

Methodology overview
Effective January 1, 2019

FTSE
Russell

Industry Classification Benchmark (ICB)

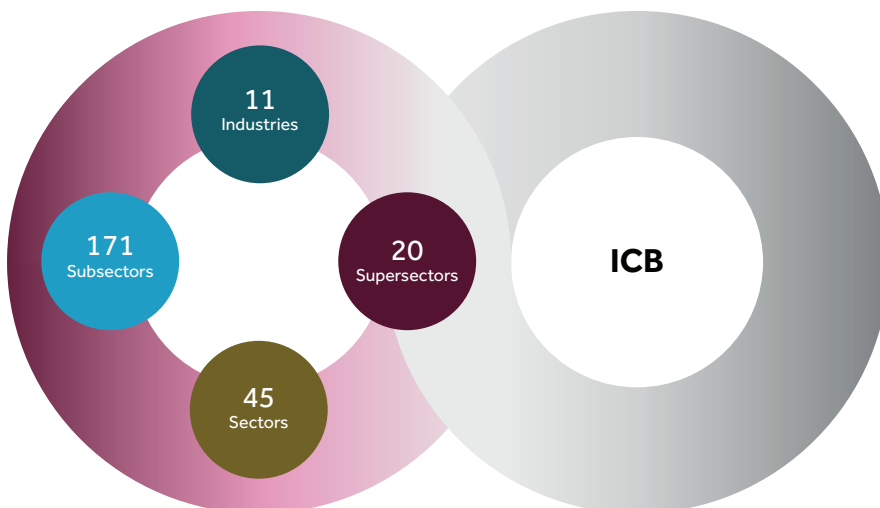
ICB is a single standard that defines the market

With approximately 100,000 securities classified worldwide, we provide a comprehensive data source and a definitive categorizing system for the global investment community.

Industry Classification benchmark (ICB) is a globally recognized standard, operated and managed by FTSE Russell for categorizing companies and securities across four levels of classification.

Each company is allocated to the subsector that most closely represents the nature of its business, which is determined by its primary source of revenue and other publicly available information.

Virtually any equity-related security that an investment professional will encounter is covered by the ICB structure, providing a standardized basis for analysis, stock selection, performance measurement and product design.



Features and content

Investor focused

Offers increased clarity, better structure and universality to meet the needs of the investment industry.

Comprehensive coverage

Covers virtually any equity-related security an investment professional will encounter. A rigorous and transparent rules-based methodology enables accurate and relevant classification, ensuring low inter-sector correlation in any stage of the economic cycle.

Versatility

Provides a standardized basis for analysis, stock selection and performance measurement. It aligns with investment research and analysis, numerous exchange-traded products, and services developed by analytical data vendors. It can also be used to drive a search engine or enhance existing data sources.

Accurate and timely

The accuracy, quality and timeliness of the data make it a very reliable reference source for validation, compliance and other reporting processes.

Relevant to investors

The first and second level Industry and Supersector tiers are designed to reflect and facilitate sector-based investment strategies. Additional granularity is provided at the third and fourth level Sector and Subsector tiers.

Representative

Independent management combined with input from research teams based in each major region allows ICB to reflect the global industrial landscape and provides the reassurance of accurate representation and continued growth and monitoring of the market.

Global reach

Adopted by stock exchanges around the world including NYSE Euronext, NASDAQ OMX, London Stock Exchange, Taiwan Stock Exchange, Johannesburg Stock Exchange, Borsa Italiana, Singapore Stock Exchange, Athens Exchange, Cyprus Stock Exchange and Kuwait Stock Exchange.

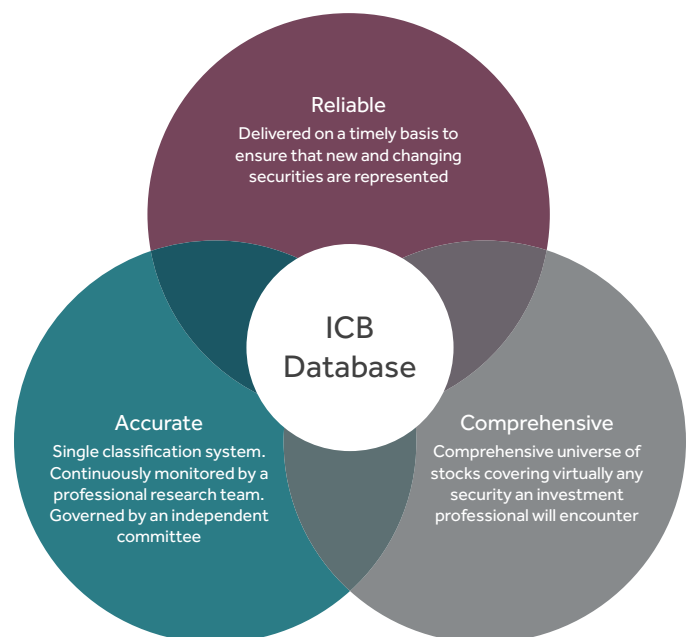
Efficient and effective

A single data source, which removes the need for users to maintain individual databases or undertake costly and time-consuming sector research.

Products

Weekly database: ICB Database product files are produced on the last business day of the week and are available by 10:00 p.m. US Eastern Standard Time

Daily updates: Files containing daily changes are produced at the end of each business day of the week and are available by 10:00 p.m. US Eastern Standard Time



| Industry | Supersector | Sector | Subsector |
|----------------------------------------|-----------------------------------------|------------------------------------------------|------------------------------------------|
| 10 Technology | 1010 Technology | 101010 Software & Computer Services | 10101010 Computer Services |
| | | | 10101015 Software |
| | | | 10101020 Consumer Digital Services |
| | | 101020 Technology Hardware & Equipment | 10102010 Semiconductors |
| | | | 10102015 Electronic Components |
| | | | 10102020 Production Technology Equipment |
| | | | 10102030 Computer Hardware |
| | | | 10102035 Electronic Office Equipment |
| 15 Telecommunications | 1510 Telecommunications | 151010 Telecommunications Equipment | 15101010 Telecommunications Equipment |
| | | 151020 Telecommunications Service Providers | 15102010 Cable Television Services |
| | | | 15102015 Telecommunications Services |
| 20 Health Care | 2010 Health Care | 201010 Health Care Providers | 20101010 Health Care Facilities |
| | | | 20101020 Health Care Management Services |
| | | | 20101025 Health Care Services |
| | | | 20101030 Health Care: Misc. |
| | | 201020 Medical Equipment & Services | 20102010 Medical Equipment |
| | | | 20102015 Medical Supplies |
| | | | 20102020 Medical Services |
| | | 201030 Pharmaceuticals & Biotechnology | 20103010 Biotechnology |
| | | | 20103015 Pharmaceuticals |
| 30 Financials | 3010 Banks | 301010 Banks | 30101010 Banks |
| | 3020 Financial Services | 302010 Finance & Credit Services | 30201020 Consumer Lending |
| | | | 30201025 Mortgage Finance |
| | | | 30201030 Financial Data & Systems |
| | | 302020 Investment Banking & Brokerage Services | 30202000 Diversified Financial Services |
| | | | 30202010 Asset Managers & Custodians |
| | | | 30202015 Investment Services |
| | | 302030 Mortgage Real Estate Investment Trusts | 30203000 Mortgage REITs: Diversified |
| | | | 30203010 Mortgage REITs: Commercial |
| | | | 30203020 Mortgage REITs: Residential |
| | | 302040 Equity Investment Instruments | 30204000 Equity Investment Instruments |
| | 302050 Nonequity Investment Instruments | 30205000 Nonequity Investment Instruments | |
| | 3030 Insurance | 303010 Life Insurance | 30301010 Life Insurance |
| | | 303020 Nonlife Insurance | 30302010 Full Line Insurance |
| | | | 30302015 Insurance Brokers |
| | | | 30302020 Reinsurance |
| 30302025 Property & Casualty Insurance | | | |

| Industry | Supersector | Sector | Subsector |
|---------------------------|-----------------------------------|------------------------------------------------------|----------------------------------------------|
| 35 Real Estate | 3510 Real Estate | 351010 Real Estate Investment & Services Development | 35101010 Real Estate Holding and Development |
| | | | 35101015 Real Estate Services |
| | | 351020 Real Estate Investment Trusts | 35102000 Diversified REITs |
| | | | 35102010 Health Care REITs |
| | | | 35102015 Hotel & Lodging REITs |
| | | | 35102020 Industrial REITs |
| | | | 35102025 Infrastructure REITs |
| | | | 35102030 Office REITs |
| | | | 35102040 Residential REITs |
| | | | 35102045 Retail REITs |
| | | | 35102050 Storage REITs |
| | | | 35102060 Timber REITs |
| | | | 35102070 Other Specialty REITs |
| 40 Consumer Discretionary | 4010 Automobiles & Parts | 401010 Automobiles & Parts | 40101010 Auto Services |
| | | | 40101015 Tires |
| | | | 40101020 Automobiles |
| | | | 40101025 Auto Parts |
| | 4020 Consumer Products & Services | 402010 Consumer Services | 40201010 Education Services |
| | | | 40201020 Funeral Parlors & Cemetery |
| | | | 40201030 Printing and Copying Services |
| | | | 40201040 Rental & Leasing Services: Consumer |
| | | | 40201050 Storage Facilities |
| | | | 40201060 Vending & Catering Service |
| | | | 40201070 Consumer Services: Misc. |
| | | | 402020 Household Goods & Home Construction |
| | | 40202015 Household Furnishings | |
| | | 40202020 Household Appliance | |
| | | 40202025 Household Equipment & Products | |
| | | 402030 Leisure Goods | 40203010 Consumer Electronics |
| | | | 40203040 Electronic Entertainment |
| | | | 40203045 Toys |
| | | | 40203050 Recreational Products |
| | | | 40203055 Recreational Vehicles & Boats |
| | | | 40203060 Photography |

| Industry | Supersector | Sector | Subsector |
|----------------------------------------------|----------------------------------------|-------------------------------------------|---------------------------------------------------|
| | | 402040 Personal Goods | 40204020 Clothing & Accessories |
| | | | 40204025 Footwear |
| | | | 40204030 Luxury Items |
| | | | 40204035 Cosmetics |
| | 4030 Media | 403010 Media | 40301010 Entertainment |
| | | | 40301020 Media Agencies |
| | | | 40301030 Publishing |
| | | | 40301035 Radio & TV Broadcasters |
| | 4040 Retailers | 404010 Retailers | 40401010 Diversified Retailers |
| | | | 40401020 Apparel Retailers |
| | | | 40401025 Home Improvement Retailers |
| | | | 40401030 Specialty Retailers |
| | 4050 Travel & Leisure | 405010 Travel & Leisure | 40501010 Airlines |
| | | | 40501015 Travel & Tourism |
| | | | 40501020 Casino & Gambling |
| | | | 40501025 Hotels & Motels |
| 40501030 Recreational Services | | | |
| 40501040 Restaurants & Bars | | | |
| 45 Consumer Staples | 4510 Food, Beverage & Tobacco | 451010 Beverages | 45101010 Brewers |
| | | | 45101015 Distillers & Vintners |
| | | | 45101020 Soft Drinks |
| | | 451020 Food Producers | 45102010 Farming, Fishing, Ranching & Plantations |
| | | | 45102020 Food Products |
| | | | 45102030 Fruit & Grain Processing |
| | | | 45102035 Sugar |
| | | 451030 Tobacco | 45103010 Tobacco |
| | | 4520 Personal Care, Drug & Grocery Stores | 452010 Personal Care, Drug & Grocery Stores |
| | 45201015 Drug Retailers | | |
| | 45201020 Personal Products | | |
| | 45201030 Nondurable Household Products | | |
| 45201040 Miscellaneous Consumer Staple Goods | | | |

| Industry | Supersector | Sector | Subsector | |
|--------------------------------|----------------------------------|------------------------------------------|-------------------------------------------------|--------------------------------------------------|
| 50 Industrials | 5010 Construction & Materials | 501010 Construction & Materials | 50101010 Construction | |
| | | | 50101015 Engineering & Contracting Services | |
| | | | 50101020 Building, Roofing/Wallboard & Plumbing | |
| | | | 50101025 Building: Climate Control | |
| | | | 50101030 Cement | |
| | | | 50101035 Building Materials: Other | |
| | 5020 Industrial Goods & Services | 502010 Aerospace & Defense | 502010 Aerospace & Defense | 50201010 Aerospace |
| | | | | 50201020 Defense |
| | | 502020 Electronic & Electrical Equipment | 502020 Electronic & Electrical Equipment | 50202010 Electrical Components |
| | | | | 50202020 Electronic Equipment: Control & Filter |
| | | | | 50202025 Electronic Equipment: Gauges & Meters |
| | | | | 50202030 Electronic Equipment: Pollution Control |
| | | | | 50202040 Electronic Equipment: Other |
| | | 502030 General Industrials | 502030 General Industrials | 50203000 Diversified Industrials |
| | | | | 50203010 Paints & Coatings |
| | | | | 50203015 Plastics |
| | | | | 50203020 Glass |
| | | | | 50203030 Containers & Packaging |
| | | 502040 Industrial Engineering | 502040 Industrial Engineering | 50204000 Machinery: Industrial |
| | | | | 50204010 Machinery: Agricultural |
| | | | | 50204020 Machinery: Construction & Handling |
| | | | | 50204030 Machinery: Engines |
| | | | | 50204040 Machinery: Tools |
| | | | | 50204050 Machinery: Specialty |
| | | 502050 Industrial Support Services | 502050 Industrial Support Services | 50205010 Industrial Suppliers |
| | | | | 50205020 Back Office Support, HR & Consulting |
| | | | | 50205025 Business Training & Employment Agencies |
| | | | | 50205030 Forms & Bulk Printing Services |
| | | | | 50205040 Security Services |
| | | 502060 Industrial Transportation | 502060 Industrial Transportation | 50206010 Trucking |
| | | | | 50206015 Commercial Vehicles & Parts |
| | | | | 50206020 Railroads |
| 50206025 Railroad Equipment | | | | |
| 50206030 Marine Transportation | | | | |

| Industry | Supersector | Sector | Subsector |
|---------------------------------------|---------------------------------|-------------------------------------|-----------------------------------------------|
| | | | 50206040 Delivery Services |
| | | | 50206050 Commercial Vehicle-Equipment Leasing |
| | | | 50206060 Transportation Services |
| 55 Basic Materials | 5510 Basic Resources | 551010 Industrial Materials | 55101000 Diversified Materials |
| | | | 55101010 Forestry |
| | | | 55101015 Paper |
| | | | 55101020 Textile Products |
| | | 551020 Industrial Metals & Mining | 55102000 General Mining |
| | | | 55102010 Iron & Steel |
| | | | 55102015 Metal Fabricating |
| | | | 55102035 Aluminum |
| | | | 55102040 Copper |
| | | | 55102050 Nonferrous Metals |
| | 551030 Precious Metals & Mining | 55103020 Diamonds & Gemstones | |
| | | 55103025 Gold Mining | |
| | | 55103030 Platinum & Precious Metals | |
| | 5520 Chemicals | 552010 Chemicals | 55201000 Chemicals: Diversified |
| 55201010 Chemicals & Synthetic Fibers | | | |
| 55201015 Fertilizers | | | |
| 55201020 Specialty Chemicals | | | |
| 60 Energy | 6010 Energy | 601010 Non-Renewable Energy | 60101000 Integrated Oil & Gas |
| | | | 60101010 Oil: Crude Producers |
| | | | 60101015 Offshore Drilling & Other Services |
| | | | 60101020 Oil Refining and Marketing |
| | | | 60101030 Oil Equipment & Services |
| | | | 60101035 Pipelines |
| | | | 60101040 Coal |
| | | 601020 Renewable Energy | 60102010 Alternative Fuels |
| | | | 60102020 Renewable Energy Equipment |
| | | | |
| 65 Utilities | 6510 Utilities | 651010 Electricity | 65101010 Alternative Electricity |
| | | | 65101015 Conventional Electricity |
| | | 651020 Gas, Water & Multi-utilities | 65102000 Multi-Utilities |
| | | | 65102020 Gas Distribution |
| | | | 65102030 Water |
| | | 651030 Waste & Disposal Services | 65103035 Waste & Disposal Services |

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