
Artificial Intelligence and the Financial Market

Transformation, Opportunities and Challenges

Case of JPMorgan Chase

Nacima Hadj Moussa*

M'HAMED BOUGARA university boumerdes (Algeria)

nacimahadjmou@gmail.com

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Abstract:

Artificial intelligence constitutes a powerful lever for transforming financial markets. It offers numerous advantages in terms of efficiency and speed of transactions, innovation, and accessibility through the introduction of algorithms capable of analyzing massive data in real time. However, it also raises significant challenges related to market stability and the lack of transparency of algorithms. The objective of our study is to explore how AI transforms financial markets in terms of prediction, efficiency, automation, and risk management, then to show how JPMorgan Chase revolutionized its trading operations by launching LOXM, an artificial intelligence platform designed to optimize trade execution in global equity markets. This cutting-edge solution also illustrates how artificial intelligence can improve decision-making and increase efficiency in one of the most competitive sectors of financial services.

Keywords : Artificial intelligence, AI, financial markets, algorithms, JPMorgan.

Jel Classification Codes : D83, G10, C63, G24.

*Corresponding author

Introduction

Over the past decades, the financial market has witnessed a series of major transformations under the effect of technological progress. Among these innovations, artificial intelligence occupies a central place in the transformation of financial markets, thanks to its capacity to analyze immense volumes of data in real time, to detect complex trends, and to improve decision-making and to personalize interactions with clients in the financial services sector. AI is now establishing itself as an essential tool for financial institutions, investors, and regulators.

In this context, large international banks play a driving role in the adoption of these technologies. Among the institutions most advanced in this field, JPMorgan Chase, the leading American bank, appears as a major player in technological innovation and constitutes an emblematic example of the integration of artificial intelligence into the financial market. This leads us to pose the following main question:

- To what extent does artificial intelligence transform the financial market by creating opportunities while at the same time generating new risks, and how do these dynamics manifest themselves concretely in the case of JPMorgan Chase?

The objective of our study is to explore how AI transforms financial markets in terms of prediction, efficiency, automation, and risk management, then to show how JPMorgan Chase uses these technologies to strengthen its performance, security, and competitiveness. To answer the main question previously cited, we have structured our work around five essential points:

1. Introduction to artificial intelligence
2. Financial sector and AI: literature review
3. The main uses of AI in the financial market
4. The challenges and limits of AI in finance
5. Case of JPMorgan Chase, a leader in technological innovation

1. Introduction to artificial intelligence

1.1. History and definition of artificial intelligence:

The roots of the concept of artificial intelligence go back to Antiquity, more precisely to the sixth century BC, when the first mentions of self-moving chairs appear in Homer's Iliad (McCorduck, 2004). In 1937, Alan Turing invented the computing machine and put forward the idea according to which a machine can be described as artificially intelligent as soon as it is capable of acting in a manner as intelligent as a human being. In 1955, McCarthy et al. (1955) used the term "artificial intelligence" for the first time, in a proposal for the Dartmouth

summer research project. The objective of this project was to explore how machines could be capable of exercising intelligence.

Their objective was to achieve a sufficiently precise description of every characteristic of intelligence, in such a way that a machine could simulate it. Simon (1955) shares this perspective by defining artificial intelligence as systems that demonstrate intelligence, whether within the framework of abstract explorations of the nature of intelligence, the theory of human intelligence, or in the development of systems capable of accomplishing practical tasks requiring intelligence. More recent definitions encompass “technologies that imitate human intelligence” as well as “machines that perform tasks that humans would perform.” Other approaches emphasize the autonomy of machines with respect to humans, by referring to artifacts capable of accomplishing concrete tasks in the real world without requiring human intervention. Other similar approaches broaden these definitions by associating machines with intelligence. For example, Legg and Hutter (2007) propose a detailed overview of the different possible definitions in this field (DHOUIB, 2023).

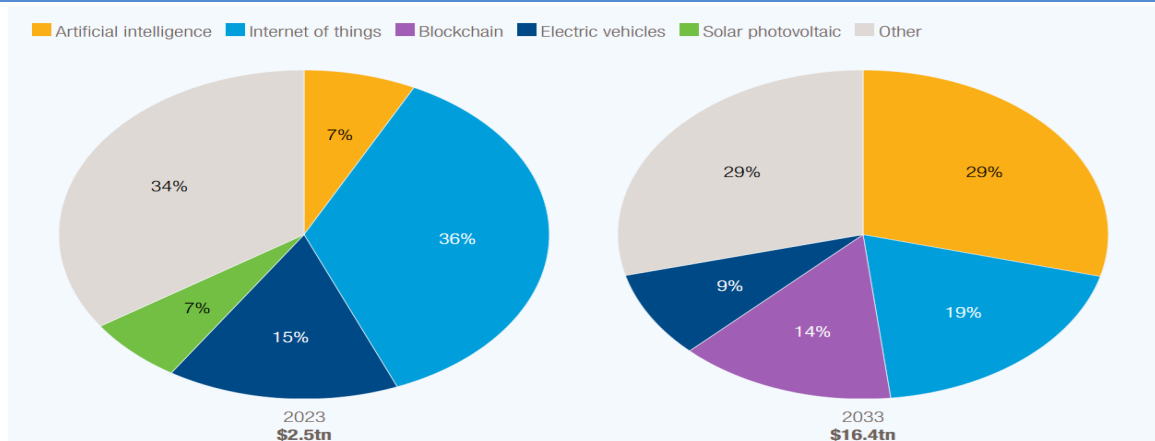
We propose a dual definition of artificial intelligence. First, the term refers to machines and algorithms produced with the aim of producing intelligent machines, but for which it would be exaggerated to claim that they demonstrate intelligence. Under this aspect, it is a floating signifier, since the machines and algorithms designated as “artificial intelligence” continue to change. Second, the term refers to the dream, always projected into the future, of intelligent machines that will put an end to work. The notion of intuition links the two definitions by designating what is lacking in the invented machines (first definition) for them to reach the horizon of the project, intelligent machines, in other words for them to conform to the second definition (Leveau-Vallier, 2023, p. 373). Artificial intelligence could reach 4800 billion dollars by 2033, and could establish itself as the top-tier technology (devlopment, 2025)

Artificial intelligence is rapidly establishing itself as the flagship technology of our time. A recent report from The UN on Trade and Development (UNCTAD) predicts that the global AI market will increase from 189 billion dollars in 2023 to 4800 billion in 2033 - a twenty-fivefold increase in ten years (devlopment, 2025) . By then, AI could quadruple its share in the global high-tech market, by rising from 7% to 29% - and thus, becoming the dominant force in the sector. As shown in the following figure:

Figure 1: Estimated size of the high-tech market and the market share of certain technologies (2023-2033)

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Source: (Development, 2025).

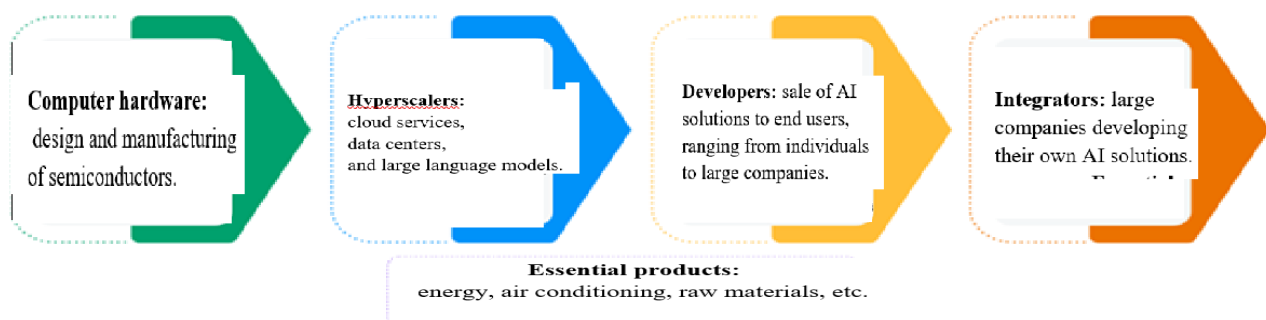
This rapid growth could widen global inequalities. The development of AI is highly concentrated, with large advanced economies benefiting from a larger talent pool and more developed skills.

In 2022, only 100 companies -mainly in the United States and China - accounted for 40% of global research and development expenditures. Together, these two countries hold 60% of AI patents and produce one-third of global scientific publications in the field (development, 2025).

1.2. Understanding the AI value chain:

To understand how an “upward catch-up” scenario could unfold, it is necessary to go much further in understanding the AI value chain (Figure 2). In very simple terms, AI companies can be grouped into five main groups (Ward, 2024)

Figure 2: Understanding the AI value chain



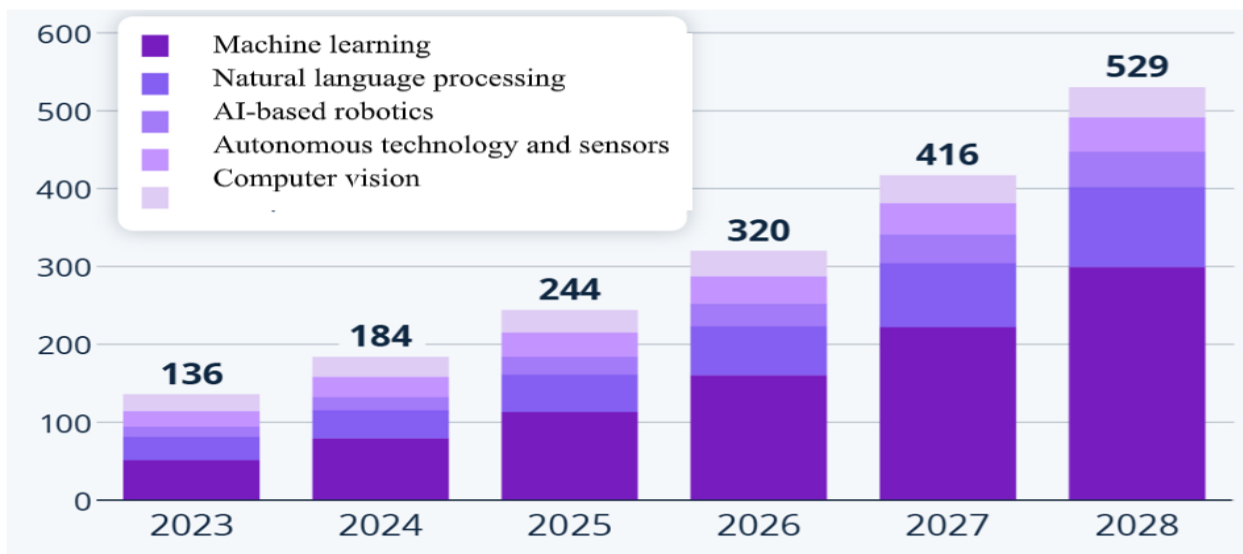
Source: (Ward, 2024).

- AI hardware (for example, Nvidia in the United States, ASML in Europe, and TSMC in Taiwan): companies that lead the design and manufacturing of semiconductors essential for generating computing power.

- AI hyperscalers (for example, Amazon Web Services or Google Cloud): companies that provide physical AI infrastructure such as cloud services and data centers, create custom silicon chips, and develop large language models that can be used by other companies.
- AI developers: ranging from small application developers to existing enterprise software publishers (for example, Adobe or Microsoft) who leverage hyperscaler technologies to provide solutions to end users.
- AI integrators: large companies with sufficient technological capabilities to create their own AI solutions, as well as IT services firms that support them.
- AI essential sectors: companies that are less directly affected by the technology itself but provide the resources that allow the entire AI value chain to function, whether it is energy, cooling, raw materials, or even data to train models.

1.3. Estimation and projection of global AI market revenue, 2023-2028:

Figure 3: Estimation and projection of global AI market revenue, 2023-2028
(in billion USD)



Source: (Fourreau, 2025).

According to the forecasts published by the Market Insights of Statista (Figure 3), the global sector of artificial intelligence could exceed 500 billion dollars of turnover by the year 2028, that is to say a multiplication by four in comparison with the size of the market estimated in 2023. The segments which should know the strongest growth between 2023 and 2028 are machine learning, robotics based on artificial intelligence, and automatic processing of languages, with a growth of more than 200% expected by the market analysts over a period of five years (more than 400% for machine learning). As it is shown by our infographic, machine learning is largely the most important segment of the market: it represented about 38% of the total turnover of the sector in 2023, and this share should rise to more than 50% by 2028.

2. Financial sector and AI: literature review:

AI in Finance refers to the use of artificial intelligence and Machine Learning (ML) to analyze data, automate processes, and generate insights for the Finance function (Scott, 2025). The financial sector is one of the first to adopt AI and expects multiple advantages from its application, that is to say the capacity to provide better service in the shortest time frames and at lower cost. In this context, Brecht (2019) considers that AI could transform the financial sector in three aspects. First, AI could promote the quality of products and services thanks to a broader and deeper base of analysis and information. Second, AI could lead to greater efficiency and a reduction in costs, for example in the field of fraud detection and anti-money laundering measures. And third, AI could become a central driver of innovation. Malali and Gopalakrishnan (2020) considered that, over the next decade, AI-powered financial services will be the only means of interaction for users, making financial products accessible to the masses, even in remote cities of the country, by providing faster services with the most appropriate solutions at an affordable cost. Umamaheswari, Valarmathi, and Lakshmi (2023) deduced that the automation process allows institutions to reduce human dependence and to improve profitability and performance. Indeed, AI-powered virtual assistants improve the performance of the business system in each domain of the company, particularly the banking sector, making it fast, reliable, and not imposed by humans.

Likewise, a survey carried out in 2021 by NTT-DATA includes 476 executives belonging to the financial sector in eight (08) countries. The main results highlighted that more than 80% stated that they already integrate AI into their strategies in order to create personalized proactive services, and to attract and retain new clients. Furthermore, 83% said that AI creates new ways to differentiate offers and to acquire clients through access to unique data sets. 81% expressed that AI is an indispensable element of their strategy to attract and retain clients.

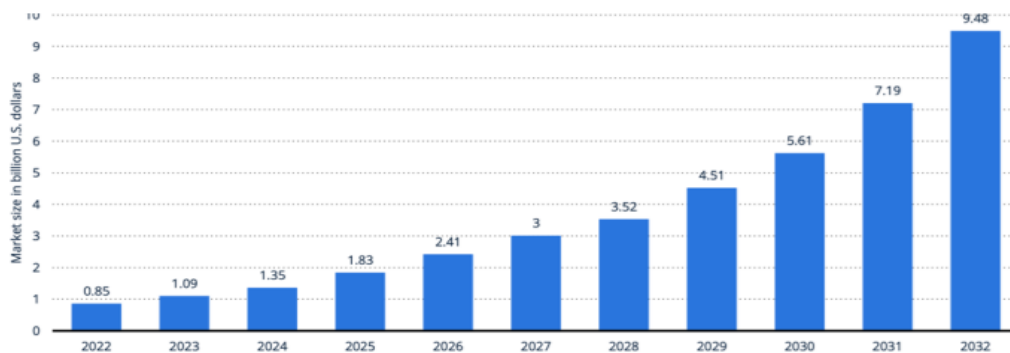
Tobias (2024) considers that the impact of AI on financial markets is visible in three domains:

- First, in terms of efficiency, AI is used to improve productivity by accelerating and automating many routine tasks.
- Second, concerning scalable improvements, AI now plays an important role in automated and high-speed trading which dominates many of the most liquid and deepest markets in the world.
- Third, in terms of revolutionary transformation, although evolutionary changes are well under way, the shift from AI-generated model inputs to autonomous and highly sophisticated AI-driven financial agents still appears distant. This is justified by the fact that most actors consider human supervision to be a fundamental element of any AI-based strategy, for reasons of regulation, risk management, responsibility, and ethics. On the other hand, Giudici (2018) estimated that solutions using big data technology, AI, and blockchain technologies leave the door open to multiple risks, which can be detrimental to client protection and

financial stability. Among the relevant examples of these threats, one can mention the underestimation of creditworthiness, non-compliance with market risks, fraud detection, and cyberattacks. In the same line of thought, Ashta and Herrmann (2021) estimated that AI creates a multitude of opportunities in the financial sector, but financial organizations must be aware of the risks inherent in the use of this technology. In this regard, the risk inherent to unrepresentative data, biases in representative data, the choice of algorithms, and human decisions, based on their interpretations by AI (Youssef, 2024, p. 652).

- **Generative AI:** It is a category, among various categories of artificial intelligence. It is capable of generating content such as text, images, audio, and synthetic data. Its success is partly due to the simplicity of accessibility and use of the user interface (SILVA, 2024, p. 24). Despite the fact that generative AI is not initially used for portfolio optimization, a clear trend is emerging for its adoption for this type of task, and more generally in financial services.

Figure 4: The size of the generative AI market by 2032



Source: (SILVA, 2024, p. 24).

In Figure (4), we can observe the current size of the generative AI market, and what it could become by 2032. The current market would be almost multiplied by five, which shows an exponential interest in this subject, in the field that concerns us. Companies such as KPMG, PwC, and Ernst & Young advocate the use of generative AI in all of their services. These companies, which are part of the “Big Four” audit firms, clearly highlight the gain in productivity across all their services, including investment advisory services.

3. The main uses of AI in the financial market:

The main uses of AI in the financial market can be cited in the following points:

3.1. Exchange-Traded Funds (AI ETFs):

ETFs, acronym for Exchange Traded Funds, are financial products also known under the name of trackers. An ETF simply replicates the performance of an underlying asset, whether it is a stock market index or, precisely, Bitcoin. It can be likened to listed investment funds (Ifrah, 2024), 2024).

An Exchange-Traded Fund dedicated to artificial intelligence (AI ETF) is a listed index fund that offers the possibility of investing in a basket of companies active in the development, integration, or exploitation of artificial intelligence. In practice, the AI ETF replicates the performance of an index that includes companies specialized in new technologies, of which the following are some examples (Patrimoine, 2025):

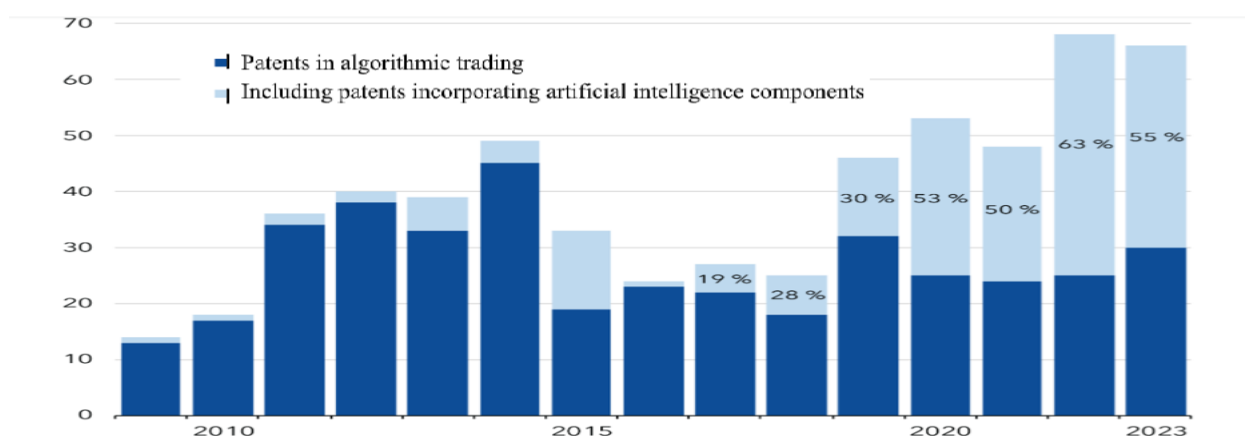
- Semiconductor designers such as Intel or NVIDIA.
- Software publishers such as Microsoft or Adobe.
- Robotics companies such as Fanuc or iRobot.
- Cloud specialists such as Google Cloud or Microsoft Azure.
- Data or AI players such as IBM or Snowflake.

Investing in AI through ETFs consists in taking part in the artificial intelligence market without directly holding the shares of the targeted companies. Overall, the AI ETF acts as a mirror of the technological revolution: it offers diversified exposure while maintaining the simplicity and security of a listed and regulated product.

3.2. The adoption of AI in trading applications is accelerating:

Patent application filings provide interesting insight into this issue, as there is often a long period of time between filings and the development of technologies ready for production. Since the first appearances of large language models in 2017, the share of AI-related content in patent application filings linked to algorithmic trading has increased from 19% to more than 50% in each year since 2020, which foreshadows the arrival of a wave of innovation in this field (Nassira Abbas, 2024).

Figure 5: Patent application filings in the field of algorithmic trading



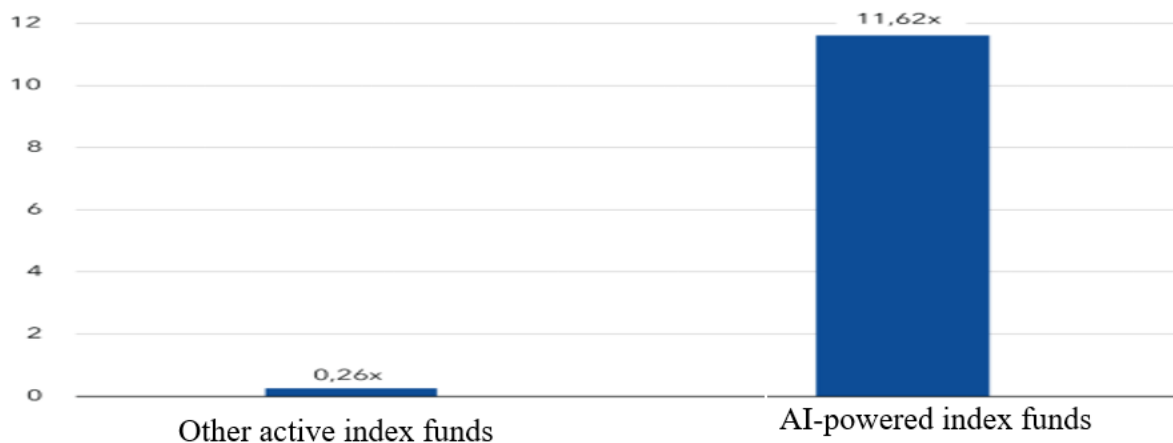
Source: (Nassira Abbas, 2024).

These new innovations will probably increase the capacity of AI to rapidly rebalance investment portfolios, which will have the effect of increasing trading volumes. AI-powered high-frequency transactions are expected to become increasingly common, particularly in liquid asset categories such as equities, government bonds, and exchange-traded derivatives. They foresee that sophisticated AI applications will be increasingly integrated into investment and trading strategies over the next three to five years, while expecting the systematic maintenance of human intervention, particularly for decisions concerning large capital allocations (Nassira Abbas, 2024).

3.3. Increase in transaction volumes :

AI-driven index funds show a much higher turnover than their traditional counterparts. While a typical equity index fund, actively managed, operates a turnover of its positions at a frequency well below once per year, AI-powered index funds do so approximately once per month. If they become widespread, these strategies could increase the depth and liquidity of financial markets in the future, which is positive for investors. However, they could also contribute to market instability: several AI-driven index funds experienced increased turnover of their positions during the market turbulence in March 2020, suggesting that asset sales driven by herding behavior could increase in periods of stress (Nassira Abbas, 2024)

Figure 6: Annual turnover rate of index funds (2023)



Source: (Nassira Abbas, 2024).

3.4. Portfolio optimization:

In portfolio management, AI makes it possible to develop investment strategies that are more sophisticated. For example, robo-advisors use algorithms in order to propose asset allocations that are personalized according to the risk profile and objectives of each investor. These systems can adapt themselves in real time to developments of the markets, offering a level of responsiveness that it is impossible to reach with manual methods (Faivre, s.d.).

Traditional methods rely on Markowitz's modern portfolio theory, using mathematical tools to diversify assets. AI models, such as machine learning, quickly analyze large amounts of data (SILVA, 2024, p. 04). A literature review and a practical case comparing these approaches were conducted, using recommendations from ChatGPT, a generative AI. The results show that portfolios optimized by ChatGPT outperform those of traditional methods in terms of return and risk management.

3.5. High frequency trading:

There are several definitions of HFT. In very general terms, the Bank of Canada defines this practice as "the very rapid implementation of automated trading strategies that allow the execution of a large number of transactions in short periods of time, with the aim of taking advantage of price gaps or other inefficiencies observed in the markets. More specifically, HFT consists of using artificial intelligences, that is to say powerful mathematical algorithms, in order to carry out stock market transactions as quickly as possible. Exchanging securities at a speed on the order of half a millionth of a second, that is to say one million times faster than a human being, these robot traders are essentially used for speculative purposes by investors operating for their own account, over extremely short-term horizons (Joly, p. 04).

HFT is therefore a practice that relies on the use of artificial intelligences operating on a time scale on the order of half a millionth of a second. In general, since the emergence of this new category of stock market activity, it is no longer humans who make the decisions to sell or buy a security, but autonomous, ultra-fast mathematical algorithms with superior calculation and execution capacity. The two technological pillars of HFT are therefore the use of algorithms and the speed of processing data and orders (Joly, p. 04).

3.6. Predictive analysis:

Predictive analysis consists in using historical data, statistical algorithms, and machine learning techniques in order to predict future results. It helps organizations to take informed decisions by identifying trends, risks, and opportunities.

AI is changing predictive analysis by allowing predictions that are more precise, more efficient, and in real time. From finance to health, its applications transform industries and stimulate innovation. As AI continues to evolve, its role in predictive analysis will become more and more crucial, through helping organizations to take decisions that are smarter and based on data (Agdestein, 2025). AI improves predictive analysis by automating the analysis of data, by increasing the accuracy of models, and by enabling predictions in real time. The following explains how AI integrates into predictive analysis (Agdestein, 2025) :

Data analysis: AI algorithms process large sets of data in order to identify patterns and correlations.

- **Model training:** Machine learning models are trained from historical data in order to predict future results.

- **Predictions in real time:** Systems powered by AI are able to analyze data continuously and to generate immediate information.
- **Continuous training:** Models improve over time by enriching themselves with new data.

In the financial market, AI predicts trends of the market, evaluates credit risk, and detects fraudulent transactions.

3.7.Risk Management:

The emergence of artificial intelligence is profoundly transforming third-party governance. According to Gartner's forecasts, AI and machine learning will make it possible to reduce by 60% the probability of major incidents related to third parties and to halve the time for detection and response. This evolution marks a significant transition from simple third-party risk management (TPRM) to a more global approach of third-party governance and risk control (TPGRC), thus reflecting the growing maturity of the market in this domain (Intelligence artificielle et gestion des risques liés aux tiers : une alliance stratégique, s.d.).

4. Challenges and limitations of AI in finance:

Despite its advantages, AI in finance presents also challenges and limitations that it is important to mention. The quality of the data remains a major issue, because AI algorithms are only as good as the data on which they are trained. Data that are incomplete, biased, or erroneous can lead to results that are misleading, with potentially serious consequences in finance.

The interpretability of AI models constitutes another important challenge. The most performing models, such as deep neural networks, often work as "black boxes," making it difficult to understand the reasons that lead to a particular prediction. This opacity can create problems in a sector where transparency and the capacity to explain decisions are crucial.

Ethical questions related to the use of AI in finance must also be taken into account. The potential biases in the algorithms, questions of privacy, or the social implications of automated decisions require a reflection that is deep. Professionals of finance must be aware of these issues and must develop an approach that is responsible regarding the use of AI (Faivre, s.d.).

Although AI presents new opportunities, it also generates new risks. In this context, we cite, for illustration, the following challenges and risks:

- AI technologies often collect and analyze large quantities of personal data. This raises issues related to data privacy and data security. In addition, AI systems are gaining in power to hack systems and to bypass encryption and security measures.

- The lack of transparency of AI systems, notably those that rely on deep learning algorithms, is often called “black boxes,” which means that the internal functioning and the reasoning that underlies their decisions are not easily interpretable or explainable.
 - Determining responsibility becomes even more delicate in situations where the systems become more autonomous and independent (Youssef, 2024, p. 656)
 - Market volatility: The adoption of the latest advances of artificial intelligence (AI) by the financial markets can improve risk management and increase liquidity, but it could also make the markets more opaque, more complex to monitor, and more vulnerable to cyberattacks and to manipulation risks (Nassira Abbas, 2024).
- ❖ **Polycrises:** AI also risks exacerbating a crisis, whatever its cause, because it relies on data that is out of sync with the reality of an unprecedented situation, according to Anselm Küsters, head of the Department of Digitization and New Technologies at the Center for European Policy in Berlin. Mr. Küsters used the term “polycrisis,” popularized by economic historian Adam Tooze, which refers to the interaction of different shocks whose combined effect is worse than the sum of their parts. The increased use of opaque AI applications “creates new systemic risks,” because they can quickly amplify chains of negative reactions, wrote Mr. Küsters, who urged the European Parliament to “focus on the additional risk related to algorithmic forecasts in case of crisis.” Central bank leaders and other decision-makers will face these questions posed by the rapid evolution of technology in the coming years, as benefits and threats become clearer. “We cannot yet determine what is relevant for central banks,” said Ms. Moufakkir. “History is only beginning” (Kearns, 2023, p. 41).

5. JPMorgan Chase case: a leader in technological innovation:

According to JPMorgan, artificial intelligence has become one of the major investment priorities in 2025. Large amounts of venture capital are directed toward AI startups, which influences overall market trends.

5.1. An intelligence named LOXM:

The largest American lender JPMorgan invests billions of dollars per year in artificial intelligence, cloud computing, cyber security, and process automation. It is today one of the most digitalized institutions in the world. It allocates more than 15 billion dollars per year to technology, a field to which nearly one fifth of its approximately 300,000 employees are assigned. An AI research group employs 200 people, and AI has been integrated into hundreds of uses, from prospecting and marketing to risk management and fraud prevention. AI is also used on a global scale in payment processing and funds transfer systems (Kearns, 2023, p. 40).

JPMorgan began testing in Europe in 2017. Since the first quarter, the bank has been assessing the capabilities and potential of its program called LOXM for the most advanced trading operations, those that require millions

of calculations in just a few nanoseconds.

The advantage of this LOXM robot is that it does not act solely in an automatic manner, like other robots on the market. LOXM learns at the same time as it executes orders, whether buying or selling. "Artificial intelligence is capable of performing calculations on a much larger and more efficient scale," confirmed to the *"Financial Times"* David Fella, a member of JPMorgan's European research team.

LOXM takes into account market information and history in order to carry out the best possible arbitrage. To achieve this result, the intelligent robot was developed using a learning method based on millions of scenarios. The robot has continuous access to JPMorgan's data and transactions, which allows it to expand the number of scenarios (Bloch, 2017). In what follows, the key functionalities of LOXM can be cited:

- **Predictive analysis:** LOXM uses machine learning to forecast price fluctuations and market trends, and this, enables proactive execution of transactions.
- **Dynamic strategy adjustments:** The system adjusts strategies in real time to adapt to market developments and ensures optimal results.
- **Minimization of market impact:** LOXM reduces the impact of large transactions on market prices by analyzing liquidity and market depth.
- **Client-centered customization:** The platform customizes execution strategies according to clients' objectives and preferences (10 ways JP Morgan is using AI, 2025).

5.2. Impact of LOXM on JPMorgan Chase:

The implementation of LOXM has brought considerable advantages to JPMorgan Chase's trading operations:

- **Efficiency gains:** LOXM processes transactions faster and with greater accuracy than traditional methods, which improves overall operational efficiency.
- **Cost reduction:** The platform generates significant savings for the bank and its clients by minimizing transaction costs and market impact.
- **Improved outcomes for clients:** Clients benefit from better execution prices and a more personalized trading experience.
- **Scalability:** LOXM's capabilities extend seamlessly across various markets and high transaction volumes, thereby meeting the requirements of JPMorgan Chase's global trading operations (10 ways JP Morgan is using AI, 2025).

The success of JPMorgan Chase with LOXM has established a new standard for the sector, prompting other institutions to explore similar innovations in transaction execution. The LOXM program illustrates how

JPMorgan Chase exploits the power of AI to address the complex challenges of equity trading on a global scale. By drawing on predictive analysis, real-time strategic adjustments, and client-oriented personalization, LOXM has redefined transaction execution standards in financial markets. This initiative not only reinforces JPMorgan's competitive advantage, but also highlights the broader role of AI in the construction of the future of financial services.

Conclusion:

Nowadays, the use of artificial intelligence has increasingly become a necessity in all areas of life and is revolutionizing many markets, such as the financial market. In this market, AI transforms the way economic actors analyze, make decisions, and execute operations. It also predicts market trends, assesses credit risk, and detects fraudulent transactions. The main uses of AI in the financial market are therefore numerous; the following can be cited:

- **High frequency trading:** a practice that relies on the use of artificial intelligences acting on a time scale of the order of half a millionth of a second. Since the emergence of this new category of stock market activity, it is no longer humans who take the decisions to sell or to buy a security, but autonomous and ultra-fast mathematical algorithms.
- **Predictive analysis:** consists in using historical data, statistical algorithms, and machine learning techniques in order to predict future results. It helps organizations to take informed decisions by identifying trends, risks, and opportunities.
- **Fraud detection:** thanks to machine learning, it makes it possible to analyze a large volume of data with precision and to adapt its rules as it goes along, in an instantaneous manner. It will identify threats in real time in order to intervene rapidly. And above all, it makes it possible to eliminate false positives, frequent with antivirus or anti-fraud software based on rules. In the long term, AI will be evolving and therefore much more effective than a traditional tool.
- **An Exchange-Traded Fund dedicated to artificial intelligence (AI ETF):** it is an index fund listed on the stock exchange that offers the luxury of investing in a basket of companies active in the development, integration, or exploitation of artificial intelligence. And investing in AI via ETFs amounts to taking part in the artificial intelligence market without directly holding the shares of the targeted companies.
- **Portfolio optimization:** in portfolio management, AI makes it possible to develop more sophisticated investment strategies. For example, Robo-advisors use algorithms to propose personalized asset allocations according to the risk profile and the objectives of each investor.

Despite its advantages, AI in finance also presents challenges and limits which are important to cite, such as market volatility and polycrises. Also, the quality of data remains a major issue, because AI algorithms are not better than the data on which they are trained. Incomplete, biased or erroneous data can lead to misleading results, with consequences that can be potentially serious in finance.

JPMorgan Chase revolutionized its trading operations by launching LOXM, an artificial intelligence platform designed to optimize the execution of transactions on global equity markets. This advanced solution illustrates how artificial intelligence can improve decision-making, reduce costs, and increase efficiency in one of the most competitive sectors of financial services. The success of JPMorgan Chase with LOXM established a new standard for the sector, encouraging other institutions to explore similar innovations in transaction execution. The LOXM program perfectly illustrates how JPMorgan Chase exploits the power of AI to address the complex challenges of equity trading on a global scale. By relying on predictive analysis, real-time strategic adjustments, and client-focused personalization, LOXM has redefined the standards of transaction execution in financial markets. This initiative not only strengthens JPMorgan's competitive advantage, but also highlights the broader role of AI in the construction of the future of financial services.

Références

1. *10 ways JP Morgan is using AI*. (2025). Consulté le 11 29, 2025, sur DigitalDefynd: <https://digitaldefynd.com/IQ/jp-morgan-using-ai-case-study/>
2. Agdestein, I. (2025, 02 27). *The Role of AI in Predictive Analytics*. Consulté le 10 20, 2025, sur FOCLAX: L'IA révolutionne l'analyse prédictive en permettant des prédictions plus précises, plus efficaces et en temps réel. De la finance à la santé, ses applications transforment les industries et stimulent l'innovation. À mesure que l'IA continue d'évoluer, so
3. Bloch, R. (2017, juillet 31). *L'intelligence artificielle s'invite dans les salles de marché*. Consulté le 11 29, 2025, sur Les Echos: <https://www.lesechos.fr/2017/07/lintelligence-artificielle-sinvite-dans-les-salles-de-marche-177283>
4. development, U. t. (2025, 04 07). *AI market projected to hit \$4.8 trillion by 2033, emerging as dominant frontier technology*. Consulté le 10 22, 2025, sur UN trade and development: [https://unctad.org/fr/news/lia-pourrait-atteindre-4-800-milliards-de-dollars-dici-2033-et-simposer-comme-la-principale#:~:text=L'intelligence%20artificielle%20\(IA\),par%2025%20en%20dix%20ans](https://unctad.org/fr/news/lia-pourrait-atteindre-4-800-milliards-de-dollars-dici-2033-et-simposer-comme-la-principale#:~:text=L'intelligence%20artificielle%20(IA),par%2025%20en%20dix%20ans).
5. DHOUIB, S. (2023, Decembre). L'EFFET DE L'INTELLIGENCE ARTIFICIELLE SUR LA PRISE DE DECISION DANS LA GESTION DE PORTEFEUILLE DE PROJETS. 23. Université du Québec à Trois-Rivières.
6. Faivre, C. (s.d.). *Finance et IA : comment l'intelligence artificielle révolutionne l'analyse financière*. Consulté le 10 19, 2025, sur TRAINY: <https://www.trainy.co/fr/blog/intelligence-artificielle-finance>

7. Ifrah, S. (2024, septembre 03). *ETF Bitcoin : le guide complet*. Récupéré sur COINHOUSE:
<https://www.coinhouse.com/fr/academie/quest-ce-quun-etf-bitcoin-et-a-quoi-ca-sert>
8. *Intelligence artificielle et gestion des risques liés aux tiers : une alliance stratégique*. (s.d.). Récupéré sur aprovall: <https://www.aprovall.com/fr/blog/intelligence-artificielle-et-gestion-des-risques-tiers-une-alliance-strategique/>
9. Joly, C. (s.d.). *E HIGH FREQUENCY TRADING L'INTELLIGENCE ARTIFICIELLE AU SERVICE DE LA SPÉCULATION BOURSIÈRE*. Institut de recherche et d'informations socio-économiques, Montréal (Québec) . Consulté le 11 29, 2025, sur <https://iris-recherche.qc.ca/wp-content/uploads/2021/03/Brochure-HFT-WEB-02.pdf>
10. Kearns, J. (2023, decembre). L'INTELLIGENCE ARTIFICIELLE ET LE SECTEUR FINANCIER. *Finance et developpement*, p. 38.
11. Leveau-Vallier, A. (2023, mars 06). Intelligence artificielle et intuition. 373. Saint-Denis, Université Paris 8.
12. Nassira Abbas, C. C. (2024, 09 15). *L'intelligence artificielle peut rendre les marchés plus efficaces et plus volatils*. Consulté le 10 19, 2025, sur IMF Blog:
<https://www.imf.org/fr/blogs/articles/2024/10/15/artificial-intelligence-can-make-markets-more-efficient-and-more-volatile>
13. Patrimoine, A. (2025). *ETF IA : investir simplement dans l'intelligence artificielle*. Consulté le 11 22, 2025, sur <https://www.auguste-patrimoine.fr/epargne/etf-ia#quels-sont-les-meilleurs-etf-historiques>
14. Scott, S. (2025, 07 17). *Les dix principaux cas d'usage de l'IA pour les opérations Finance*. Consulté le 11 29, 2025, sur <https://blog.workday.com/fr-fr/top-10-ai-use-cases-finance-operations.html>
15. SILVA, A. D. (2024, juillet 11). Utilisation des méthodes traditionnelles et des modèles d'IA pour l'optimisation de portefeuille. *Travail de Bachelor réalisé en vue de l'obtention du Bachelor HES*, 04. (É. d'Entreprise, Éd.) Genève. Consulté le 11 29, 2025, sur file:///C:/Users/CP/Downloads/DA_SILVA-ALEX-RENDU-JUL.pdf
16. Ward, K. (2024, 12 09). *Investissement dans l'IA : un élargissement plus qu'une bulle*. Consulté le 10 19, 2025, sur JPMorgan asset management: <https://am.jpmorgan.com/ch/fr/asset-management/adv/insights/market-insights/investment-outlook/ai-investment/>
17. Youssef, R. (2024). Secteur financier et intelligence artificielle: Avantages, Limites. . *revue forum d etude et de recherches economiques*, 08(02), p. 652.