

MSCI Inc.

RAYMOND JAMES INSTITUTIONAL INVESTOR CONFERENCE



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 MSCl'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 MSCl's underlying assumptions prove to be incorrect, actual results may vary significantly from what MSCl projected. Any forward-looking statement in this presentation reflects MSCl's current views with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to MSCl's operations, results of operations, growth strategy and liquidity. MSCl 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

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



What We Do

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

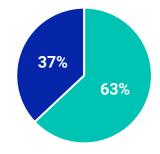
4,303 employees²

~\$2.2B
Total Run Rate²

30+ Office locations

120%_{YoY}

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



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



Helping Investors Navigate Increasingly Complex Global Landscape



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

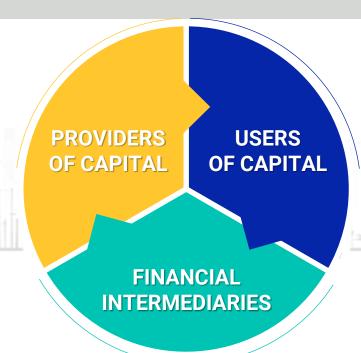
- Data- and research-driven insights into drivers of risk and performance
- Broad asset class coverage
- Innovative tools to help bring investment strategies to market
- Exceptional quality
- Reliability, technology and business continuity infrastructure





Enabling All Participants in the Investment Process

Enabling Owners and Managers of Assets Build Better Portfolios for a Better World



Enabling Corporates and Others Present their ESG, Climate and Other Data to Providers of Capital

Enabling Banks, Broker Dealers, Exchanges, Custodians and Others Support Providers and Users of Capital in the Investment Process



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



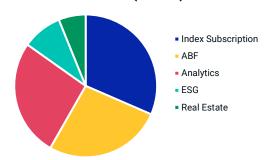
Capabilities

- Data
- Technology
- Talent

Client Segment Run Rate (\$2.2B)

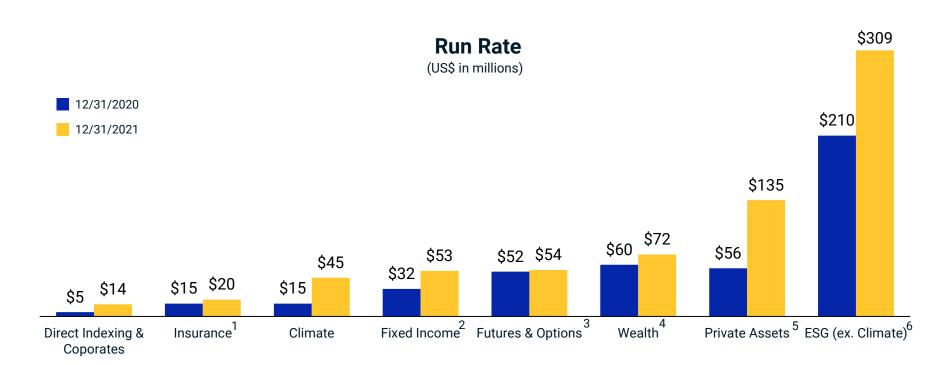


Product Run Rate (\$2.2B)





Significant demand and growth across large emerging opportunities

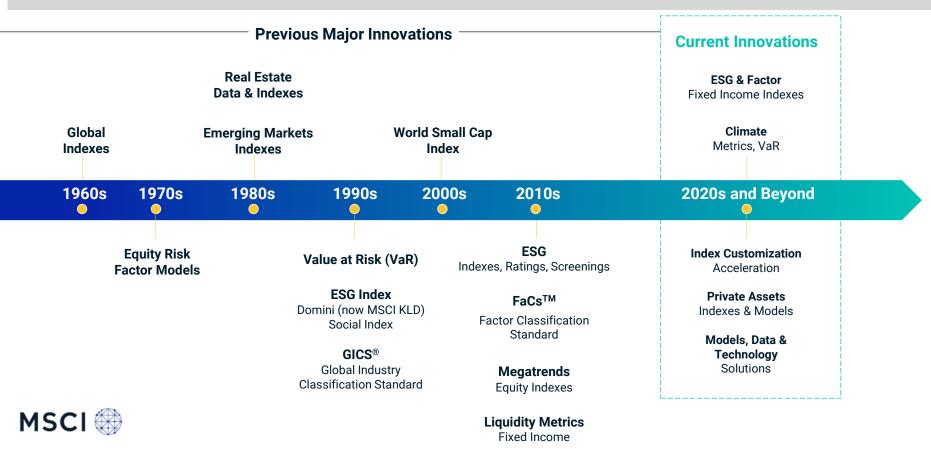


Rapidly expanding in attractive additional addressable markets



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.

50+ Years of Establishing Standards in the Investment Industry



2020-2021Corporate 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 Climaterelated 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 MSCl'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

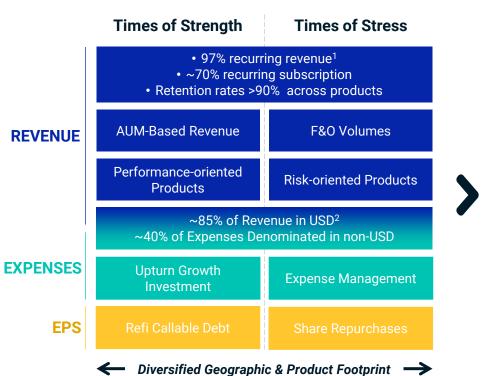
Net Zero Revolution PDF: https://www.msci.com/documents/1296102/24586122/Role-of-Capital-in-the-Net-Zero-Revolution.pdf/20b604be-5658-08c7-aa4e-c78f5d49cd73

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



Well Positioned in All Markets from All Weather Franchise



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



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

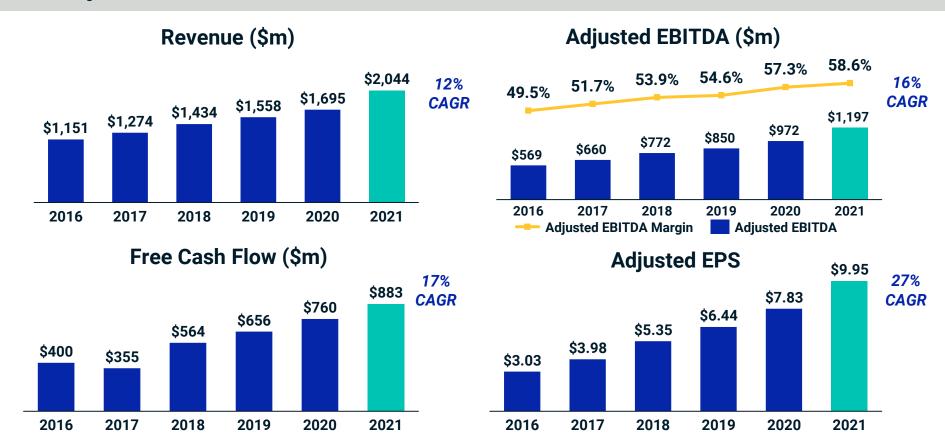


Strong balance sheet and liquidity

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



Exceptional Track Record of Financial Execution







Financial review

4Q21 and FY21 Financial Results Snapshot

Robust earnings growth reflecting strong top-line growth with continued operating leverage

4Q21 Operating Revenues (reported)

+24%

4Q21 Adjusted EBITDA Margin (+22 bps)

+58.0%

FY21 Free Cash Flow

\$883M

4Q21 Operating Revenues (organic)

+20%

4Q21 Operating Margin (-173 bps)

+51.0%

FY21 Net cash provided by operating activities

\$936M

4Q21 Adjusted EPS

+28%

As of December 31, 2021 Subscription Run Rate Growth (reported)

+18%

4Q21 Adjusted EBITDA Growth

+24%

4Q21 Weighted Average
Diluted Shares Outstanding
(-0.2% YoY)

83.6M

4Q21 Diluted EPS

+24%

As of December 31, 2021 Subscription Run Rate Growth (organic)

+13%

4Q21 Operating Income Growth

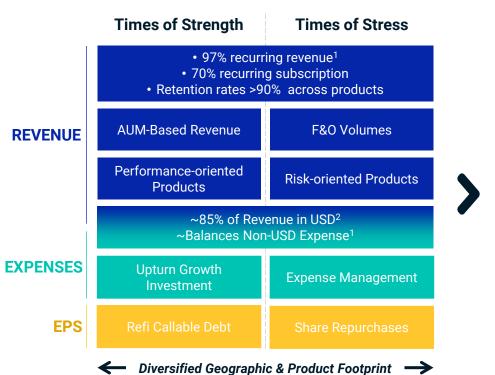
+20%

4Q21 Dividends to Shareholders

\$85.8M



Well Positioned in All Markets from All Weather Franchise



Upturn / Downturn Investing Levers				
		Approx. Annual Impact of 10% Flex ³		
	Self-Adjusting Metric-based Annual Incentives Plans	+/- \$10M		
Upturn Priorities	Pacing of Investments Reprioritization, Pace of Hiring Headcount Optimization	+/- \$15M		
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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
- [Index Builder]
- Fixed income Indexes



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 3/4/2022:

	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.



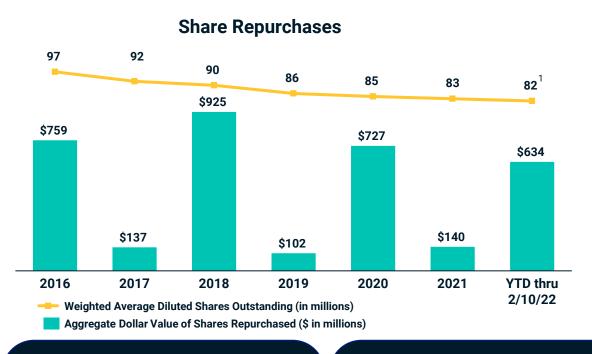
¹MSCI typically seeks to maintain minimum cash balances globally of approximately \$200.0 million to \$250.0 million for general operating purposes ²Reflects gross debt, inclusive of deferred financing fees and premium.

³Aggregate commitments of \$500.0 million until February 2027. Reflects amendment to revolving credit agreement on February 16, 2022.

Disciplined Approach to Capital Deployment for Shareholders



- 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



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

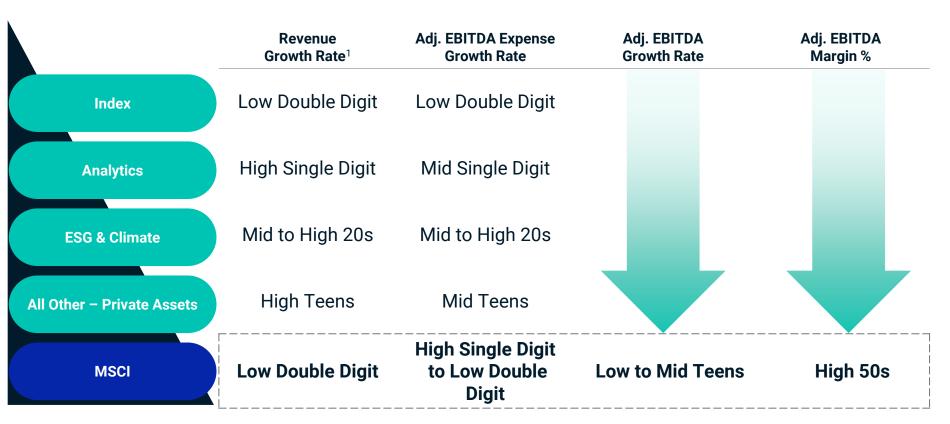
Guidance Item	Current Guidance for Full-Year 2022	
Operating Expense	\$1,075 to \$1,115 million	
Adjusted EBITDA Expense	\$975 to \$1,005 million	
Interest Expense (including amortization of financing fees) ¹	~\$162 million	
Depreciation & Amortization Expense	\$100 to \$110 million	
Effective Tax Rate	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.

Long-term Targets as of January 27, 2022



MSCI

¹ Excludes Asset-Based Fees.



Selected segment highlights

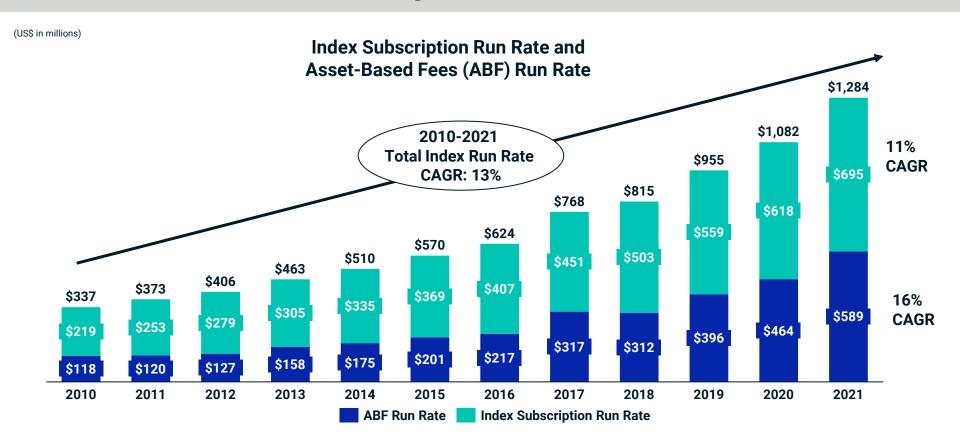
Index: We are Uniquely Positioned to Meet the Industry's Needs

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



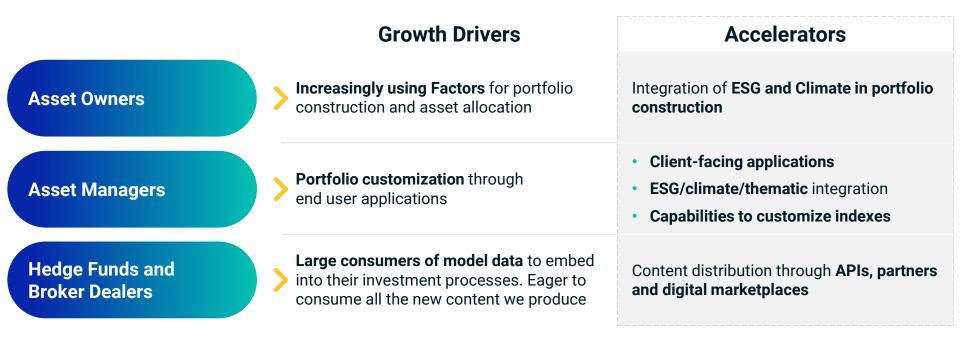
- MSCI Indexes are built using a modular approach with a rules-based, consistent and transparent methodology
- Indexes designed to represent full opportunity set across geographies and products with no gaps or overlaps
- Can be used as building blocks for portfolio construction in indexed and active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

Index: Consistent Growth through the Index Revolution





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



Broad Adoption of Factors and Portfolio Customization Driving Growth



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

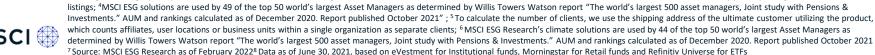
Extensive set of solutions for **ESG** and Climate integration

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, IRRC, 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-





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



REPORT **(D)**

- 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

Benchmark





2.96°C



LAGGING above 3.85°C between 2°C and 3.85°C 2°C ALIGNED helow 2°C



Cloud-native platforms Climate Models and Metrics



Carbon Emissions & Foot Printing



Physical Risk Assessment Low Carbon Transition Risk



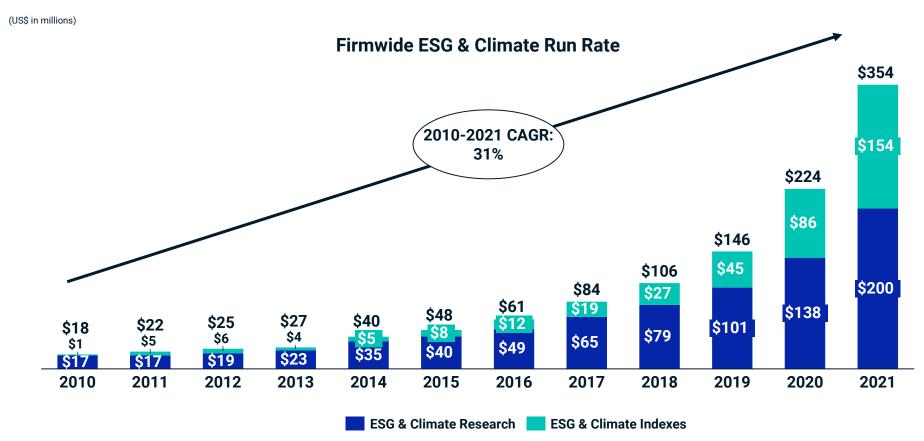
MSCI Climate Scenario **Analysis (Climate VaR)**



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



ESG & Climate: Continued Growth Across Firmwide Franchise





Note: 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.

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.

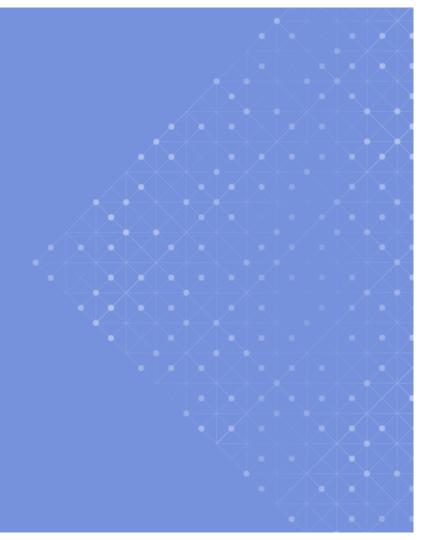
- SaaS-based platform integrated into daily workflow of brokers & agents, investors & owners and lenders & originators
- Measuring \$40T+ of capital transactions covering property transactions, Mortgage Debt Intelligence and Construction Starts Data
- Profiles on over 200 000+ investors, lenders, brokers and deal participants
- RCA CPPITM 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





Appendix

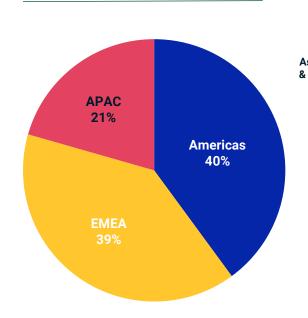


Index subscription at a glance





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

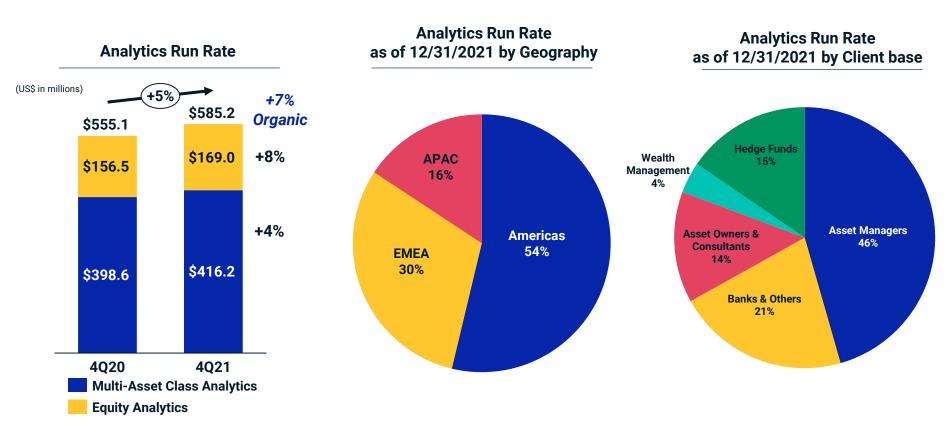


Index Subscription Run Rate as of 12/31/2021 by Client base



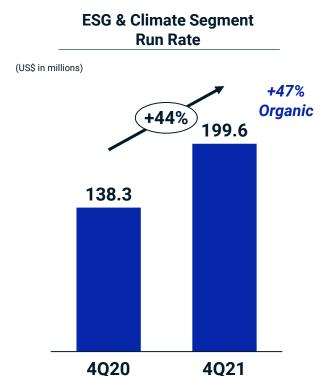


Analytics segment at a glance

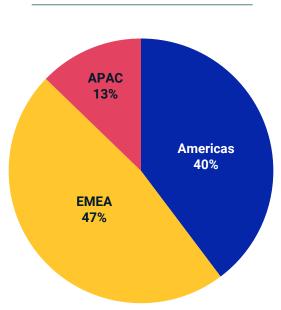




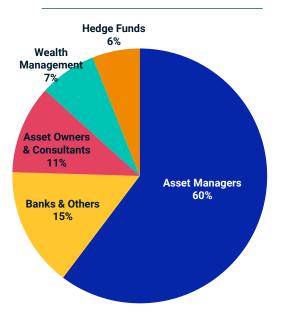
ESG & Climate segment at a glance





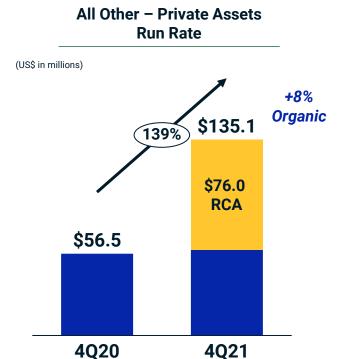


ESG & Climate Run Rate as of 12/31/2021 by Client base

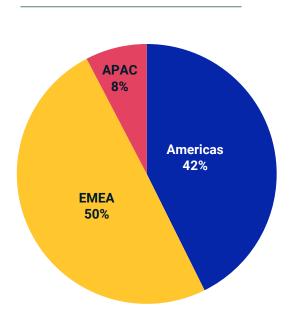




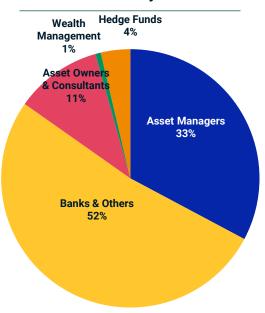
All Other- Private Assets segment at a glance





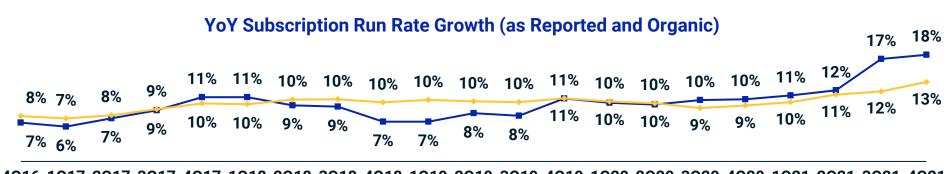


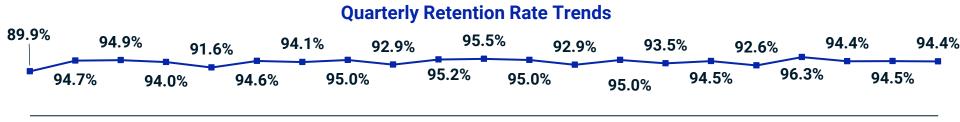
All other- Private Assets Run Rate as of 12/31/2021 by Client base





Continued Resilient Key Operating Metrics





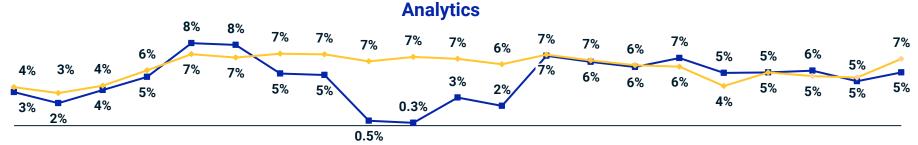
4Q16 1Q17 2Q17 3Q17 4Q17 1Q18 2Q18 3Q18 4Q18 1Q19 2Q19 3Q19 4Q19 1Q20 2Q20 3Q20 4Q20 1Q21 2Q21 3Q21 4Q21



4Q16 to 4Q21 YoY Segment Run Rate Growth



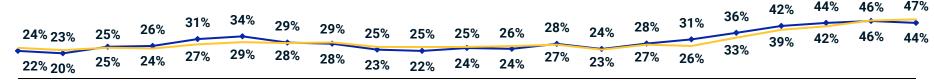
4Q16 1Q17 2Q17 3Q17 4Q17 1Q18 2Q18 3Q18 4Q18 1Q19 2Q19 3Q19 4Q19 1Q20 2Q20 3Q20 4Q20 1Q21 2Q21 3Q21 4Q2 —■— Subscription Run Rate Growth as Reported —— Asset-Based Fees Run Rate Growth as Reported





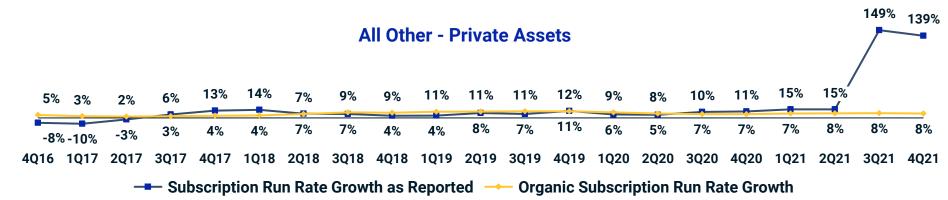
4Q16 to 4Q21 YoY Segment Run Rate Growth

ESG & Climate



4Q16 1Q17 2Q17 3Q17 4Q17 1Q18 2Q18 3Q18 4Q18 1Q19 2Q19 3Q19 4Q19 1Q20 2Q20 3Q20 4Q20 1Q21 2Q21 3Q21 4Q2·

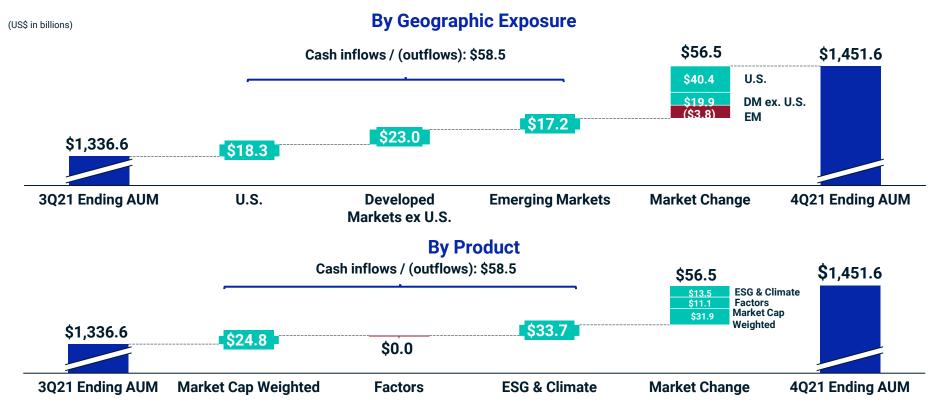
→ Subscription Run Rate Growth as Reported — Organic Subscription Run Rate Growth





4Q21 QoQ AUM Drivers: MSCI-Linked Equity ETFs

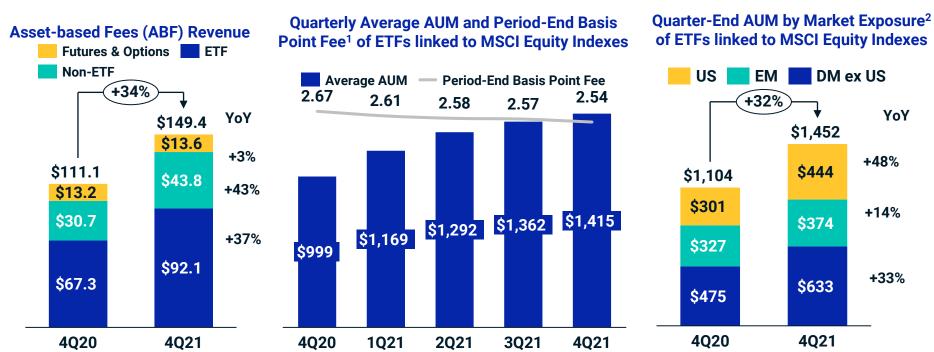
Continued cash inflows in market cap weighted and ESG & Climate products and across all regions



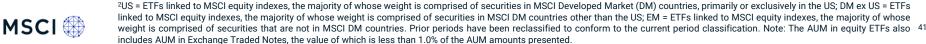


Index Segment: Asset-Based Fees Details

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



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.



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 MSCl'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 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. 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
- 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 termination to 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)

	Year Ended										
	- 1	Dec. 31,	-	Dec. 31,	- 1	Dec. 31,		Dec. 31,	ı	Dec. 31,	Dec. 31,
In thousands		2021		2020		2019		2018		2017	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 Mon	ths Ended
	Dec. 31,	Dec. 31,
In thousands	2021	2020
Consolidated adjusted EBITDA	318,660	256,136
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)

	Three Months Ended					Year Ended				
	 Dec. 31,	I	Dec. 31,		Dec. 31,		Dec. 31,			
In thousands	 2021		2020		2021		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)

		Three Months Ended Year Ended				ths Ended Year Ended			Full-Year
In thousands		Dec. 31,	Dec. 31,		Dec. 31,		Dec. 31,		2022
		2021		2020		2021		2020	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,									\$100,000 - \$110,000
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(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,		Dec. 31,		Dec. 31,		Dec. 31,	Dec. 31,		Dec. 31,	
In thousands, except per share data		2021		2020		2019		2018		2017		2016
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 spftware		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)		(0.00)		_		_		_		(0.01)		_
Less: Gain on sale of FEA (not tax effected)		_		_		_		(0.12)		(0.01)		_
Less: Gain on sale of InvestorForce		_		_		_		(0.12)		_		_
Less: Valuation Allowance released related to								(0.52)				
InvestorForce disposition		_		_		_		(0.09)		_		_
Plus: Tax Reform adjustments		_		(0.07)		_		(0.09)		0.38		_
Less: Income tax effect		(0.31)		(0.07)		(0.16)		0.09)		(0.13)		(0.16)
Adjusted EPS	Ś	9.95	Ś	7.83	\$	6.44	Ś	5.35	Ś	3.98	Ś	3.03
Adjusted EPS	\$	9.95	<u>\$</u>	7.83	Ş	6.44	<u> </u>	5.35	<u>\$</u>	3.98	<u>\$</u>	3.03



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

In thousands, except per share data Dec. 31, 2021 Dec. 31, 2020 Dec. 32, 2020 <th></th> <th colspan="5">Three Months Ended</th> <th colspan="6">Year Ended</th>		Three Months Ended					Year Ended					
Net income \$ 193,865 \$ 156,216 \$ 725,983 \$ 601,822 Plus: Amortization of acquired intangible assets and equity method investment basis difference Plus: Debt extinguishment costs associated with the 2024, 2025, 2026 and 2027 Senior Notes Redemptions		Dec. 3			Dec. 31,		Dec. 31,	ı	Dec. 31,			
Plus: Amortization of acquired intangible assets and equity method investment basis difference 17,086 9,528 47,001 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,413 17,000 37,0	In thousands, except per share data	2021			2020		2021		2020			
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 spftware — — 59,104 44,930 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: Income tax effect (4,497) (2,007) (26,462) (16,490) Adjusted net income \$ 209,774 \$ 163,737 \$ 830,410 \$ 601,419 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: Impairment related to sublease of leased property(1) 0.10 — <t< td=""><td>Net income</td><td>\$</td><td>193,865</td><td>\$</td><td>156,216</td><td>\$</td><td>725,983</td><td>\$</td><td>601,822</td></t<>	Net income	\$	193,865	\$	156,216	\$	725,983	\$	601,822			
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 spftware — — — — — 16,013 — — — 16,013 — — — 16,013 — — — 16,013 — — — — 16,013 — — — 16,013 — — — — 16,013 — — — — 16,013 — — — — 16,013 — — — — — 16,013 — — — — — — 16,013 — — — — — — 16,013 — — — — — — 16,013 — — — — — — — — 16,013 — — — — — — — — — — — — — — — — — — —	Plus: Amortization of acquired intangible assets and											
2024, 2025, 2026 and 2027 Senior Notes Redemptions — — 59,104 44,930 Plus: Write-off of internally developed capitalized spftware — — 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 \$ 239,774 \$ 163,737 \$ 830,410 \$ 61,419 Diluted EPS \$ 2.32 \$ 1.87 \$ 8.70 \$ 7.12 Plus: Amortization of acquired intangible assets and equity method investment basis difference — — — — 0.44 Plus: Ebet extinguishment costs associated with the — — — — 0.44 Plus: Write-off of internally developed capitalized software<	equity method investment basis difference		17,086		9,528		47,001		37,413			
Plus: Write-off of internally developed capitalized spftware - - 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) - (6,256) Less: Tax Reform adjustments - - - - (6,256) Less: Income tax effect (4,497) (2,007) (26,462) (16,490) Less: Income tax effect (4,497) (2,007) (26,662) (16,490) Adjusted net income \$ 2,32 \$ 1,87 \$ 87,00 \$ 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	Plus: Debt extinguishment costs associated with the											
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 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 — — — 0.71 0.53 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	2024, 2025, 2026 and 2027 Senior Notes Redemptions		_		_		59,104		44,930			
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 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.	Plus: Write-off of internally developed capitalized spftware		_		_		16,013		_			
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 — — 0.71 0.53 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) — — (0.07)	Plus: Impairment related to sublease of leased property(1)		8,702		_		8,702		_			
Less: Tax Reform adjustments —	Plus: Acquisition-related integration and transaction costs(2)(3)		1,590		_		7,041		_			
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) - (0.07) (0.07) Less: Tax Reform adjustments - - - - (0.07) Less: Income tax effect (0.05) (0.02) (0.31) (0.19)	Less: Gain from changes in ownership interest of equity method investee		(6,972)		_		(6,972)		_			
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 — — — — 0.10 — — 0.10 — — 0.10 — — 0.10 — — 0.10 — — 0.10 — 0.10	Less: Tax Reform adjustments		_		_		_		(6,256)			
Diluted EPS \$ 2.32 \$ 1.87 \$ 8.70 \$ 7.12	Less: Income tax effect	-	(4,497)		(2,007)		(26,462)		(16,490)			
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 0.10 -	Adjusted net income	\$	209,774	\$	163,737	\$	830,410	\$	661,419			
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 0.10 -	Diluted EDS	¢	2 22	¢	1 97	¢	8 70	¢	7 1 2			
equity method investment basis difference 0.20 0.11 0.56 0.44 Plus: Debt extinguishment costs associated with the 3024, 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)		Ÿ	2.02	Ŷ	1.07	Ÿ	0.70	Ŷ	7.12			
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)			0.20		0.11		0.56		0.44			
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)	1 ,		0.20		0.11		0.00		0.44			
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)	3		_		_		0.71		0.53			
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)	•		_		_				_			
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)	, , ,		0.10		_		0.10		_			
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)	1 1 27				_				_			
Less: Tax Reform adjustments - - - - (0.07) Less: Income tax effect (0.05) (0.02) (0.31) (0.19)			(0.08)		_		(0.08)		_			
Less: Income tax effect (0.05) (0.02) (0.31) (0.19)			_		_		_		(0.07)			
	•		(0.05)		(0.02)		(0.31)		` '			
The state of the s	Adjusted EPS	\$	2.51	\$		\$	9.95	\$	<u> </u>			



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

		Year Ended									
	Dec. 31,	Dec. 31, Dec. 31,		Dec. 31,	Dec. 31,	Dec. 31,					
In thousands	2021	2020	2019	2018	2017	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					

	Three Mor	Full-Year		
	 Dec. 31,	Dec. 31,	2022	
In thousands	2021	 2020	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	

