes	51,898	38,950
Net income	\$ 193,865	\$ 156,216

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

In thousands	Three Months Ended		Year Ended	
	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2021	Dec. 31, 2020
Index adjusted EBITDA	\$ 252,378	\$ 204,930	\$ 951,312	\$ 766,493
Analytics adjusted EBITDA	52,963	45,384	198,799	172,924
ESG and Climate adjusted EBITDA	9,163	6,068	29,748	22,851
All Other - Private Assets adjusted EBITDA	4,156	(246)	16,931	9,242
Consolidated adjusted EBITDA	318,660	256,136	1,196,790	971,510
Amortization of intangible assets	21,023	14,770	80,592	56,941
Depreciation and amortization of property, equipment and leasehold improvements	7,929	7,281	28,901	29,805
Impairment related to sublease of leased property	7,702	—	7,702	—
Acquisition-related integration and transaction costs ⁽¹⁾	1,419	—	6,870	—
Operating income	280,587	234,085	1,072,725	884,764
Other expense (income), net	34,824	38,919	214,589	198,539
Provision for income taxes	51,898	38,950	132,153	84,403
Net income	\$ 193,865	\$ 156,216	\$ 725,983	\$ 601,822

¹Incremental 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 Adjusted EBITDA Expenses to Operating Expenses (Unaudited)

In thousands	Three Months Ended		Year Ended		Full-Year
	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2021	Dec. 31, 2020	2022 Outlook(1)
Index adjusted EBITDA expenses	\$ 79,429	\$ 63,710	\$ 300,452	\$ 250,002	
Analytics adjusted EBITDA expenses	85,119	87,016	345,500	340,884	
ESG and Climate adjusted EBITDA expenses	39,280	25,210	136,444	88,513	
All Other - Private Assets adjusted EBITDA expenses	27,354	11,589	64,358	44,481	
Consolidated adjusted EBITDA expenses	231,182	187,525	846,754	723,880	\$975,000 - \$1,005,000
Amortization of intangible assets	21,023	14,770	80,592	56,941	
Depreciation and amortization of property, equipment and leasehold improvements	7,929	7,281	28,901	29,805	\$100,000 - \$110,000
Impairment related to sublease of leased property	7,702	—	7,702	—	
Acquisition-related integration and transaction costs(2)	1,419	—	6,870	—	
Total operating expenses	\$ 269,255	\$ 209,576	\$ 970,819	\$ 810,626	\$1,075,000 - \$1,115,000

¹We have not provided a line-item reconciliation for adjusted EBITDA expenses to total operating expenses for this future period because we do not provide guidance on the individual reconciling items between total operating expenses and adjusted EBITDA expenses.

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)

	Year Ended					
	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2016
In thousands, except per share data						
Net income	\$ 725,983	\$ 601,822	\$ 563,648	\$ 507,885	\$ 303,972	\$ 260,855
Plus: Amortization of acquired intangible assets and equity method investment basis difference	47,001	37,413	34,773	43,981	39,157	47,033
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)	7,041	—	—	—	—	—
Less: Gain from changes in ownership interest of equity method investee	(6,972)	—	—	—	—	—
Less: Gain on sale of Alacra (not tax effected)	—	—	—	—	(771)	—
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)	34,500	—
Less: Income tax effect	(26,462)	(16,490)	(13,226)	1,678	(10,772)	(15,243)
Adjusted net income	\$ 830,410	\$ 661,419	\$ 550,797	\$ 480,273	\$ 366,086	\$ 292,645
Diluted EPS	\$ 8.70	\$ 7.12	\$ 6.59	\$ 5.66	\$ 3.31	\$ 2.70
Plus: Amortization of acquired intangible assets and equity method investment basis difference	0.56	0.44	0.41	0.49	0.43	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)	0.08	—	—	—	—	—
Less: Gain from changes in ownership interest of equity method investee	(0.08)	—	—	—	—	—
Less: Gain on sale of Alacra (not tax effected)	—	—	—	—	(0.01)	—
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)	0.38	—
Less: Income tax effect	(0.31)	(0.19)	(0.16)	0.02	(0.13)	(0.16)
Adjusted EPS	\$ 9.95	\$ 7.83	\$ 6.44	\$ 5.35	\$ 3.98	\$ 3.03

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

	Three Months Ended		Year Ended	
	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2021	Dec. 31, 2020
In thousands, except per share data				
Net income	\$ 193,865	\$ 156,216	\$ 725,983	\$ 601,822
Plus: Amortization of acquired intangible assets and equity method investment basis difference	17,086	9,528	47,001	37,413
Plus: Debt extinguishment costs associated with the 2024, 2025, 2026 and 2027 Senior Notes Redemptions	—	—	59,104	44,930
Plus: Write-off of internally developed capitalized software	—	—	16,013	—
Plus: Impairment related to sublease of leased property(1)	8,702	—	8,702	—
Plus: Acquisition-related integration and transaction costs(2)(3)	1,590	—	7,041	—
Less: Gain from changes in ownership interest of equity method investee	(6,972)	—	(6,972)	—
Less: Tax Reform adjustments	—	—	—	(6,256)
Less: Income tax effect	(4,497)	(2,007)	(26,462)	(16,490)
Adjusted net income	\$ 209,774	\$ 163,737	\$ 830,410	\$ 661,419
Diluted EPS	\$ 2.32	\$ 1.87	\$ 8.70	\$ 7.12
Plus: Amortization of acquired intangible assets and equity method investment basis difference	0.20	0.11	0.56	0.44
Plus: Debt extinguishment costs associated with the 2024, 2025, 2026 and 2027 Senior Notes Redemptions	—	—	0.71	0.53
Plus: Write-off of internally developed capitalized software	—	—	0.19	—
Plus: Impairment related to sublease of leased property(1)	0.10	—	0.10	—
Plus: Acquisition-related integration and transaction costs(2)(3)	0.02	—	0.08	—
Less: Gain from changes in ownership interest of equity method investee	(0.08)	—	(0.08)	—
Less: Tax Reform adjustments	—	—	—	(0.07)
Less: Income tax effect	(0.05)	(0.02)	(0.31)	(0.19)
Adjusted EPS	\$ 2.51	\$ 1.96	\$ 9.95	\$ 7.83

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

In thousands	Year Ended					
	Dec. 31, 2021	Dec. 31, 2020	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2017	Dec. 31, 2016
Net cash provided by operating activities	\$ 936,069	\$ 811,109	\$ 709,523	\$ 612,762	\$ 404,158	\$ 442,363
Capital expenditures	(13,509)	(21,826)	(29,116)	(30,257)	(33,177)	(32,284)
Capitalized software development costs	(39,285)	(29,149)	(24,654)	(18,704)	(15,640)	(10,344)
Capex	(52,794)	(50,975)	(53,770)	(48,961)	(48,817)	(42,628)
Free cash flow	\$ 883,275	\$ 760,134	\$ 655,753	\$ 563,801	\$ 355,341	\$ 399,735

In thousands	Three Months Ended		Full-Year
	Dec. 31, 2021	Dec. 31, 2020	2022 Outlook(1)
Net cash provided by operating activities	\$ 279,664	\$ 235,928	\$1,120,000 - \$1,160,000
Capital expenditures	(6,390)	(9,674)	
Capitalized software development costs	(10,207)	(7,218)	
Capex	(16,597)	(16,892)	(\$70,000 - \$60,000)
Free cash flow	\$ 263,067	\$ 219,036	\$1,050,000 - \$1,100,000

- (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 do not provide guidance on the individual reconciling items between net cash from operating activities and free cash flow.