The Rise of AI in Finance and its Implications for the Entire Industry

Mr. Suheil Savlani
Research Scholar
Invictus International
Amritsar

Dr. Saurabh Grover
Research Scholar
Invictus International
Amritsar

Abstract

AI has become the topic of discussion at every dinner table of every family, with it being brought into the mainstream by the likes of Chatgpt and Microsoft, the importance of AI is likely to balloon in every industry as can be seen currently in finance. Fintech platforms are constantly employing artificial intelligence to provide the best services to their customers most efficiently; furthermore AI is likely to replace millions of desk jobs in the industry which may lead to mass unemployment. Is AI the panacea to the inefficiency of sentient beings or will it lead to Humans being more economically divided than ever? The answer lies in regulation and legal framework.

Introduction

AI in finance has ballooned in importance and with spending on AI expected to double from 50.1 billion usd In 2020 to nearly 110 billion usd by 2024, it is only expected to further dominate the industry.

Algorithmic trading accounts for nearly 47% of all turnovers in the derivatives and cash segment on the national stock exchange according to the NIFM. This figure is as high as 80-85% in most developed countries. Although the industry might be in a nascent stage in India, the above figures succeed in highlighting the importance of AI and in giving tokens to the future of the financial industry. AI in trading helps increase the efficiencies in our market with lower bid ask spreads and option prices being more aligned to the underlying asset. More importantly, AI has successfully proven to increase the liquidity of assets, this makes it easier for both fund managers and retail investors to enter and exit relatively obscure companies. Higher liquidity fortifies the capital roots of an economy and makes it more lucrative for foreign firms to invest in the region. For example, Long term capital management's near collapse in 1998 can be largely attributed to systemic lack of liquidity, as Russia declared default on 13.5 billion$ of it's treasury debts, firms flocked to safer investment options which resulted in a flash sale of Russian treasury bonds, this sucked the liquidity out of the market with few buyers willing to make an offer. LTCM which was leveraged 1:25 during the same time and lost major investor money forced the Federal Reserve to intervene and form a consortium to revive LTCM from the pits of collapse and prevent more repercussions to the wider financial community. Higher liquidity from AI drastically reduces the chances of such catastrophic events. The creditors of LTCM had to sit on the fence and be an unwilling audience as their own money evaporated from this air, the creditors failed to margin call LTCM on time due to the scare of precipitating a larger crisis amongst counterparties.

This brings me to my second point; AI has recently witnessed pragmatic implementation of risk management amongst banks, the likes of Wells Fargo and Capital one being the first ones to adopt the same. By definition AI will analyze billions of variables to ensure a lender is never overexposed to a party and the same is capable of repaying it's debts. In the case of LTCM, AI could have prevented lending to such a highly leveraged and vulnerable firm and likely prevented billions of dollars of losses caused to revered institutions such as UBS and CITICORP. AI can further throw out models instantaneously to ensure appropriate actions is taken is response to a critical situation. This especially important in India since the IL&FS and DHFL crisis rattled investor confidence in the nation and many NBFC's lost hard built trust.

Additionally, AI's ability to replicate human cognition and make individualized decisions makes it viable in another industry, Advisory Services. According to a survey by the economic times, only 12% of Indians consult financial advisors before making decisions. This shows that an overwhelming majority prefer to do it on their own. Furthermore, a survey by Samco securities showed that 67% of Indian investors fail to beat the benchmark index. The under penetration of financial awareness in India is severe and can be attributed to lack of information and a more general dearth of advisors. However, AI's ability to house itself on the internet and duplicate human familiarity will ensure that more people have access to proper financial advice which is based on analysis of highest extent. People will become more aware about the need to save money and also realize the importance of insurance which will thereby increase the usage of financial products by the average household. The ease of access will ensure that Indian households don't take destructive financial decisions and are fully aware about all the financial products that may suit their personal needs.

Trading bots have become a very common sight on Wall Street and in return for maintaining the efficiency and liquidity, firms are rewarded with profits.

Arbitrage is the process of taking advantage of market pricing inefficiencies to make profit. Due to AI's seamless and blistering fast integration, it is brilliant in discovering such opportunities and is hence often employed by trading firms to make them money. More techniques such as mean reversion and trend following are also employed to make money for the clients of these firms. Jane Street, a quant fund alone traded more than 17 trillion usd worth of securities in 2020. That is a ludicrous number and gives a general idea of the liquidity generated through these activities.

AI, through its human interpretation can even help banks in the credit screening process. AI can separate risky debtors and relatively safe debtors and hence calculate interest rates to be charged from these different groups of people. India, which is in the midst of a raging credit upcycle will be able to use AI to ensure that banks have smaller and smaller NPAS and thus the economy is stable.

On the other hand, finance employs a very large portion of the populous, and the essence of AI is to automate processes and help cut costs. This may result in mass lay-offs by financial institutions that may no longer require that one life insurance agent selling his soul along with policies. This form of structural unemployment may require retraining of the workforce to ensure capability to work which may have huge costs to the government. Furthermore, AI is capable of learning and adapting to situations, it may be possible that it is corrupted by counterparties which poses a serious security threat to the nation. We must ensure that AI does not only benefit the upper echelons of society and that the common man can become more productive through the use of this revolutionary technology.

This brings me to my last point; the above statement only brings into importance the requirement of a regulatory framework, something which is currently lacking in the ecosystem. Perpetrators can use this powerful technology to exacerbate economics situations and furthermore cause immense damage to society. The framework must outline the use of AI for altruistic purposes only and regulate its usage. The pioneers of AI such as San Altman and Elon Musk have emphasized the risks associated with AI and it would be asinine to not regulate it. With correct legality of AI and oversight by governmental bodies, it is certain AI will revolutionize not only finance but all human endeavors combined.

Conclusion

Through this research, it is evident that artificial intelligence is here to stay and is making leaps in the financial industry largely for the better. The increase in efficiency is likely to increase the economic potential of an economy who can harness it's powers. AI in finance has made it easier for all parties involved to execute trades and has increased liquidity massively. Furthermore, if implemented conscientiously, it can help increase financial awareness in the larger populous. However, Governments will have to constantly monitor the job roles AI will be replacing and may incur massive retraining costs. Furthermore a legal framework is necessary for the peaceful and secure operations of AI. Oversight is also imperative to ensure safety against domestic and international perpetrators who may use AI and it's network links to cause large amounts of damage.

References

- OECD business and finance outlook(2021):"AI in business and finance"
- SAMCO and Nielsen survey(2023)
- The Economic Times (2018):" Rich people, middle income group, youngsters: Who needs financial advice the most?"
- The Daily Guardian(2023):" Unleashing the potential: How AI is reshaping stock markets"
- Risk Optics(2021):" Using Artificial Intelligence in Risk Management"
- KPMG:" Artificial Intelligence in Risk Management"
- NIFM(2022):"NIFM report on algo trading"
- GOOGLE: "What is artificial intelligence(AI) in finance?"