THE GROWTH OF THE

ALGORITHMIC TRADING MARKET

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MAY 2022

THE FUTURE OF RETAIL ALGORITHMIC TRADING

Annual revenues from global algo trading activity are expected to grow by over **80% by 2027.**
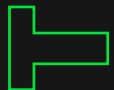
Key drivers of the exponential growth include increasing **programming skills**, improvement in **trading technological tools** and services, and the increasing **demand worldwide for automated trading** university programs.

ACCORDING TO THE MORDON INTELLIGENCE REPORT, THE MARKET SIZE WAS VALUED AT 💰💰 $13.18 BILLION IN 2021 AND IS FORECASTED TO BE NEARLY *DOUBLED* BY 2027, REACHING A $23.74 BILLION MARKET SIZE.

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GROWTH OF ALGORITHMIC TRADING MARKET 2022-2027

the global algorithmic trading market is projected to grow at a **CAGR of 10.5%,** reaching a market size of **$23.74 billion in 2027.**

KEY DRIVERS FOR GROWTH

1. **The Increase of Customized Trading Algorithms and Expert Advisors**

2. **Hedge Funds Are Relying More on Algorithmic Trading**

3. **Younger Generation is MORE Advanced in Technology and Programming**

4. **Increasing Demand for Algorithmic and Quantitative Trading University Programmes**

ALGO TRADING ACTIVITY IS DOMINATING THE US EQUITY MARKETS AND IS RISING ELSEWHERE

GLOBAL ALGORITHMIC TRADING MARKET BY, REGION

The US markets have the highest presence of algo traders and HFT machines in securities and forex markets, followed by the Asia Pacific and European countries

1. North America - United States
2. Asia Pacific - India, Japan, the Philippines, & Singapore
3. Europe
4. South America

The percentage of **overall market trades** made by retail traders has grown to

25% in 2022

ALGORITHMIC TRADING

accounts for around **70-80% of the overall trading volume** in financial markets

ALGORITHMIC TRADING MARKET 2022

STATISTICS, MARKET SIZE, AND TRENDS

ALGORITHMIC TRADING MARKET OVERVIEW

• Algorithmic trading, also known as automatic trading or black-box trading, is a major contributor to liquidity in financial markets. Therefore, large proprietary firms, financial institutions, and high liquidity retail investors are often compensated by exchanges for adding liquidity to the markets, particularly for assets and small markets that suffer from low liquidity.

• According to a report published by Mordon Intelligence, the global algorithmic trading market is projected to grow at a CAGR of 10.5%, reaching a market size of $23.74 billion in 2027.

• Major reasons for the increase among retail investors in using algo trading systems in recent years include the ease of use, growth of customized built-in algo systems through the open market, improvements in market execution by brokerage firms, and the acquisition of programming skills by individual investors.

• A key trend boosting the algo trading market growth is the increasing adoption of cloud-based solutions in the form of VPS. Retail traders and investors are taking advantage of the technology to confidently execute their algorithmic strategies without the concern of tech or internet-related issues from a home setup.

• Due to the rising demand from retail traders, online brokerage firms have an interest in adding VPS service to their full online trading package.

THE RISE OF ALGORITHMIC TRADING AMONG RETAIL TRADERS OVER THE PAST TWO DECADES
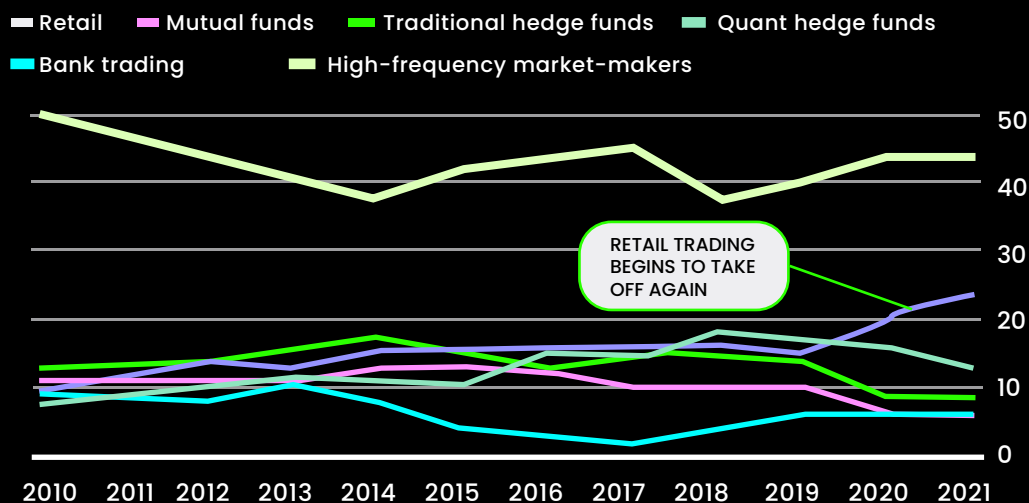
Since the beginning of the century, the algorithmic trading market has witnessed exponential growth that has undoubtedly changed financial markets. It is estimated that the overall percentage of automated trading has grown from around 15% in the early 2000s to somewhere between 70%-80% in 2022.

Apart from hedge funds, and financial institutions, independent retail traders have also substantially increased their share in the algorithmic trading market. Although the majority of automated tradingis done by banks, hedge funds, and institutional traders, the retail algo-trading market has also seen exponential growth at the global scale in recent years.

This is in line with the increase in retail trading activity in the forex and stock markets over the last few years. For example, in the stock market, the percentage of overall market trades made by retail traders has grown to 25% in 2022, up from 20% in 2020 and 10-15% in the preceding decade, according to BNY Mellon Wealth Management. According to Bloomberg Intelligence, the same factors have boosted retail-traders participation in the US equity market to 23% from 20% in 2020 and around 15% in 2019.

Retail trading now accounts for almost as much volume as mutual funds and hedge funds combined

Market share of overall US equity trading volumes (%)

■ Retail ■ Mutual funds ■ Traditional hedge funds ■ Quant hedge funds
■ Bank trading ■ High-frequency market-makers

RETAIL TRADING BEGINS TO TAKE OFF AGAIN

50
40
30
20
10
0

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

Source: Bloomberg intelligence

In the forex market, the estimations are less precise due to the complexity of the Foreign Exchange market - still, as of 2022, retail traders in the foreign exchange market account for an estimated figure of between 5%-5.5% percent of the global market, according to a recent study, and OpenEurope.org.uk. While there's no indicator that denotes retail trading and allows us to track the percentage of retail traders in real time, the metrics show that the retail forex trading industry has grown significantly since 2020 with record number of new clients, partly due to the Covid-19 pandemic, lockdowns, and increasing volatility that fueled market activity.

Some of the key reasons for the rise in automatic trading systems among retail investors include technology improvements, speed of execution, the increasing use of web-based and cloud-based solutions (VPS), the open market for custom-built algorithmic strategies, and low trading costs and monthly rebates made by large stock and futures exchanges to increase market liquidity.

ALGORITHMIC TRADING MARKET SIZE 2021/2022

As of 2021, the global algorithmic trading market size stands at roughly $13.18 bn according to Mordor Intelligence. The data includes the portions of all market participants such as hedge funds, financial institutions, proprietary trading firms, and retail traders.

ALGORITHMIC TRADING MARKET
– FUTURE GROWTH FORECAST

According to a report conducted by Mordor Intelligence, the global algorithmic trading market is projected to grow by a compound annual growth rate of 10.5% during the forecast period of 2022 to 2027. This growth represents an increase in market size from USD 13.18 bn in 2021 to USD 23.74 bn in 2027.

Algorithmic Trading Market
Revenus in USD billion,
Global, 2020-2027

10.5% CAGR

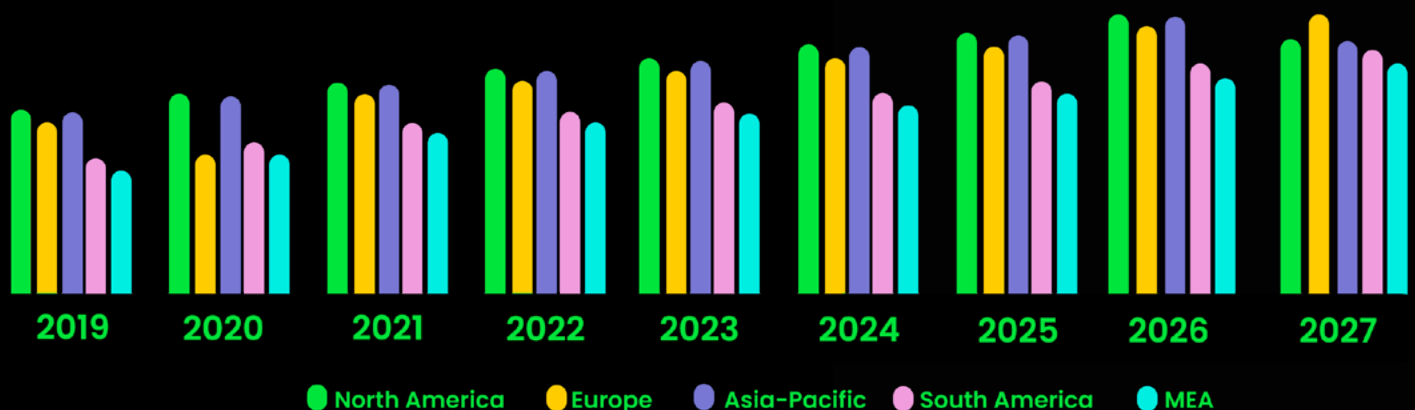| 2020	2021	2022	2023	2024	2025	2026	2027
XX.XX	13.81	XX.XX	XX.XX	XX.XX	XX.XX	XX.XX	23.74

Source: Mordon intelligence

Furthermore, according to the research, a large portion of the growth will originate from North America, in particular the United States. The use of high-frequency trading (HFT) has already become increasingly common in the US stock and futures markets, largely due to the support from regulators in order to increase market liquidity. Additionally, over the last few years, many exchanges around the world have been trying to lure HFT companies and traders to narrow the differences between buy and sell prices and develop a liquid-functioning market.

However, although currently, the US markets have the highest presence of algo traders and HFT machines in securities and forex markets, Asia Pacific is forecasted to become a dominant region for algo trading activity and register the highest growth rate over the forecast period 2021-2027, according to a ReportLinker study released in 2021. Another study by Maximize Market Research reveals the same findings. According to the research, the US is expected to remain the largest market for algorithmic trading activity followed by the Asia Pacific and European countries. The expected growth in the Asia Pacific will be largely driven by the adoption of automated trading systems in India, Japan, the Philippines, and Singapore.

"ALGO TRADING ACTIVITY IS DOMINATING THE US EQUITY MARKETS AND IS RISING ELSEWHERE"

Liz Ann Sonders, Chief Investment Strategist for Charles Schwab

Global Algorithmic Trading Market, By Region 2020-2027

2019 2020 2021 2022 2023 2024 2025 2026 2027

● North America ● Europe ● Asia-Pacific ● South America ● MEA

Source: maximizemarketresearch

KEY PLAYERS

For retail traders and investors, the global automated trading market is operated by various key market players. These include MetaQuotes Software Corp, Virtu Financial, Inc., 63MOONS, Software AG, Symphony Fintech Solutions Pvt Ltd., Algo Trader AG., and Refinitiv Ltd., and Tata Consultancy Services.

THE FUTURE OF ALGORITHMIC TRADING MARKET
## TRENDS AND KEY DRIVERS FOR GROWTH

In the past two decades, the use of algorithms in trading has become a central factor in financial markets. According to TRADE's 2021 Algorithmic Trading Survey, large investment banks and hedge funds around the world are shifting their assets under management to algorithmic automated trading.

The survey, which shows responses from hedge funds managers from leading financial banks such as Bank of America, Barclays, Citi, and Goldman Sachs, reveals that some of the reasons for the shift to automated systems include low commission rates, the increase in traders' productivity, the reduction of market impact, ease of use, etc. Evidently, the term algo trading has been on the rise on various search engines since 2004, and particularly in the past few years with the rise of AI technology and machine learning.

FIGURE 2: Reasons for using algorithims (% of responses)		
FEATURE	2021	2020
Results match pre-trade estimates	▼ 1.85	1.87
Data on venue/order routing logic or analysis	▼ 4.16	5.04
Algo monitoring capabilities	▼ 5.91	7.09
Customisation capabilities	▲ 6.90	5.97
Higher speed, lower latency	▲ 7.02	6.47
Better prices (price improvement)	▼ 7.18	7.96
Greater anonymity	▼ 8.28	9.33
Flexibility and sophistication of SOR	▲ 8.47	7.28
Consistency of execution performance	▼ 8.68	10.07
Lewer cemmission rates	▲ 9.27	8.27
Increased trader productivity	▲ 10.29	9.95
Reduced market impact	▲ 10.78	10.63
Ease of use	▲ 11.21	10.07

Source: TRADE's 2021 Algorithmic Trading Survey

Interest over time

```
100
 75
 50
 25
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1 Jan 2004   1 Jul 2009   1 Jan 2015   1 Jul 2020
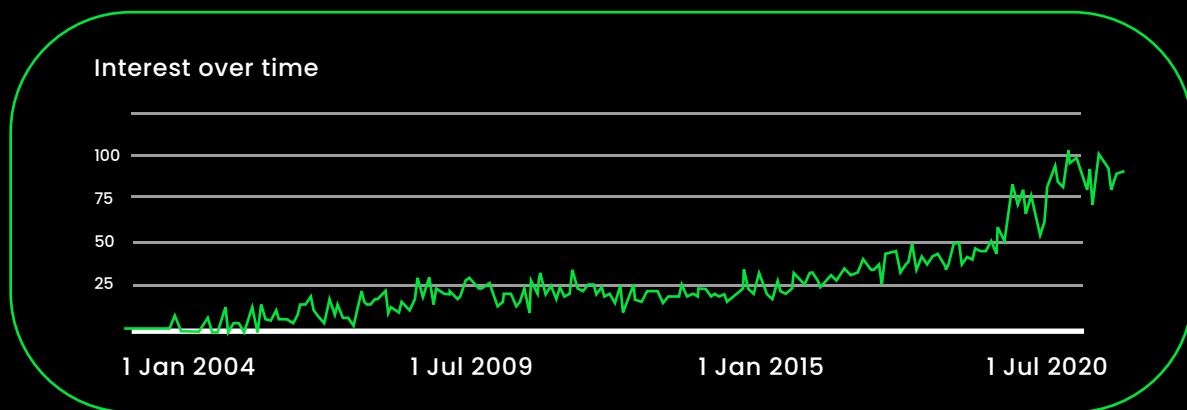
Google Trends: Algo Trading

Beyond that, other key drivers influencing the shift towards adoption of algorithmic trading market execution include:

THE INCREASE OF CUSTOMIZED TRADING ALGORITHMS AND EXPERT ADVISORS

In recent years, major vendors have developed open markets for custom-built automated trading strategies. By using these services, retail investors buy custom-built algorithmic strategies and activate them on their platforms. In that sense, top-notch algo trading marketplaces like MetaQuotes, StockAlgos.com, and TradeTron open up a new world of opportunities for investors who lack the ability to program automated trading systems.

HEDGE FUNDS ARE RELYING MORE ON ALGORITHMIC TRADING

Another trend that has had an impact on the algorithmic trading market over the last few years is the increasing use of algos and automated machines across investment and hedge funds. According to TRADE's 2021 Algorithmic Trading Survey, hedge funds managers rely heavily on algorithms to execute their trades. Nearly all survey's hedge fund respondents reported that hedge funds' clients traded 50% and above of their portfolio algorithmically. According to the report, the main factors behind this trend include the ease of use, low transaction costs, speed, dark pool acvcess and the ability to buy and sell large blocks of shares, futures or options on an exchange algorithmically.
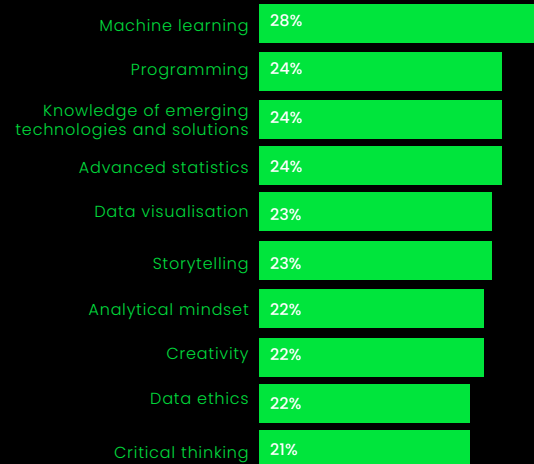
Though this factor does not directly impact the algorithmic trading industry, it could significantly increase the algorithmic trading client base over the long term. This can be attributed to the fact that a large number of traders and investors turn to the retail trading industry after leaving their positions within hedge funds. With many traders having algorithmic and quantitative skills joining the retail industry, algo trading activity is anticipated to rise over the next few years. Consequently, retail brokers must be prepared to address the expected increase of retail algo traders.

YOUNGER GENERATION IS MORE ADVANCED IN TECHNOLOGY AND PROGRAMMING

New technologies are not only changing traditional asset management but also the format in which retail traders approach financial markets. As the younger generation is more tech-savvy, having a good understanding of coding and programming, it is very likely that the retail algorithmic trading market will grow as well in the next few years.

Nowadays, with the new awareness of programming and coding skills in and out of schools, a junior programmer trader might know how to build a black box machine, set the data, and activate it. From that point on, the only missing tool for them is a cloud or web-based hosting solution. A VPS has the ability to solve two of the most notable problems for an automated trading machine - execute trades faster than any personal computer and avoid disconnections.

TOP 10 SKILLS BUSINESSES SAY THEIR SECTOR HAS INSUFFICIENT SKILLS IN

Skill	%
Machine learning	28%
Programming	24%
Knowledge of emerging technologies and solutions	24%
Advanced statistics	24%
Data visualisation	23%
Storytelling	23%
Analytical mindset	22%
Creativity	22%
Data ethics	22%
Critical thinking	21%

SourceL UK.gov

Looking forward, according to the UK.Gov report, around a quarter of businesses still face insufficient data skills in machine learning (25%), programming (22%), knowledge of emerging technologies and solutions (23%), and advanced statistics (22%).

The same trend occurs across other European countries - according to the CBI Ministry of Foreign Affairs, the demand for programming and software development services is driven by a shortage (around 500,000, according to DAXX) in the European labor market. According to the European Commission, by 2030, the fastest-growing need across the continent will be for advanced IT and programming skills - that is 90% growth compared to 2016, followed by basic digital skills.

	COUNTRY	NO. OF SOFTWARE DEVELOPERS
NUMBER OF SOFTWARE DEVELOPERS 2021	Germany	901k
	The UK	849k
	France	533k
	Russia	412k
	The Netherlands	320k
	Italy	314k
	Spain	323k
	Poland	295k
	Ukraine	200k
	Sweden	179k

Source: DAXX

Worldwide, according to statistics from SlashData, the total number of software developers is projected to rise from 26.9 million in 2021 to 45 million in 2030!

Therefore, as the demand for Artificial Intelligence, Machine Learning, and programming skills is growing rapidly in every region of the world, the shift towards an automation of financial markets is inevitable. The trend will have a huge impact on algorithmic retail market participation as well as the format in which the retail market executes clients' trades.

"THE INDUSTRY HAS ALMOST BEEN COMPLETELY TAKEN OVER BY COMPUTERS, SO MOST WORKERS HAVE NEEDED TO REINVENT THEMSELVES".

Former Wall Street Trader

INCREASING DEMAND FOR ALGORITHMIC AND QUANTITATIVE TRADING UNIVERSITY PROGRAMMES

Another crucial factor in the projected growth of the algo trading market is the increase of top university programmes focused solely on quantitative and algorithmic trading. With the rising demand for algorithmic programmers in the last few years by top financialinstitutions, leading education institutions worldwide have opened up new programmes for algorithmic trading and quantitative portfolio management. These institutions, among others, include Oxford University, the University of Essex, the University of Chicago, WorldQuant University, and many more.

According to the Economic Times, algo-trading or quant trading professionals have seen a huge increase in the past decade, largely due to the high salary associated with the algorithmic trading industry. According to Comparably, in the US, the salaries of Quantitative Traders range from **$37,167 to $795,786**, with a median salary of $178,046. 57% of quantitative traders make between $178,050 and $383,324, with the top 86% making $795,786.

VIRTUAL HOSTING SERVICES (VPS) FOR AUTOMATED TRADING

With the rise of algorithmic trading in financial markets, a key component of creating a secure and reliable trading environment for retail investors is to integrate virtual hosting services. The primary reasons for the increasing demand among retail algorithmic traders for VPS connection are that they can have access to their trading accounts at all times, they get faster market execution and low latency.

These factors make VPS an essential tool for traders who wish to utilize automated trading systems. Additionally, as many VPS providers offer high-quality services at relatively reasonable prices, algo traders who are familiar with the issues of low latency and disconnections are now acquiring the service before running the algo trading systems.

We, at ForexVPS.net, assist in integrating virtual private services to various leading brokerage firms. Located in prime data centers in New York, London, Los Angeles, Amsterdam, Singapore, Zurich, Tokyo, Frankfurt, Johannesburg and Hong Kong, ForexVPS ensures clients get a reliable connection and low latency.

For more details and inquiries regarding our VPS service, contact us here.

BOOK A DEMO

Amsterdam
Netherlands

London
United Kingdom

Frankfurt
Germany

New York
USA

Zurich
Switzerland

Tokyo
Japan

Los Angeles
USA

Hong Kong
Hong Kong

Singapore
Singapore

19

ForexVPS.net

FAQs

WHAT PERCENTAGE OF THE MARKET IS ALGORITHMIC TRADING?

According to various reports, algorithmic trading accounted for around 70-80% of the overall trading volume in all markets, including the estimations for the retail trading industry. Further, according to a survey published by Alite Group, the proportion of retail market participants trading 80% or more of their portfolio via algorithmic trading systems almost doubled from 10.98% in 2020 to 20.75% in 2021.

IS ALGORITHMIC TRADING THE FUTURE?

Yes, more than likely. According to all estimations, the algorithmic trading market size is expected to grow exponentially in the upcoming years.

HOW CAN VPS SERVICE HELP IN ALGORITHMIC TRADING?

With a VPS service, any online brokerage firm can offer a virtual machine to its clients. For clients who automate their trading, a VPS can help them avoid any internet connection problems (slippages) and execute trades faster without any delay.

WHY SHOULD BROKERS OFFER VPS SERVICES?

Nowadays, many retail traders are looking specifically for brokerage firms that offer them a free VPS service to avoid disconnections, slippages, and market delays. And, with the growth expectations of automated trading systems in the upcoming years, a VPS service is becoming an essential tool for retail market participants.

WILL TRADITIONAL RETAIL TRADERS GET LEFT BEHIND?

Despite the fact that the trading industry has been completely taken over by computers and automated machines, human traders will remain an integral part of financial markets. Generally, algorithmic trading is better than human traders as it increases liquidity for exchanges and allows traders to minimize errors. Having said that, the total trading volume of algo trading is expected to rise by 80% in upcoming years, however, the vast majority of market participants will remain humans, meaning traditional retail traders.

BOOK A 15 MINUTE DEMO WITH OUR TEAM AND WE'LL SHOW YOU HOW TO DOMINATE THIS ALGORITHMIC TRADING OPPORTUNITY.

BOOK A DEMO