

## Reference companies

- [Renaissance Technologies](#)

Renaissance Technologies is a quantitative investment management company trading in global financial markets, dedicated to producing exceptional returns for its investors by strictly adhering to mathematical and statistical methods.

**Type:** Quantitative Investment Management.

**Business model:** Non offering.

**Capital:** Private & Institutional.

**Headquarters:** New York, US.

**Offices:** -

**Founder:** [Jim Simons](#)

**Nationality:** US.

**Founded:** 1998

**Maturity:** 32 years.

**AUM:** \$68 billions.

**Employees:** <257 (100)

**Super-start:** Medallion Fund.

**Avg Annual Return:** 60%.

**Markets:** Multi-asset class.

**Strongest:** Maths, Technology & Trading Infrastructure.

- [Two Sigma](#)

Two Sigma is a systematic investment manager, founded with the goal of applying cutting-edge technology to the data-rich world of finance. Technology drives our business. We use machine learning, distributed computing and other technologies to find connections in the world's data. We've been pushing the frontiers of Big Data since before it was a buzzword. To us, it's just data. We work with vast sets of it, from over a thousand diverse sources.

**Type:** Hedge Fund.

**Business model:** Public offering.

**Capital:** Professional & Institutional.

**Headquarters:** New York, US.

**Offices:** Houston, London, Hong Kong, Tokyo, Shanghai.

**Founder:** [John Overdeck](#), [David Siegel](#), ...

**Nationality:** US.

**Founded:** 2001

**Maturity:** 19 years.

**AUM:** \$60 billions.

**Employees:** >1,500

**Super-start:** Two Sigma Fund.

**Avg Annual Return:** 10-30%.

**Markets:** Global Equities, Stocks, ETFs, Bonds.

**Strongest:** Machine Learning.

- [Akuna Capital](#)

Akuna Capital is an innovative trading firm with a strong focus on collaboration, cutting-edge technology, data driven solutions and automation. We specialize in providing liquidity as an options market-maker – meaning we are committed to providing competitive quotes that we are willing to both buy and sell. To do this successfully we design and implement our own low latency technologies, trading strategies and mathematical models.

The Akuna Team spans across four major departments:

- DEVELOPMENT
- QUANTITATIVE
- TRADING
- IT INFRASTRUCTURE

**Type:** Proprietary Trading Firm.

**Business model:** Non offering.

**Capital:** Private.

**Headquarters:** Chicago, US.

**Offices:** Sydney, Shanghai, Boston.

**Founder:** [Andrew Killion](#), ...

**Nationality:** AUS.

**Founded:** 2011

**Maturity:** 9 years.

**AUM:** ?

**Employees:** >600

**Super-start:** ?

**Avg Annual Return:** ?

**Markets:** Global Options & Cryptos.

**Strongest:** Market Making & Quantitative analysis.

- [Janet Street](#)

A very different Street. Jane Street is a quantitative trading firm with a unique focus on technology and collaborative problem solving.

- Global Market Making: we trade an average of \$13 billion in global equities every day. Learn how we make the markets more efficient.
- Tech at the Center: tech is core to our business, and software development is integrated into everything we do. Learn how functional programming sets us apart.
- Institutional Services: Jane Street offers institutional clients access to its proprietary liquidity through a variety of services. Learn how to trade with Jane Street.

**Type:** HFT Trading Firm.

**Business model:** Non offering.

**Capital:** Private.

**Headquarters:** New York, US.

**Offices:** Hong Kong, London.

**Founder:** [Tim Reynolds](#).

**Nationality:** US.

**Founded:** 1999

**Maturity:** 21 years.

**AUM:** \$886 millions.

**Employees:** >900

**Super-star:** ?

**Avg Annual Return:** ?

**Markets:** Global Equities, Stocks, ETFs, Bonds.

**Strongest:** Market Making & Technology.

- [First New York](#)

First New York is a multi-strategy investment firm. Since its inception in 1986, First New York has been a preferred destination for portfolio managers seeking to partner in an opportunistic environment with a history of success. For over three decades, First New York has identified portfolio managers and third party managers for its own account who implement strategies in equities, derivatives, fixed income, currencies, commodities and futures across global markets. First New York provides experienced portfolio managers with infrastructure and capital to deploy their strategies.

**Type:** Discretionary Multi-strategy Investment Firm.

**Business model:** Non-offering.

**Capital:** Private.

**Headquarters:** New York, US.

**Offices:** London.

**Founder:** [Donald Motschwiller](#).

**Nationality:** US.

**Founded:** 2010

**Maturity:** 10 years.

**AUM:** ?

**Employees:** <100

**Super-star:** ?

**Avg Annual Return:** ?

**Markets:** Multi-asset class.

**Strongest:** Discretionary Trading.

- [Hudson River Trading](#)

Hudson River Trading brings a scientific approach to trading financial products. We have built one of the world's most sophisticated computing environments for research and development. Our researchers are at the forefront of innovation in the world of algorithmic trading.

**Type:** HFT Trading Firm.

**Business model:** Non offering.

**Capital:** Private.



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**Headquarters:** New York, US.

**Offices:** New York, London, Singapore, Austin, Chicago, Shanghai, Dublin, Mumbai.

**Founder:** Jason Carroll (Harvard '00), Suhas Daftuar (Harvard '00), and Alex Morcos (MIT '97).

**Nationality:** US.

**Founded:** 2000

**Maturity:** 20 years.

**AUM:** ?

**Employees:** >300

**Super-start:** ?

**Avg Annual Return:** ?

**Markets:** Multi-asset class.

**Strongest:** Scientifics, Engineers & Coders.

- [QTS Capital Management](#)

QTS Capital Management, LLC. manages a commodity pool as well as individual clients' accounts using quantitative strategies. It is a member of the National Futures Association and is registered as a Commodity Pool Operator and Commodity Trading Advisor (NFA ID: 0431162). Since 2011, it has served a global clientele spanning 4 continents.

**Type:** Quantitative Trading Firm.

**Business model:** Public offering.

**Capital:** Private, Professional & Institutional.

**Headquarters:** Toronto.

**Offices:** New York, Singapore.

**Founder:** [Enerst Chan](#).

**Nationality:** Canada.

**Founded:** 2008.

**Maturity:** 12 years.

**AUM:** \$23 Billions.

**Employees:** <100

**Super-start:** QTS Fund.

**Avg Annual Return:** 30%

**Markets:** Multi-asset class.

**Strongest:** Quantitative Analysis.

- [Bridgewater](#)

Our unique success is the direct result of our unique way of being. We want an idea meritocracy in which meaningful work and meaningful relationships are pursued through radical truth and radical transparency. We require people to be extremely open, air disagreements, test each other's logic, and view discovering mistakes and weaknesses as a good thing that leads to improvement and innovation. It is by continually striving together for the highest levels of truth and excellence that we create meaningful work and meaningful relationships.

We are both idealistic and practical. We believe that creating excellent outcomes requires setting ambitious goals and applying our understanding of how the world works, as reflected in principles, to achieve them. Our Principles are ways of dealing with situations. They are the evolving record of our understanding of what works well. They're not just read and followed, but stress-tested on an individual and collective level as our shared approach to working together. As Bridgewater is an idea-meritocracy in which we value independent thinking, we urge you to read and assess them for yourself.

Bridgewater Associates is focused on understanding how the world works. By having the deepest possible understanding of the global economy and financial markets, and translating that understanding into great portfolios and strategic partnerships with institutional clients, we've built a distinct track record of success. We've done this for more than 40 years by having great people operate in a culture of radical truth and radical transparency. Today, we manage about \$160 billion for approximately 350 of the largest and most sophisticated global institutional clients including public and corporate pension funds, university endowments, charitable foundations, supranational agencies, sovereign wealth funds, and central banks.

**Type:** Quantitative Asset Management Firm. Hedge Fund.

**Business model:** Public offering.

**Capital:** Private, Professional & Institutional.

**Headquarters:** New York, US.

**Offices:** -

**Founder:** [Ray Dalio](#).

**Nationality:** US.

**Founded:** 1975.

**Maturity:** 35 years.

**AUM:** \$160 Billions.

**Employees:** >1,500

**Super-start:** Bridgewater Institutional Fund.

**Avg Annual Return:** 12%

**Markets:** Multi-asset class.

**Strongest:** Quantitative Trading, Asset Allocation & Risk Management.

- [Citadel](#)

### **To Be the Most Successful Investment Team in the World.**

We analyze global markets with discipline and focus, and employ a range of strategies in an effort to deliver market-leading investment returns to our capital partners. We empower the most talented minds in finance with an unparalleled combination of deep fundamental research, predictive analytics, and leading-edge technology to identify and capture new opportunities. Our world-class global team brings together the art of investing with the science of finance to help our capital partners achieve their financial goals.

We drive our mission through a culture of excellence: constantly improving, continuously learning, rewarding results, and winning with integrity.

**Type:** Asset, Fund & Wealth Management Firm.

**Business model:** Public offering.

**Capital:** Private, Professional & Institutional.

**Headquarters:** Chicago, US.

**Offices:** New York, London.

**Founder:** [Kenneth C. Griffin](#).

**Nationality:** US.

**Founded:** 1842.

**Maturity:** 178 years.

**AUM:** \$32 Billions.

**Employees:** >1,400

**Super-start:** Citadel Funds.

**Avg Annual Return:** 10%

**Markets:** Multi-asset class.

**Strongest:** [Risk Management](#) & [Investment Strategies](#).

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## Too big to fail?

- [GETCO](#)

The Global Electronic Trading Company (GETCO), or Getco LLC, was an American proprietary algorithmic trading and electronic market making firm based in Chicago, Illinois. In December 2012, the firm agreed to acquire Knight Capital Group; this merger was completed in July 2013 forming the new company KCG Holdings.

The firm was founded in 1999 by Stephen Schuler and Daniel Tierney, former floor traders in Chicago, and reached over 400 employees. The firm's primary business was electronic market making, though it also provided execution algorithms and a dark pool through its client services arm, GETCO Execution Services.[citation needed]

GETCO traded in over 50 markets in North and South America, Europe and Asia, and was consistently among the top 5 participants by volume on many venues, including the CME, Eurex, NYSE Arca, NYSE Arca Options, BATS, Nasdaq, Nasdaq Options, Chi-X, BrokerTec, and eSpeed. It has offices in New York City, Chicago, London, and Singapore, and was an investor in the electronic exchanges BATS Exchange, Chi-X, NYSE Liffe U.S., Eris, and ELX.[4]

In a 2009 profile by the Wall Street Journal[5] the firm was identified as one of the largest market makers in the US stock market. GETCO also served as one of the six Designated Market Makers (DMMs) on the NYSE between 2010 and the merger.[6]

GETCO was one of the six investors that participated in the rescue of Knight Capital, a competitor that had experienced a significant trading malfunction on August 1, 2012. Supported by its main investor, General Atlantic, GETCO pursued Knight Capital and defeated a competing proposal from Virtu Financial by offering to pay \$3.75/share to Knight Capital's shareholders, for a total value of \$1.4 billion.



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- [Knight Capital Group](#)

The Knight Capital Group was an American global financial services firm engaging in market making, electronic execution, and institutional sales and trading.[1] With its high-frequency trading algorithms Knight was the largest trader in U.S. equities, with a market share of 17.3% on NYSE and 16.9% on NASDAQ.[2] The company agreed to be acquired by Getco LLC in December 2012 after an August 2012 trading error lost \$460 million. The merger was completed in July 2013, forming KCG Holdings.

Knight was formerly known as Knight/Trimark Group, Inc. and Knight Trading Group, Inc. Initially, Knight Trading group had multiple offices located in the United States and in other cities around the world. Knight's Asset Management offices were headquartered in Minnetonka, Minnesota, with offices in Hong Kong, China, and London.

### **Activities**

Knight's largest business was market making in U.S. equities.[3] Its Electronic Trading Group (ETG) covered more than 19,000 U.S. securities with an average daily trading volume of more than 21 billion dollars in May 2012.[4] Knight also made markets in U.S. options and European equities.

In 2002, Knight paid \$1.5 million to settle regulatory charges of violations such as not respecting posted quotes. Knight neither admitted nor denied the allegations.[5] In 2004, the company paid a \$79 million settlement to customers whom they had overcharged.[6] In 2008, Knight traded an average of 3.97 billion shares per day.[7] In 2011, the company was worth \$1.5 billion and employed approximately 1450 people.[8]

### **Offices**

Knight was headquartered in Jersey City, New Jersey. It had many offices in other US locations, as well as in the UK, Germany, Switzerland, China, and Singapore.[9]

### **Operating Subsidiaries**

Knight Capital Group operated in four segments: equities, fixed income, currencies and commodities, and corporate. Operating business subsidiaries included Knight Capital Americas, L.P., Knight Execution & Clearing Services LLC, Knight Capital Europe Limited and Hotspot FX Holdings, Inc.[10] Knight Capital Group discontinued operations of its asset management segment in 2009 when its subsidiary, Deephaven Capital Management, sold most of its assets to Stark & Roth, LLC.

- **Long-Term Capital Management**

Long-Term Capital Management L.P. (LTCM) was a hedge fund management firm based in Greenwich, Connecticut that used absolute-return trading strategies combined with high financial leverage. LTCM was founded in 1994 by John W. Meriwether, the former vice-chairman and head of bond trading at Salomon Brothers. Members of LTCM's board of directors included Myron S. Scholes and Robert C. Merton, who shared the 1997 Nobel Memorial Prize in Economic Sciences for a "new method to determine the value of derivatives".

Initially successful with annualized return of over 21% (after fees) in its first year, 43% in the second year and 41% in the third year, in 1998 it lost \$4.6 billion in less than four months following the 1997 Asian financial crisis and 1998 Russian financial crisis. The firm's master hedge fund, Long-Term Capital Portfolio L.P., collapsed in the late 1990s, leading to an agreement on September 23, 1998, among 14 financial institutions—which included Bankers Trust, Barclays, Chase Manhattan Bank, Crédit Agricole, Credit Suisse First Boston, Deutsche Bank, Goldman Sachs, JP Morgan, Merrill Lynch, Morgan Stanley, Paribas, Salomon Smith Barney, Société Générale, and UBS—for a \$3.6 billion recapitalization (bailout) under the supervision of the Federal Reserve. The fund liquidated and dissolved in early 2000.

- **Other Proprietary Trading Firms:**

<https://www.traderslog.com/proprietarytradingfirms>

- **Other High-Frequency Trading Firms:**

<https://medium.com/automation-generation/15-well-known-high-frequency-trading-firms-f45292c56d05>

- **Other Quantitative Trading Firms:**

<https://www.quora.com/What-are-the-best-quantitative-trading-firms-in-the-world>