

Datafeeds from Refinitiv Investing & Advisory



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StarMine quantitative models

StarMine® is dedicated to making investment research smarter. Analytics and equity research tools like our suite of quantitative models help investment professionals around the globe generate alpha and process equity information more efficiently so they can get ideas to market faster. StarMine quantitative models are stock selection factors grounded in sound economic intuition and developed using best of breed modeling techniques. These robust models span across regions, sectors and market environments to help you achieve higher returns across a spectrum of investment styles.

Differentiators

- **Performance:**
StarMine has a rich history of building innovative and profitable stock selection factors
- **Strict research methodology:**
StarMine models are grounded in fundamental economic intuition, backed by rigorous research and thorough testing
- **Clear-box approach:**
StarMine provides you with stock selection factors as well as underlying inputs so you enjoy flexible, customizable implementation
- **Best-of-breed data:**
Our models are built using Institutional Brokers' Estimate System (I/B/E/S®), Reuters Fundamentals and other Refinitiv content sets that play an integral role in key decision making across the financial industry

StarMine models

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Combined Alpha Model (CAM)	Global – 31,000 companies covered	FTP	Daily updates	Monthly and daily history going back to 1998
Value Momentum (Val-Mo)	Global – 30,000 companies covered	QA Direct® FTP QA Point	Daily updates	Monthly history going back to 1998 Daily history going back to October, 2009
Analyst Revisions Model (ARM): Includes consensus Smart Estimate measures of earnings per share (EPS), Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA), revenue	Global – 17,500 companies covered	QA Direct FTP QA Point	Daily updates	Monthly and daily history with monthly going back to 1995 and daily going back to 1998 FTP StarMine SmartEstimate history available back to 1998 QA Direct SmartEstimate history back to 2009
Price Momentum (Price Mo)	Global – 29,000 companies covered	QA Direct FTP QA Point	Daily updates	Monthly and daily history going back to 1998
Intrinsic Valuation (IV) and Relative Valuation (RV)	IV: Global – 21,000 companies covered and RV: Global – 38,000 companies covered	QA Direct FTP QA Point	Daily updates	Monthly going back to 1998 Daily going back to January, 2009
Earnings Quality (EQ)	Global – 38,000 companies covered	QA Direct FTP QA Point	Daily updates	Monthly and daily history going back to 2000
Smart Holdings	Global – 40,000 companies covered	QA Direct FTP QA Point	Daily updates	Monthly and daily history going back to 2000
Short Interest (SI)	U.S. only – 4,700 companies covered	FTP	Daily updates	Monthly and daily history going back to 2004
Insider Filings	U.S. only – 5,700 companies covered	FTP	Daily updates	Monthly and daily history going back to 1998
Structural Credit Risk (SCR)	Global – 36,700 companies covered	QA Direct FTP DataScope Select (DSS)	Daily updates	Monthly and daily history going back to 1998
SmartRatios Credit Risk (SRCR)	Global – 41,100 companies covered	FTP DSS	Daily updates	Monthly and daily history going back to 1998
Text Mining Credit Risk (TMCR)	Global – 33,000 companies covered	FTP DSS	Daily updates	Monthly and daily history going back to 2002
Combined Credit Risk (CCR)	Global – 44,000 companies covered	FTP DSS	Daily updates	Monthly and daily history going back to 1998

I/B/E/S Estimates

Analyst forecasts on company performance expressed via more than 240 consensus measures, including EPS, sales and net income.

Differentiators

I/B/E/S is the highest quality, most granular and transparent estimates provider. We provide industry-leading coverage – with decades more history and experience (1976 U.S.), hundreds more brokers (900+), and thousands more companies (22,000+) – especially in emerging markets – for the most complete view

of the market. Plus, we offer analytics not available anywhere else – like StarMine SmartEstimates®, StarMine Analyst Ratings and Predicted Surprises.

Coverage

Global database of 22,000 active companies and more than 900 brokers across more than 220 key financial measures (70 company-specific measures and 150 industry-specific KPIs); includes StarMine SmartEstimates.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
I/B/E/S Real Time: Includes all SmartEstimates measures	Global	TIBCO (XML messages) FTP (Initialization files)	Real time	Fiscal periods ending January, 2013 and later. SmartEstimates history begins in 2013
I/B/E/S Current: End of day and intraday updates. SmartEstimates for EPS, EBITDA and revenue	Global	FTP QA Direct DSS *DataStream® Data Loader (DDL)	End of day and Intraday	Current FTP has more than 230 measures Other platforms have 30 measures
I/B/E/S Point in Time: Daily snapshots of historical data using an array of dates and time stamps	Global	FTP DSS	Weekly	History as far back as 1976 (U.S.) and 1987 (non-U.S.)
I/B/E/S Historical: Full time series data back to 1976 and coverage of companies outside the U.S. dating back to 1997	Global	QA Direct* DDL* TRKD API DSS	Full history delivered once a month	As far back as 1976
I/B/E/S Daily Means	Global	QA Direct DSS	End of day	Consensus estimates back to 2001
I/B/E/S V2: 200 measures including KPIs, time stamps for precision and three views of currency adjustments; no regional splits and single view of parent/consolidated; includes all SmartEstimates measures	Global	QA Direct (updates every 15 minutes) DSS	Synchronized detail, consensus and preliminary estimates are updated for global stocks every day, including weekends	1980s – U.S. markets 1987 – Other regions QA Direct I/B/E/S V2 Smart Estimates history for all measures available from 2012

*Partial coverage only

I/B/E/S Guidance

Provides comments directly from corporate management about future company expectations. These forward-looking statements focus on sales or earnings expectations in light of industry

trends, allowing detailed valuation of a company's earnings potential and outlook picture.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Current & Historical – U.S. Current & Historical – Global	Global Quantitative guidance across 14 measures, including EPS, Net Income, Sales and Operating Profit	QA Direct FTP DSS	Current files are available four times on a daily basis History files are available once a week every Friday	1994

I/B/E/S Global Aggregates

Provides bottom-up sector and industry earnings forecasts plus related data.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
I/B/E/S Global Aggregates	Global Includes 56 countries and major international indices to include FTSE, MSCI, S&P, Russell and TOPIX	QA Direct DDL Datastream Web Services (DSWS) API DSS	Weekly	As far back as 1985

Worldscope® Fundamentals

Standardized and As Reported financial statement data – both interim and annual – along with per-share data, calculated financial ratios, company profile information, security data, Officers & Directors and market content for over 85,000 issuers.

Differentiators

Market-leading global coverage encompasses companies trading in over 125 markets representing more than 96% of the world's market cap. Coverage includes the fastest-growing frontier markets, not covered by the competition. Point in Time offers global, as of content to support backtesting of investment strategies.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Global: Provided in four main industry-based templates (industrial, banks, insurance and other financials). Covers more than 49,000 active and 36,000 inactive companies representing more than 55 established and emerging markets, nearly 96 percent of global stock market value	Global – covers over 95% of global market cap	QA Direct FTP QA Point	Daily end of day	As far back as 1980
Custom: All companies, data items and history available as above; cut is based on client requirements	Global	DDL	Daily updates	
Point in Time: Annual and interim financial statement data (income statement, balance sheet and statement of cash flows). Point date is based on when data became available in the Worldscope data feed	Global	QA Direct FTP QA Point	Daily updates	Same as Global but with monthly point dates from September, 1992 to September, 1999, weekly point dates from October, 1999 to 25 August, 2006 and daily since August, 2006

Business Intelligence

Business Intelligence offers in-depth qualitative information about companies around the world to enhance investment selection. Our database currently contains global data on over 113,000 companies, of which 80,000 are active companies. Keep abreast of markets worldwide through reports that identify key business people (and corporate affiliations) and provide a detailed overview of a company's business, competition and industry.

Officers & Directors is one of the most comprehensive databases of public company executives and directors in the world. The database features profiles for key decision makers from publicly traded companies with over 20 years of employment and compensation history. We capture over 1.75 million total officers and directors, representing 1.2 million unique people, from over 78,000 companies. Data elements include names, full title history, biographies, education, corporate affiliations, committees served and compensation, presenting a complete view of a person. In addition to public company data, we also capture the names and titles for over 100,000 officers and directors from private companies.

PACKAGE	FILE CONTENT/COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Business Intelligence	Officers & Directors: global 108,000 total, 76,000 active companies	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	North America (NA) – 1998, ex-NA 2003
	Major customers: global 18,700 total, 14,400 active companies	QA Direct FTP KD API	End of day; weekly refresh	1997
	Competitors: U.S. only 18,200 total, 9,800 active companies	QA Direct FTP KD API	End of day; weekly refresh	Current only
	Long business descriptions: U.S. only 28,000 total, 14,600 active companies	QA Direct FTP KD API	End of day; weekly refresh	Current only
	Reference information: global 128,800 total, 80,000 active companies	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	Current only
	General information: global 113,000 total, 80,000 active companies	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	Current only
	Multiple language short business descriptions: global 96,200 total, 52,900 English	FTP	End of day; weekly refresh	Current only

Reuters Fundamentals

Standardized and As Reported financial statement data – both interim and annual – along with per-share data, calculated financial ratios, company profile information, security data, Officers & Directors and market content for over 90,000 issuers.

Differentiators

Market-leading global coverage encompasses companies trading in over 169 exchanges representing more than 99% of the world's market cap. Coverage includes the fastest growing frontier markets, not covered by the competition. Point in Time offering global, as of content to support backtesting of investment strategies.

PACKAGE	FILE CONTENT/ COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Standardized Fundamentals	Standardized: aggregated line items to provide a standard view of the company Global coverage	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	North America – 1983; ex-North America – 1997 Interim: NA 1989; ex-NA 2000
	Analytics: pre-calculated ratios based on company standardized financials Global coverage	QA Direct FTP KD API	Daily	Current only
	Reference information Global coverage 128,800 total, 80,000 active companies	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	Current only
	General information Global coverage 113,000 total, 80,000 active companies	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	Current only

Upcoming packages (files already available)

PACKAGE	FILE CONTENT/ COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Standardized and As Reported Fundamentals	As Reported: all items from the income statement, balance sheet and cash flow. Provides all financial line items reported on the annual and interim financial statements Global coverage	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	North America – 1983; ex-North America – 1997 Interim: NA 1989; ex-NA 2000
	Standardized: aggregated line items to provide a standard view of the company Global coverage	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	North America – 1983; ex-North America – 1997 Interim: NA 1989; ex-NA 2000
	Business & Geographic Segments: information for each segment reported by a company on an annual and interim basis Global coverage	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	Annual 1998 Interim 2000

PACKAGE	FILE CONTENT/ COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Standardized and As Reported Fundamentals (continued)	Analytics: pre-calculated ratios based on company standardized financials Global coverage	QA Direct FTP KD API	Daily	Current only
	Reference information Global coverage 128,800 total, 80,000 active companies	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	Current only
	General information Global coverage 113,000 total, 80,000 active companies	QA Direct FTP KD API	Intraday (every 4 hours); end of day; weekly refresh	Current only

PACKAGE	FILE CONTENT/ COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Point in Time add-on to Standardized	Point in Time: annual and interim financial statement data (income statement, balance sheet and statement of cash flows). Point dates are based on the source date. Global coverage	QA Direct FTP	End of day; weekly refresh	Annual: North America – 1983; ex-North America – 1997 Interim: NA 1989; ex-NA 2000

Filings

Top three facts

- Largest, most consistent and authoritative source for global public company corporate disclosure. Through our former exclusive relationships with the U.S. Securities and Exchange Commission (SEC), Filings provides unrivaled depth and access to unique U.S. historical documents, including annuals, insider reports and pricing supplements
- Filings' global network of local experts results in unique coverage and unrivaled timeliness, with same-day availability of most documents
- Sourcing from Refinitiv provides global coverage for over 130 developed and emerging markets. Within the database of record, there is up to 50 years of history and 34 million documents in more than 20 languages

Unique characteristics

- Automated web scraping tools and direct document feeds ensure faster turnaround of up to 10 minutes
- Standardized Electronic Data Gathering, Analysis, and Retrieval (EDGAR) tags for easy navigation; including Filer Status and Document Title

- Display of SEC Delta reports
- OCR/CVISTA for scanned documents
- Documents available in multiple formats including XBRL, HTML and PDF

Scope and coverage

- Coverage includes all U.S. and global exchanges, including partial coverage of private companies, U.S. municipal bonds and fixed-income related documents
- Hundreds of document types, including annual and quarterly reports, equity and fixed-income prospectuses, municipal bonds, mergers and acquisitions (M&A), ownership and other regulatory filings
- 130 countries; 20 languages
- 65,000 global companies; 14K SEC companies (active), 7.5K private companies and growing
- 2.8 million docs sourced in 2016: 7.3K filings collected on average every day
- More than 20,000 documents captured in a given peak day

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Filings	Global	KD API	Hourly, real-time	1968
Filings	Global	Elektron Real Time	Hourly, real-time	1968

Insider

Data on equity transactions by individuals and institutions classified as insiders – officers, directors, persons with a policy-making role in the company or beneficial owners of a company's stock who are required by their respective governments or regulatory agencies to report direct or indirect holdings.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
U.S.: active insider filers include over 8,700 companies and over 437,000 owners	United States	QA Direct FTP DSS	Daily updates	1986
Canada: active insider filers include over 3,400 companies and 63,000 owners	Canada	QA Direct FTP DSS	Daily updates	October, 2003
UK: more than 27,000 active filers and approximately 373,000 director's dealings	United Kingdom	QA Direct FTP DSS	Daily updates	1998
Asia: insider holdings data processed for all listed securities. Coverage amounts to ~302,000 Insiders at ~15,600 listed stocks	India, Singapore, Taiwan, Hong Kong, China and Australia	QA Direct FTP DSS	Daily updates	As far back as 1997; most comprehensive history from 2008

Ownership

Global consolidated ownership. Comprehensive collection of global institutional holdings data. Coverage spans 13F institutions, mutual, pension and insurance funds, declarable stakeholders and UK share registers.

Differentiators

Our unique depth of historical holdings data enables clients to understand ownership trends over time, essential for validating investment models.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
OP global equity ownership	Global owners of securities trading in more than 70 countries; consolidated view of equity ownership for global securities	QA Direct FTP KD API	Daily – current view Weekly – eight-quarter view Quarterly – full history view	Back to 1997
OP equity ownership – Americas	Global owners of securities trading in the Americas	FTP	Daily – current view Weekly – eight-quarter view Quarterly – full history view	Back to 1997
OP equity ownership – Asia	Global owners of securities trading in Asia Pacific	FTP	Daily – current view Weekly – eight-quarter view Quarterly – full history view	Back to 1997
OP equity ownership – EMEA	Global owners of securities trading in the UK and Europe, Middle East and Africa (EMEA)	FTP	Daily – current view Weekly – eight-quarter view Quarterly – full history view	Back to 1997
Ownership V2	Global owners of securities trading in more than 70 countries; unconsolidated view reflecting all as-reported holdings filings collected by Refinitiv Ownership, including mutual fund content; features split-adjusted and unadjusted presentation and new analytics data	QA Direct	Every 30 minutes	1997

eMAXX

An ASCII feed of eMAXX data will provide you with fixed-income holdings and ownership data that can be incorporated into your proprietary in-house applications. View holdings of institutional fixed-income investors in 33 countries throughout North America, Europe and Asia. View holdings of over 2,500 managing firms with more than \$19 trillion in assets under management among U.S. and European insurance companies, pension funds and U.S., Canadian and European mutual funds. Over \$7 trillion in total fixed-income par amount. Coverage of over 50,000 fixed-income issuers and of over 500,000 individual fixed-income securities, more than 1.8 million securities positions, holdings of nearly 17,000 insurance companies, mutual funds and pension funds.

Key profile data elements

- Detailed asset breakdown
- Portfolios under management
- Investment decision makers
- Contact details including email addresses and direct-dial phone numbers

Key bond holdings data elements

- Par amount and net change
- U.S. insurance company transaction activity
- Issuer name or ticker
- Range or structure
- Credit sector
- Instrument or collateral type
- Currency or issuer location
- Ratings
- Private placement type

eMAXX coverage

Investors located in North America, Europe and Asia in the following market sectors:

eMAXX Markets

- ABS – including collateralized debt obligation (CDO) and covered bonds

- Corporate – high yield and investment grade
- Government – sovereign and government agency
- Mortgage-backed security (MBS) – agency and private label pass-through, collateralized mortgage obligation (CMO), commercial mortgage-backed securities (CMBS) and residential mortgage-backed securities (RMBS)
- Regional/municipal – U.S. municipal and international cities, states and provinces
- Private placement – 144A and non-144A
- Emerging markets

The eMAXX Match module

The eMAXX Match module instantly loads client portfolios viewable only by users at your firm, placing all holdings information in one powerful, easy to search database.

- Organize client and prospect holdings
- Assign internal sales coverage to each firm
- Identify holders of bonds you want to trade
- Communicate trade information
- Benefit from flexible delivery and integration

Data highlights

- Profile information on over 7,000 buy-side firms representing \$22.3 trillion under management
- Holdings for U.S. and some European insurance companies, U.S. mutual funds and top public pension funds and European, Canadian and Asian mutual funds
- Coverage of more than 50,000 fixed-income issuers, over 500,000 bonds and 1.8 million individual positions
- Over \$7 trillion in total fixed-income par held in more than 19,000 funds, each linked to the firms and investment professionals

All eMAXX data is also available in Eikon® and as a data feed, enabling you to import the data directly into your own system for customized needs.

Company profiles

Institutional and professional profile data for buy-side and sell-side institutions and contacts.

Differentiators

Our shareholding and firm profiles content is the industry standard for breadth, accuracy and timeliness. With more than 30 years of experience, our commitment to quality is supported by strong relationships with investment firms, registrars and local stock exchanges.

Coverage

More than 200,000 investment management and investment research professionals at 26,000 institutions.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Buy-side, sell-side or both	Global	QA Direct FTP	Daily refresh	Current only

Deals

Deals content from Refinitiv includes transactions relating to global equity, fixed income, M&A, syndicated lending, joint ventures (JV) and repurchases, corporate takeover defense and shareholder activism. The database includes more than two million transactions in 220 nations and features thousands of data items illustrating the entire deal life cycle.

Mergers and acquisitions

- Over 1,050,000 global deals from the 1970s to present
- More than 320,000 U.S. M&A deals
- More than 772,000 international M&A deals
- More than 1,000 fields are captured by mining thousands of sources and contributions from more than 2,000 advisor desks
- Industry-leading timeliness, deals available in product within 60 minutes of announcement
- Available via data feeds, QA Direct, Securities Data Company (SDC) Platinum, Deals Business Intelligence, T1 and Eikon

New issues (equity and debt)

- Global coverage from the 1970s to present
- Over 850,000 debt new issue deals
- Over 320,000 equity new issue deals
- More than 500 fields are captured by mining thousands of sources and contributions from 2,000+ advisor desks
- Available via data feeds, SDC Platinum, Deals, Business Intelligence, T1 and Eikon

Global syndicated loans

- Global coverage from 1965 to present
- Over 311,000 loan deals
- More than 300 fields are captured by mining thousands of sources and contributions from more than 2,000 advisor desks
- Available via data feeds, SDC Platinum, Deals, Business Intelligence, T1 and Eikon

Project finance

- Global coverage from 1972 to present
- Over 25,000 project finance deals
- More than 524 fields are captured by mining thousands of sources and contributions from advisor desks
- Available via data feeds, T1 and SDC Platinum

Repurchases

- Global coverage from 1986 to present
- Over 36,000 repurchases (buyback deals)
- More than 180 fields are captured by mining thousands of sources and contributions from over 2,000 advisor desks
- Available via data feeds and SDC Platinum

Joint ventures and strategic alliances

- Global coverage from 1963 to present
- Over 158,000 joint venture and strategic alliance deals
- 100+ fields are captured by mining thousands of sources and contributions from 2,000+ advisor desks
- Available via SDC Platinum

Municipals

- Global coverage from 1966 to present
- Over 580,000 municipal deals
- More than 180 fields are captured by mining thousands of sources and contributions from over 2,000 advisor desks
- Available via data feeds and SDC Platinum

Corporate governance

- Global coverage from the mid 1980s
- Over 12,000 poison pill records
- Over 4,000 proxy fight records
- More than 500 fields are captured by mining thousands of sources and contributions from legal and financial advisor desks
- Available via data feeds, SDC Platinum, T1 and Eikon

Private equity

- Global coverage from 1969
- Over 307,000 deals
- Capture details on private-equity-backed companies as well as private equity funds and firms
- More than 400 fields are captured by mining thousands of sources and contributions from over 400 private equity funds
- Available via data feeds, T1 and Eikon

FEED TYPE	FREQUENCY	HISTORY OPTION	# OF DEALS IN 2017	TOTAL DEALS	HISTORY START	FIELDS IN FEED	TOTAL FIELDS IN DB
Global debt new issues	Daily	Daily, 10 years or 20 years	36,635	846,202	1954	57	542
Global equity new issues	Daily	Daily, 10 years or 20 years	18,933	320,472	1970	70	598
Global IPOs	Daily	Daily, 10 years or 20 years	4,110	78,044	1970	70	598
Global M&A	Daily	Daily, 10 years or 20 years	53,836	1,100,733	1967	92	1,329
U.S. M&A	Daily	Daily, 10 years or 20 years	14,034	320,647	1971	92	1,329
M&A consideration	Daily	10 years	53,836	486,417	2007	18	1,329
M&A history event	Daily	10 years	53,836	486,417	2007	10	1,329
M&A arbitrage pricing	Daily	10 years	1,563	13,716	2007	12	1,329
Municipals	Daily	All history	14,326	583,245	1966	89	181
Syndicated loans	Daily	Daily, 10 years or 20 years	17,686	311,626	1965	78	349
Poison pills	Weekly	All history	90	12,320	1983	35	206
Proxy fights	Weekly	All history	446	4,226	1987	43	305
Project finance	Daily	All history	1,630	25,993	1972	Custom	524
Repurchases	Daily	All history	1,702	36,631	1986	42	180
Private equity	Weekly	10 years or 20 years	12,378	307,076	1969	144	437
Intraday for global M&A	Intraday	20 years	–	–	–	–	–

Deal counts are as of January 1st, 2018.

Arbitrage feed is free when M&A Standard and M&A Considerations is purchased.

Deals, mergers and acquisitions are also available in DataScope Select.

Aftermarket research collection

Access the world's most comprehensive database of aftermarket research reports

Written by analysts at more than 1,800 sell-side research departments and independent research firms dating back to 1982, aftermarket research collections from Refinitiv offer authoritative analysis of companies, industries, products and markets across the globe. The reports, embargoed for an average of seven days from publication, provide unique insight, including forecasts and opinions, from the most sought-after industry experts including sources not available from any other distributors.

- **Broker/investment research reports** – from the major global banks and regional, local and boutique firms
- **Independent research reports** – from non-brokerage outlets
- **Market research reports** – from the world's top-rated and most renowned market research firms
- **Fundamental research** – company details covering over 45,000 companies
- **Fixed-income research** – including ratings agencies

Investext® collection

Available on a subscription basis, the Investext aftermarket research collection contains research from over 1,800 contributors and 16 million research documents that ensures that you have got the most comprehensive views so you can make confident decisions.

Market research collection

The market research collection includes pay-per-view, in-depth primary research and statistics, interviews with industry leaders, survey results, forecasts, market size and share data and market segment analysis. More than one million market research reports are available from nearly 40 market research sources.

Research select collection

Access in-depth, timely analysis and forecasts on companies, industries, products and markets across the globe. Research reports are sold on a pay-per-view basis and are only sold as full reports with the price of each research report set by the contributing firm. Our comprehensive collection boasts information and nearly two million reports written by expert analysts from the world's top research producers.

Differentiators

Refinitiv continues to strengthen these collections with new sources providing greater geographic coverage. We are constantly increasing the breadth and depth of content coverage among both global and regional research firms. Over 202 contributors were added in 2016 and 2017, bringing our total active number of aftermarket research contributors to 958.

Refinitiv brings more research to your search results than our competitors. Use our global coverage to gather valuable and unique information on your peers or industry and monitor global industry trends and significant developments.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Aftermarket research collection	Global	KD API	Daily	As far back as 1982

StreetEvents®

Corporate disclosures and brokerage events from over 18,000 public companies and hundreds of sell-side firms in over 90 countries.

Differentiators

Our event-based content offers you a one-stop solution for market-moving corporate disclosure information by bringing together conference call and webcast details, transcripts, call summaries, briefs, guidance, SEC filings and more. We are the largest provider of corporate, institutional and proprietary event content.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Events: event information sourced from over 18,000 public companies and hundreds of sell-side firms	Global	FTP KD API DSS	Intraday and end of day	The full file generates all forward-looking events in the database as well as 120 days of history
Transcripts & Briefs: transcripts of corporate conference calls	Global	FTP KD API DSS	Intraday and end of day	

Significant Developments

News analysis and filtering service providing a concise description of each crucial, market-moving company news event on a near real-time basis. Concise summaries of company-reported events.

Differentiators

Filtered summaries and categorization save time, offer insight and allow you to keep abreast of critical news. Standard tagging allows you to isolate different events and utilize for trend analysis and backtesting. Ability to track companies, industries, geographies and topics allows you to focus on key subjects of interest and efficiently monitor peer and competitor activity.

Coverage

Over 63,000 active companies representing over 99% of world market capitalization; coverage of all constituents of all major indices – more than 150 exchanges in 116 countries; 35 topics ranging from mergers and acquisitions to earnings outlooks.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Significant developments	Global	QAD KD API FTP	Intraday, real time and end of day	U.S. and Canada history from 2002; other markets from 2005

Datastream time series content

Provides global cross-asset time series enabling users to explore relationships between data series, perform correlation and relationship analysis, test investment and trading ideas, and research countries, regions and sectors.

Differentiators

A huge volume of content not available anywhere else. A detailed function and expression language for in-depth analytics. Long historical time series with access to instruments which are now inactive. Handling revisions and providing consistent histories, content is of the highest quality.

PACKAGE	# INSTRUMENTS/ TIME SERIES**	DELIVERY PLATFORM	COVERAGE	UPDATE FREQUENCY	HISTORY
Bond indices	80,000+	DDL, DSWS API	Global: over 175 countries and 60 markets worldwide	Update frequency can be specified by client, but data generally updated end of day. Update frequency is not specified by the client for QA Direct. Data is end of day, but the updates are intraday.	Over 50 years' history for some time series
Bonds & convertibles	1,900,000+	DDL, DSWS API			
Commodities	145,000+	DDL, DSWS API, QA Direct, DSS			
Constituent lists	282,000+	DDL, DSWS API, QA Direct			
Economic series	11,000,000+	DDL, DSWS API, QA Direct (about 150,000 series)			
Equities	268,000+	DDL, DSWS API, QA Direct, QA Point			
Equity indices	348,000+	DDL, DSWS API, QA Direct, QA Point			
Exchange rates	11,300+	DDL, DSWS API, QA Direct			
Futures	340,000+	DDL, DSWS API, QA Direct			
Funds (sourced from Lipper)	550,000+	DDL, DSWS API			
Interest rates	24,000+	DDL, DSWS API, QA Direct (minimal coverage)			
Investment trusts	3,000+	DDL, DSWS API, QA Direct*			
Options	16,700,000+	DDL, DSWS API, DSS			
Credit default swaps	101,000+	DDL, DSWS API, QA Direct*			
Warrants	2,900,000+	DDL, DSWS API, QA Direct*			

*Partial coverage only

**Includes Active & Inactive Instrument

ESG

ESG provides objective and transparent environmental, social and governance (ESG) information and analysis tools to enable our clients to benchmark, compare and integrate extra-financial information into their investment processes to identify companies with quality management and reduced risk exposure.

Differentiators

Refinitiv offers the most complete and in-depth ESG information and news in the industry. Our data and framework enable investors to make better investment decisions by looking beyond traditional financial metrics to benchmark and monitor how

companies are responding to global sustainability trends like climate change, resource depletion and demonstrating industry leadership in governance, business ethics, health and safety and more.

Coverage

ESG data on over 7,000 global companies. More than 400 strategic ESG data measures are available, structured into 18 categories representing four areas of corporate performance: economic, environmental, social and corporate governance.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Core: 23 key scores (18 categories + four pillars + one equal-weighted company score)	Global	DDL, DSWS	Every other week	As far back as 2002
Premium: core content plus underlying data	Global	DDL, DSWS	Every other week	As far back as 2002

Lipper Global Data Feed

Lipper provides independent insight to asset managers and institutional investors on global collective investments, including mutual funds, retirement funds, hedge funds and fund fees and expenses.

Lipper offers premium quality data, fund ratings, analytical tools and global commentary through specialized product offerings.

Trusted by investment professionals for more than 40 years, Lipper provides unparalleled expertise and insight to the funds industry.

Lipper Global Data Feed provides the most comprehensive global coverage offering insight on mutual funds, retirement funds, pension funds and fund fees and expenses. Our content is relied upon by financial professionals every day to support detailed analysis, peer comparison, performance reporting and investment selection. Millions of retail investors view Lipper information via their favorite print and digital news publications.

- We have 40 years of fund industry experience and a reputation for providing unbiased, high-quality institutional information
- Lipper covers over 292,000 collective investments including mutual funds, closed-end funds, exchange-trade funds (ETFs), hedge funds, domestic

retirement funds, pension funds and insurance products in 61 Registered for Sale (RFS) countries

- Lipper classifications and benchmarks provide unmatched granularity enabling more concrete comparative analysis. The Lipper Global Classification scheme is composed of more than 400 peer groups. Lipper Leader® ratings facilitate fund selection by illustrating how well a fund meets specific investment goals
- Lipper Global Data Feed provides access to fund performance, returns, daily net asset values (NAVs), risk statistics, benchmarks, asset information, distributions and historical data
- Lipper Global Data Feed also offers key portfolio data and ratios including full holdings, weight and rank within portfolio, shares held, allocations, sentence case: EPS growth, price to sales, price/book ratio, price/earnings ratio, return on assets, sales per share growth, weighted percent market caps
- Lipper fee and expense information including initial sales fees, management fees and redemption charges. Total Expense Ratios (TERs) and other expense data is also available
- Fund events include events such as mergers, liquidations, name changes, cross-reference changes and classification changes

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Asset overview: profile, performance, classifications, Lipper ratings, portfolio allocations & characteristics	Global	FTP	Custom	Full history since inception for prices, distributions and performance
Portfolio full holdings	Global	FTP	Monthly	Full history extends back to 2006 where available

Lipper Global Data Feed (continued)

The Lipper Global Fund Flows Feed provides detailed content on estimated net fund flows on a daily, weekly and monthly basis. Output is in XML format and can be easily integrated into outward-facing products. Estimated net flows are provided as well as total net assets, changes in assets, standard performance periods and general fund information.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Fund Flows at the fund level, company level, classification level and by domicile	Global	FTP	Daily	For markets outside the U.S., daily data will begin on August 1st, 2012, while U.S. content will begin January 1st, 1992. If fund history exists, the section will include at least 10 years of history

Machine Readable News

1. Real-Time News

Real-Time News includes feed and archive access to Reuters and third-party newswires.

Coverage:

- All news alerts, stories and updates that come over the Reuters newswire for companies, commodities, macroeconomic news and markets including foreign exchange (FX), fixed income, futures and equities
- Reuters operations in 131 countries with 2,600 journalists in 200 bureaus
- 10,000 stories a day to 450,000 financial professionals and more than 1 billion consumers
- Over 1,500 topic codes and other metadata
- Corporate and regulatory announcements: over 40 third-party newswires including major newswires publishing corporate announcements

2. News Analytics

News Analytics includes feed and archive access to sentiment, entity relevance and other natural language processing (NLP)-based scores on Reuters and third-party news.

Sources: Reuters, over 40 third-party newswires including major newswires publishing corporate announcements.

Coverage: 33,000 companies, 40 commodities and energy topics. Also scores general news, for example, macroeconomic news.

Scored by: author sentiment, relevance, novelty, volume.

Metadata includes: company identifiers, topic codes, alert/article/update, sector and geographic classification.

Languages: English and native Japanese.

3. News Sentiment Indices

News Sentiment Indices provide trailing-window news analytics scores of news sentiment and volume on companies and commodities. It is targeted at desktop traders and online portals.

4. MarketPsych Indices

MarketPsych Indices analyze news and social media in real time. They convert the volume and variety of professional news and social media into manageable information flows that drive sharper decisions. The indices are delivered as real-time data series that can easily be incorporated into your analysis and decision processes – quantitative or qualitative.

Asset and sentiment coverage:

- 10,000 companies
- 133 countries
- 34 commodities
- 30 currencies
- 61 unique indexes

Text sources:

- 40,000 primary global news sources
- 7,000 blogs, stock message boards and social media sites
- News Analytics includes feed and archive access to sentiment, entity relevance and other NLP-based scores on Reuters and third-party news

5. Economic events

An ultra-low latency delivery of economic indicators such as GDP, employment and inflation figures, consumer sentiment figures and purchasing manager indices.

Coverage: Over 1,500 economic indicators, over 70 countries.

Data Format: Optimized low-latency delivery in binary format.

Connectivity: Available in Washington, D.C. and New York at Equinix NY4 (EBS), Chicago Mercantile Exchange (CME) and London at Docklands (FX Matching).

Delivery: Ultra-low latency via News Feed Direct.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Real-time news feed/archive	Global	Elektron/FTP	Real time/monthly	1996 for Reuters, 2003 for other sources
News analytics feed/archive	Global	Elektron/FTP	Real time/monthly	2003
News sentiment indices	Global	Elektron/FTP	Real time/monthly	2003
MarketPsych indices	Global	FTP	Minutely	1996
Economic events	Global	News Feed Direct	Real time	

Tick History

Captured from the Refinitiv real-time data feeds, Tick History offers global tick data since 1996 across all asset classes, covering both OTC and exchange-traded instruments from more than 500 exchanges and third-party contributor data, the majority available two hours after markets close. Tick History provides superior coverage of complete, timely and global nanosecond tick data. This enables you to download the data you need when you need it, via a single interface.

DATA

Recorded trade and quote messages from our real-time feeds since 1996.

Region	Global: Americas, Asia Pacific, EMEA
All asset classes	Equities Fixed Income Foreign Exchange and Money Markets Commodities and Energy Futures Options Economic Indicators
Major third-party contributors	MarketAxess ICAP BGC Partners Tullett Tradition WM fixings
Exclusive content	Tradeweb® Matching

MESSAGE TYPES

With integrated reference data, Tick History enables the creation of seamless historical time series effortlessly and ensures clients can account for trading pattern anomalies and survivorship bias.

Time series data	Trades and Quotes (level 1) Market depth (level 2) Market by Price Market by Order End-of-day prices Intraday summaries (one sec, one min, five min, 15 min, hourly)
Reference data	Corporate Actions (Corax) Secondary Identifiers (ISIN, CUSIP, SEDOL, RIC, etc.)

ITEM	TRTH V2
Content	Recorded from Real-Time Feeds
Recorded from real-time feeds	HTML-Based GUI
API	REST Web Services

Proprietary indices

Refinitiv has been calculating indices for over 30 years. We are uniquely positioned to construct, calculate and distribute indices using an unrivaled amount of cross-asset proprietary content and data.

Whether you require indices for benchmarking, for the development of investment vehicles or custom index services, we provide a range of indices and index solutions to meet your needs precisely. With fewer limitations, our indices avoid the usage restrictions and pricing complexities imposed by traditional providers.

We support fully International Organization of Securities Commissions (IOSCO's) approach, which applies a common set of principles across all jurisdictions and we have been working to ensure full observance of these principles across all benchmarks that we administer.

We calculate index families from global suites, fixed income entities, commodity partnerships, convertible and FX suites, as part of our passive investment strategies. We also offer specialized custom asset classes and calculations along with Smart Beta and Thematic variants.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Global equity index, fixed income, convertible and custom approach index suites	Global	FTP QA Direct* KD API QA Point	Custom	Prices and compositions back to 1999

*Partial coverage only

Business Classification

Business Classification (BC) is the market-based system that helps you identify, analyze and monitor industries across global markets.

Differentiators

BC allows you to view companies at any of five levels: 10 Economic Sectors, 28 Business Sectors, 54 Industry Groups, 136 Industries and 837 Activities. Complete coverage across 130 developed, emerging and frontier countries.

Coverage

Over 72,000 public companies classified – more than any other sector classification system – and 2.4 million private companies.

History available from 1999. Powers five levels of Refinitiv Sector Indices in 51 countries and 23 regions.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
BC	Global	QA Direct KD API FTP QA Point	Daily refresh	History from 1999
Worldscope	Global	FTP	Daily refresh	History from 1999
I/B/E/S	Global	FTP DDL (features current TRBC only)	Features current and historical business classification in FTP and monthly history delivery	History from 1999

Knowledge Graph

Refinitiv financial content sets with a pre-identified set of relationships help you uncover previously undetected connections within and across data sets.

Knowledge Graph feeds include bulk delivery of the following content sets along with specific metadata

CONTENT SET	CONTENT	EXAMPLE FIELDS	EXAMPLE RELATIONSHIPS
Value Chain Relationships			
Supply Chain Refinitiv's growing collection of publicly-disclosed supplier and customer relationships. Provides evidence text (snippets) that went into determining the relationship	190,000 relationships for 28,000 companies extracted from 11 million publicly available sources dating back to 2011. Coverage for 5,000 public companies	Agreements Organizations, Confidence Score Source Information Text, Date, Source Type	Supply Chain Supplier Customer
Comparable Companies Find competitors, peers and related companies to identify comprehensive and often non-obvious targets	Comparable Companies is a list of two million relationships for 200,000 companies generated using a proprietary algorithm that analyzes co-occurrence and frequency of appearances within news, together with industry and geography information	Organizations Relative Similarity Score	Comparable Company
JVs and Strategic Alliances JVs and Strategic Alliances includes agreements that result in the formation of new entities (JVs) and business partnerships (alliances)	Dating back to 1985, JVs and Alliances covers over 60,000 Joint Ventures and 80,000 Strategic Alliances	Up to 100 fields are available, including: Deal Information Dates, Investment, Size, Duration Agreement Type Technology, Marketing, Product, Cross-Border Alliance	Joint Venture Strategic Alliance Resulting Company
Industry Classification Business Classification (BC) is a comprehensive, detailed and up-to-date market-oriented sector and industry classification	Over 727,000 companies in 130 countries with five levels of industry classification. History is available back to 1999	In addition to the industry assignment, the dates of prior assignments and prior classification schemes are available	Economic Sector Business Sector Industry Group Industry Activity

CONTENT SET	CONTENT	EXAMPLE FIELDS	EXAMPLE RELATIONSHIPS
Knowledge Graph – Core Entities			
Instruments and Quotes Comprehensive equity data covers all exchanges and allows customers to connect company data to security masters. With instruments and quotes, customers can identify which tradable securities are impacted by any company-level information	Includes all current and historical Equity Instruments and Quotes, 240,000 equity instruments and 1.17 million equity quotes across 160 exchanges	Instrument PermID®, Instrument Name, Asset Class, Active/Inactive Status Quote PermID, RIC, Ticker, MIC, Exchange, Currency & Currency Unit	Issuers Instrument to issuer quote to instrument Metadata Currency, asset class, share class, exchange
Officers and Directors Officers and Directors is one of the most comprehensive databases of public company executives and directors in the world	Over two million officer and director positions, including historical positions from 1998. Every person is uniquely identified independently from his or her position. Coverage includes all public and private equity-backed companies	Available fields include: Personal eetails Name, age, biography, education Work history Corporate affiliations, ss-reported and standardized titles, committees served	Role Officer, director Personal Committee, education, qualification
Metadata Refinitiv provides a comprehensive set of metadata that describe the financial markets including the content, taxonomies and relationships available from Refinitiv. We make available all the metadata needed to understand the content within the Knowledge Graph, plus additional metadata that indicates what other content is available from Refinitiv	Over 5 million metadata entities, including major classification systems and detailed data item coverage for every Refinitiv published content set. Includes ISO and other industry standards where applicable	Available metadata includes: Classification systems Industry classifications – BC, NAICS Asset classes: equity, commodities, fixed income, FX News topics Core metadata Geographies, countries, cities, commodities, currencies, languages Holidays, units, time zones Data set specific metadata Relationships, definitions, data elements	Geographies Administrative units, subdivision Industry Business sector, industry Currencies Currency currency unit Taxonomies Asset class hierarchy

Symbology

The Symbology Concordance feed delivers seamless access to Refinitiv content by routing you from any identifier to any other identifier whether internal or external, or to PermIDs that index our platform content.

It provides both identity resolution and navigation services to quickly connected you to the information you need.

PACKAGE	COVERAGE	DELIVERY PLATFORM	UPDATE FREQUENCY	HISTORY
Symbology Concordance	Global	FTP	30 min Delta; end of day Delta; Weekly refresh	Current only

Delivery mechanisms and platforms

QA Direct is a powerful, scalable platform to manage, maintain and integrate your research and investment data. You will benefit from the advanced database structure, extensive content offerings and efficient implementation of QA Direct. With QA Direct, you get direct access to best-of-breed, integrated data from multiple vendors. You can utilize Microsoft® SQL Server or Oracle with fully documented database schema and diagrams. Each vendor set is interlinked through our proprietary mapping system and our database is Dates, designed to be fully expandable for additional content sets. QA Direct can be easily linked to statistical and portfolio optimization software packages, such as SAS, MATLAB, R and S-PLUS. ODBC compatibility allows easy links to statistical packages and modern programming languages such as Python and C.

Datastream Data Loader (DDL) allows you to pinpoint the exact data you need from our full range of content offerings and retrieve it one of two ways: when the latest updated data becomes available or on an ad hoc basis. This simple yet powerful FTP-based solution is the most flexible, easy to implement and cost-effective method of delivering referential data.

File Transfer Protocol (FTP): Data files via FTP meet the demands of users who need to store and manipulate the data, integrate the data into proprietary analysis or merge the data with other content sets. The files are usually designed to be database ready and work at various levels to meet different user groups' requirements.

Elektron Real Time is a low-latency consolidated global data feed that delivers full tick, depth-of-market data, helping you to source better quality information and minimize the total cost of ownership of your real-time infrastructures.

News Feed Direct (NFD) delivers an ultra-low latency feed of world-class news content from Refinitiv. NFD was designed specifically for application consumption. It offers full text and comprehensive metadata via streaming broadcast with assured delivery to ensure you never miss an important event.

Knowledge Direct API (KD API) meets the demands of users who have a requirement to incorporate data within applications for display purposes whether for internal or redistribution purposes. This API facilitates the delivery of data, news and the capabilities associated with these (charts, search, timeseries and so on) through SOAP XML Web services.

QA Point is a cloud-based platform for backtesting systematic investment models that allows professional investors to introduce cutting-edge quantitative research and analytics to fund management.

Knowledge Graph Feed is a linked data feed of financial content sets by Refinitiv with a pre-identified set of relationships helping you uncover previously undetected connections within and across data sets.

DataScope Select provides a total solution for your historical and reference data needs. It offers comprehensive, accurate global equities data from over 180 exchanges, evaluated fixed income pricing for more than one million U.S. securities and extensive money markets and futures data.

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THE BEGINNING 