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Financial Services Authority (Ojk) Supervision Of Ai Crypto Trading Robots For Regulatory Compliance and Consumer Protection

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Abstrack

Digital Financial Assets are experiencing positive developments and have the potential to support the development of the financial services sector. This is evident in the increasing use of Digital Financial Assets, particularly Crypto Assets, as investment instruments for Indonesians. The Crypto Asset Market in Indonesia operates under regulations and supervision issued by the Commodity Futures Trading Regulatory Agency (BAPPEBTI). The trading ecosystem in the Digital Financial Asset Market has been operating to facilitate the public in trading Crypto Assets. However, Law Number 4 of 2023 concerning the Development and Strengthening of the Financial Sector (UU P2SK) stipulates new duties for the Financial Services Authority (OJK) as the regulatory and supervisory authority for activities in the Financial Sector Technology Innovation (ITSK) sector, as well as Digital Financial Assets and Crypto Assets. As technology advances, many investors are turning to artificial intelligence (AI) technology to automate trading activities. However, a major question arises: which platforms are truly legal, safe, and suitable for use. AI Crypto Trading Robots are software that uses artificial intelligence algorithms to automatically execute crypto asset buy-sell transactions. This system analyzes market data, historical price patterns, and technical indicators in milliseconds, much faster than manual analysis. However, the reality is that the legality of trading robots on the market is unclear. Over the past few years, fraud cases disguised as AI trading robots have emerged, claiming victims. Understanding which platforms are legitimate and compliant with regulations is crucial before investing funds in automated systems. This study attempts to outline the use of AI crypto trading robots for crypto assets, their legal basis, legality, and the reasons why the Financial Services Authority (OJK), with its authority, needs to regulate and supervise them as a form of regulatory compliance and consumer protection.

Keywords: *Crypto Assets, Trading Robots, Artificial Intelligence, Compliance, Consumer Protection*

INTRODUCTION

The development of the Crypto Asset Ecosystem in Indonesia is experiencing rapid growth, supporting the development of the financial services sector. The popularity of Crypto Assets is growing in Indonesia. Several factors are driving the increase in the number of Crypto Asset users, including: the potential for large profits through market volatility, its decentralized nature providing greater control to individuals, and the underlying blockchain technology offering security and transparency. Ease of access via the internet, 24/7 transaction flexibility, and the perception of long-term value.

As cited in online news reports based on studies and discussions with various communities, the reason Crypto Assets are becoming increasingly popular among the Millennial Generation is that transactions are limitless and do not have to be conducted domestically. All

Vol. 1, No. 3, July 2026, pp. 1240-1255
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users can engage in blockchain activities not only in Indonesia but also internationally. Crypto Asset trading can be done 24 hours a day, with no specific time limits, thus providing a broader reach. [1]

According to the Financial Services Authority (OJK)'s industry development data, crypto asset trading activity has shown significant dynamics. Throughout 2025, the value of crypto asset transactions was recorded at IDR 482.23 trillion. As of February 2026, the number of consumer accounts reached 21.07 million, demonstrating that public participation continues to increase in line with the development of the ecosystem. [2]

While in 2025, the value of crypto asset transactions was recorded at IDR 482.23 trillion, this actually decreased by around IDR 168.38 trillion, or 25.9%, compared to IDR 650.61 trillion in 2024. The decline in crypto transaction value was triggered by global pressures, including geopolitical tensions. Globally, rising geopolitical tensions, including the escalating US-China trade war and the Middle East conflict, have led to increased risk-off sentiment in global financial markets. [3] Despite the decline in transaction value, the number of crypto investors in Indonesia continues to grow. As of February 2026, the Financial Services Authority (OJK) recorded 21.07 million crypto investor accounts

Prior to being under the OJK, the supervisory and regulatory authority for Crypto Asset Management operated under a regulatory and supervisory framework issued by the Commodity Futures Trading Supervisory Agency (Bappebti) to facilitate the public in trading Crypto Assets. Law Number 4 of 2023 concerning the Development and Strengthening of the Financial Sector (UU P2SK) then stipulated new duties for the Financial Services Authority (OJK) as the regulatory and supervisory authority for activities in the Financial Sector Technology Innovation (ITSK) sector, as well as Digital Financial Assets and Crypto Assets. As stipulated in Article 312 of the P2SK Law, the regulatory and supervisory duties for Digital Financial Assets have been transferred from the Commodity Futures Trading Supervisory Agency (Bappebti), a government agency under the Ministry of Trade of the Republic of Indonesia tasked with fostering, regulating, developing, and supervising commodity futures trading activities, to the OJK. [4]

As technology advances, many investors are turning to artificial intelligence (AI) to automate crypto trading activities, particularly by using Artificial Intelligence (AI) Crypto Trading Robots. These are software programs that use artificial intelligence algorithms to automatically execute crypto asset buy and sell transactions. [5] These systems analyze market data, historical price patterns, and technical indicators in milliseconds, much faster than manual analysis.

Amidst high market volatility and 24/7 operations, the use of AI-based systems such as AI Crypto Trading Robots is gaining popularity, among both beginners and experienced traders.

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[1] Gagas Yoga Pratomo, Alasan Kripto Makin Populer di Kalangan Generasi Milenial https://www.liputan6.com/crypto/read/4887621/alasan-kripto-makin-populer-di-kalangan-generasi-milenial, 15 Pebruari 2022. .

[2] Siaran Pers: OJK Minta Masyarakat Pahami Fundamental Data Sebelum Investasi Kripto, Pembukaan Bulan Literasi Kripto (BLK) 2026 **,** https://ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/Pembukaan-Bulan-Literasi-Kripto-(BLK)-2026.aspx, 7 April 2026.

[3] Ramdhani Pratama, Zetta Hannany, OJK ungkap alasan transaksi kripto anjlok 25% di Indonesia**,** **https://www.idnfinancials.com/id/news/62774/ojk-ungkap-alasan-transaksi-kripto-anjlok-25-di-indonesia,, 7 April 2026**

[4] Imam Gunawan, Tantangan Hukum Aset Kripto Terhadap Penggunaan Telegram Wallet di Indonesia, Officium Notarium 2024, Universitas Islam Indonesia, Available Online 23 April 202: 149-176.

[5] Arief Wibowo, Robot Trading Crypto AI: Panduan Lengkap, Legalitas, dan Rekomendasi Platform Terbaik 2026,, https://ratuberita.id/robot-trading-crypto-ai, 20 Pebruari 2026

However, understanding how they work, their legality, and the risks remains crucial before using them.

The Financial Services Authority (OJK) emphasizes that investments offering risk-free returns are illegal and constitute fraud. Similarly, with crypto assets, the complexity and risks of crypto assets must remain paramount to the healthy growth of the financial services sector while prioritizing public trust. Similarly, with the use of AI Crypto Trading Robots, understanding legal and regulated platforms is a wise step before investing funds in automated systems.

How are AI Crypto Trading Robots used for crypto assets, their legal basis and legality, and whether the OJK, with its authority, needs to regulate and supervise AI Crypto Trading Robots as another supporting activity in the implementation of crypto asset trading to demonstrate regulatory compliance and provide consumer certainty and protection to maintain public trust in crypto assets in the digital financial market.

DISCUSSION

1. Implementation Of Crypto Asset Trading

Digital Financial Assets are financial assets stored or represented digitally, including Crypto Assets. [6] The definition of a Crypto Asset itself is a digital representation of value that can be stored and transferred using technology that enables the use of distributed ledgers such as blockchain to verify transactions and ensure the security and validity of stored information. It is not guaranteed by a central authority such as a central bank but is issued by a private party. It can be transacted, stored, and transferred or transferred electronically. It can take the form of digital coins, tokens, or other asset representations, including both backed and unbacked crypto assets.

Distributed Ledger Technology (DLT), better known as Blockchain, has transformed the financial industry and is predicted to disrupt businesses, governments, and society. Blockchain is the technology that gave birth to cryptocurrency. [7] With Blockchain technology, crypto assets can be created, recorded, transferred, and stored in a decentralized manner, without the need for intermediaries such as traditional financial institutions or central administrators. Crypto assets have given rise to new intermediaries and service providers, such as crypto-asset exchanges and wallet providers. Crypto assets are intangible commodities, in the form of digital assets, that use cryptography, peer-to-peer networks, and distributed ledgers to regulate the creation of new units, verify transactions, and secure them without the intervention of third parties. [8]

Cryptocurrencies operate decentralized without central bank intervention. Well-known examples include Bitcoin, Ethereum, Ripple, Litecoin, and others. [9] Bitcoin is a pioneer in cryptocurrency, created by Satoshi Nakamoto to eliminate the need for a central control over the

[6] Indonesia. Peraturan Otoritas Jasa Keuangan No. 23 Tahun 2025 tentang Perubahan Atas Peraturan Otoritas Jasa Keuangan Nomor 27 Tahun 2024 tentang Penyelenggaraan Perdagangan Aset Keuangan Digital Termasuk Aset Kripto,

[7] Rusno Haji, Urgensi Penerapan Kerangka Regulasi Aset Kripto Yang Komprehensif, Adaptif, dan Akomodatif, Pusat Riset Ekonomi Makro dan Keuangan BRIN, Indonesia, Oktober 2022.

[8] Dewina Nurul Aini Kosasih, Elsa Benia, Perlindungan Hukum Bagi Konsumen Pada Transaksi Digital Aset Kripto Ditinjau Dari Undang-Undang Nomor 8 Tahun 1999 Tentang Perlindungan Konsumen, Padjadjaran Law Review Volume 10, Nomor 1, 2022, 97-102.

[9] Az Zahra Naskhira Ryan, Aris Prio Agus Santoso, Giovania Madeira Do Carmo, Jonathan James Kurniawan, Zakkiya Muflih Gusma Putra, Perlindungan Konsumen Pada Cryptocurrency di Era Digital, Aliansi: Jurnal Hukum, Pendidikan dan Sosial Humaniora, Volume 1, No.3 May 2024: 198-204.

Vol. 1, No. 3, July 2026, pp. 1240-1255
https://doi.org/10.56861/nalarnagara.v1i3.118

entire financial system. Several concepts are used, including a database called Blockchain, a publicly visible ledger, allowing anyone to view and validate financial transactions made within the blockchain. [10] Although Bitcoin is not the only cryptocurrency in the world, it still has the highest market value compared to other cryptocurrencies.

Cryptocurrency is a technology based on blockchain and cryptography that functions as a digital currency. The presence of cryptocurrency has significantly changed our perspective on the concepts of money and investment. As a digital asset, cryptocurrency has great potential not only as a medium of exchange but also as a store of value and investment instrument. Over time, public interest in cryptocurrency continues to grow, including in Indonesia. [11]

In Indonesia, crypto assets have become widespread in society, but are still prohibited as a means of payment. However, as an investment tool, they are included as commodities that can be traded on futures exchanges. Considering that, economically, the investment potential is large and if it is prohibited, it will impact the large amount of investment that comes out (capital outflow) because consumers will look for markets that legalize crypto transactions.

The development of crypto assets in Indonesia began with the establishment of a commodity futures trading regulator in 2019, which established a legal framework for operating crypto asset futures exchanges and digital gold assets. The previous year, the Ministry of Trade issued Ministerial Regulation No. 99 of 2018, legalizing digital crypto assets as a subject of trading on futures exchanges under the management and supervision of the Commodity Futures Trading Regulatory Agency (Bappebti). [12]

The management of crypto asset trading was then officially transferred from the Commodity Futures Trading Regulatory Agency (Bappebti) to the Financial Services Authority (OJK) and Bank Indonesia (BI) following the signing of the handover report on July 30, 2025, as a follow-up to the mandate of the Financial Sector Development and Strengthening Law (UU P2SK). The Financial Services Authority (OJK) now has the authority to regulate and supervise digital financial assets, including crypto assets, and has issued several regulations, the most recent of which is Financial Services Authority Regulation (POJK) Number 23 of 2025 concerning Amendments to Financial Services Authority Regulation Number 27 of 2024 concerning the Implementation of Digital Financial Asset Trading, Including Crypto Assets

The Financial Services Authority (OJK) currently acts as the primary supervisor and regulator of Financial Sector Technology Innovation (ITSK), Digital Financial Assets (AKD), and Crypto Assets (AK). Its primary duties are as follows:

a. Regulatory Development

OJK develops and drafts regulations to regulate the Financial Sector Technology Innovation, Digital Financial Assets, and Crypto Assets, including Sharia-compliant ones.

b. Supervisory System Development

OJK develops a supervisory system, including standards, norms, guidelines, criteria, and supervisory procedures relevant to the ITSK sector.

c. Guidance and Supervision

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[10] Dimaz Ankaa Wijaya, Mengenal Bitcoin dan Cryptocurrency, Medan, Puspantara, 2016.

[11] Anaway Alnajah Corrs, Agus Syam, Valentino Aris, Analisis Sentimen Tren Cryptocurrency Menggunakan Machine Learning, Jurnal Kecerdasan Buatan dan Bisnis Digital (RIGGS) Volume 3 Nomor 4, 2025

[12] Shabrina Puspasari, Perlindungan Hukum Bagi Investor Pada Transaksi Aset Kripto Dalam Bursa Berjangka Komoditi, Jurnal Diction. Volume 3 No. 1 Januari 2020. 309.

OJK provides guidance, supervision, and inspections of parties that have obtained business licenses or approvals from the OJK and other parties operating in the ITSK sector.

OJK's regulatory development for the Implementation of Digital Financial Asset Trading, including Crypto Assets, is manifested in the issuance of Financial Services Authority Regulations (POJK) concerning ITSK, Digital Financial Assets, and Crypto Assets, hereinafter abbreviated as IAKD, which aim to:

a. Maintaining Financial System Stability:

Ensuring that all activities in the financial services sector are conducted in an orderly, fair, transparent, and accountable manner to achieve a stable and sustainable financial system.

b. Maintaining Market Integrity

Ensuring that the integrity of digital financial markets and crypto assets is maintained.

c. Consumer Protection

Protecting consumers and the public from potential risks arising from activities in the ITSK and crypto asset sectors

The issuance of this Financial Services Authority Regulation and Circular Letter adopts the regulatory and supervisory framework implemented by Bappebti, which is aligned with financial services sector standards and international best practices. To accommodate this, this Financial Services Authority Regulation regulates the institutional framework, licensing, governance, trading mechanisms, consumer protection, and personal data protection for Digital Financial Asset Trading Providers. Regarding the Implementation of Digital Financial Asset Trading, including Crypto Assets, the Financial Services Authority (OJK) has issued several Regulations, namely:

a. Regulation of the Financial Services Authority of the Republic of Indonesia Number 27 of 2024 concerning the Implementation of Digital Financial Asset Trading, including Crypto Assets; and
b. Regulation of the Financial Services Authority of the Republic of Indonesia Number 16 of 2025 concerning the Fit and Proper Assessment and Reassessment of Key Parties in the Financial Technology Innovation Sector, as well as Digital Financial Assets and Crypto Assets;
c. Financial Services Authority Regulation (POJK) Number 23 of 2025 concerning Amendments to Financial Services Authority Regulation Number 27 of 2024 concerning the Implementation of Digital Financial Asset Trading, Including Crypto Assets
d. Circular Letter of the Financial Services Authority of the Republic of Indonesia Number 20/SEOJK.07/2024 concerning the Implementation of Digital Financial Asset Trading, Including Crypto Assets
e. Circular Letter of the Financial Services Authority of the Republic of Indonesia Number 21/SEOJK.07/2025 concerning the Fit and Proper Assessment and Reassessment of Key Parties in the Financial Technology Innovation Sector, as well as Digital Financial Assets and Crypto Assets

The OJK's regulations are expected to effectively fulfill the mandate of the Financial Services Authority (P2SK) Law and prevent any disruptions resulting from the transfer of

Vol. 1, No. 3, July 2026, pp. 1240-1255
https://doi.org/10.56861/nalarnagara.v1i3.118

regulatory and supervisory duties from Bappebti to the Financial Services Authority (OJK). Furthermore, they aim to create a healthy ecosystem for technological innovation in the financial sector, as well as for digital financial assets and crypto assets, so that they can provide optimal services to the public.

The scope of these regulations is regulated in the Financial Services Authority of the Republic of Indonesia Regulation Number 27 of 2024 concerning the Implementation of Digital Financial Asset Trading, Including Crypto Assets, which was later amended by the Financial Services Authority of the Republic of Indonesia Regulation Number 23 of 2025 (hereinafter abbreviated as POJK No. 23 of 2025 covers several aspects, as follows: 1) General Provisions, 2) Types of Digital Financial Assets that can be traded on the Digital Financial Asset Market, 3) Institutional Organizations of Digital Financial Asset Trading Organizers, 4) Organizer Licensing, 5) Capability and Compliance Assessment, 6) Governance, 7) Trading Organization Mechanisms, 8) Supporting Activities, 9) Reporting, 10) Supervision, 11) Procedures for Applying for Approval to the OJK, 12) Personal Data Protection, 13) Consumer and Community Protection, 14) Coordination, 15) Other Provisions, 16) Transitional Provisions, and 17) Closing Provisions.

This OJK Regulation also regulates various further provisions in detail through a Financial Services Authority Circular Letter, including procedures for notification of Crypto Asset trading, the mechanism and procedures for submitting evaluation results for Crypto Assets listed in the Crypto Asset List, the implementation of fit and proper assessments for Key Parties, and re-assessments of Key Parties. Furthermore, this OJK regulates the business plans of Digital Financial Asset Trading Providers and the scope, procedures, and mechanisms for submitting periodic and incidental reports by Digital Financial Asset Trading Providers. [13]

Digital Financial Assets, including Crypto Assets, that will be traded on the Digital Financial Market must meet several criteria for Digital Financial Assets as regulated by the Financial Services Authority (OJK), namely:

a. Issued, stored, transferred, and/or traded using distributed ledger technology;

b. Not financial assets recorded electronically by a financial services institution;

c. Not sourced from and/or used in activities that violate statutory provisions; and

d. Other criteria established by the Financial Services Authority.

In addition to meeting the criteria for Digital Financial Assets, traded Crypto Assets must also meet the following criteria:

a. Serve as the primary digital representation of value;

b. Use publicly accessible distributed ledger technology;

c. Have utility and/or be backed by assets;

d. Be traceable or lack features that obscure or conceal ownership and transaction data; and

e. Have been assessed using the methods stipulated in the Exchange's rules and regulations

Furthermore, the criteria that each Crypto Asset must meet to be traded on the Digital Financial Market will serve as the basis for assessment using methods and analysis conducted by the Exchange before being designated on the Crypto Asset List, and the Exchange will then determine the Crypto Asset List. The Exchange is the Operator of a Digital Financial Asset

[13] Ahmad Hasni Fahmi Sadig, Urgensi Penyesuaian Hukum Aset Kripto Sebagai Upaya Pencegahan Pemanfaatan Dalam Transaksi Ilegal, JIHHP: Jurnal Ilmu Hukum, Humaniora dan Politik, Vo. 5 No. 4 2025: 3234-3243

Exchange, including Crypto Assets. It is a business entity that organizes and provides systems and/or facilities to facilitate activities related to the trading of Digital Financial Assets, including Crypto Assets, and/or provides Digital Financial Asset trading reports.

The current Crypto Asset Exchange in Indonesia is PT Central Finansial X (CFX). CFX is a Crypto Exchange in Indonesia licensed and supervised by the Financial Services Authority (OJK). CFX exists to support the growth of the crypto asset industry with quality and integrity. In carrying out its role as a crypto exchange, CFX complies with Financial Services Authority Regulation (POJK) No. 23 of 2025 concerning Amendments to Financial Services Authority Regulation No. 27 of 2024 concerning the Implementation of Digital Financial Asset Trading, including Crypto Assets. Implementation of Digital Financial Asset Trading, including Crypto Assets. [14] CFX's mission is to accelerate the adoption of digital assets by developing innovative and secure products for consumers, ensuring compliance with applicable regulations to prevent abuse of authority and function, and encouraging innovation in the crypto asset industry. CFX collaborates with the Financial Services Authority (OJK) to ensure compliance with all applicable laws and regulations. CFX encourages its members to prioritize Know-Your-Customer (KYC) and Anti-Money Laundering (AML) procedures to create a transparent and compliant trading environment

2. AI Crypto Trading Robot

Manual crypto trading involves monitoring charts on various exchanges, attempting to time entries and exits, calculating position sizes in spreadsheets, and making decisions under emotional pressure, all while facing the fundamental limitations of today's 24/7 global crypto market. The challenge with manual crypto trading isn't a lack of sophistication; it's the enormous cognitive burden of simultaneously processing multidimensional information across multiple assets, exchanges, and timeframes.

The development of digital technology has brought about significant changes in almost every aspect of human life, particularly in how we interact, communicate, and conduct economic activities. This transformation has not only affected the social and industrial sectors but has also had a significant impact on the global financial system. One of the most revolutionary changes is the emergence of digital financial asset trading, including Artificial Intelligence (AI)-based crypto assets, which has the potential to transform investment decision-making patterns. [15]

Artificial Intelligence (hereinafter referred to as AI) can be defined as Artificial Intelligence. AI simulates human intelligence processes such as learning, planning, and problem-solving, enabling machines to think and work as humanly as possible. AI has made rapid progress and transformed various aspects of human life, even surpassing human performance in many tasks in the last decade. Its ability to process large-scale data, make automated decisions, and solve complex problems makes AI one of the most revolutionary technological innovations

[14] Tentang CFX , https://www.cfx.co.id/id/about-us/history, 15 Pebruari 2022.

[15] Enriko,, I. K. A., Gustiyana, F. N., & Putra, R. H. (2023). Komparasi Hasil Optimasi Pada Prediksi Harga Saham PT. Telkom Indonesia Menggunakan Algoritma Long Short Term Memory. JURNAL MEDIA INFORMATIKA https://doi.org/10.30865/mib.v7i2.5822. Sebagaimana dikutip oleh Wildayanti, Rehulina, Perlindungan Hukum Bagi Investor Terhadap Kerentanan Sistem Pada Perdagangan Berbasis AI, Jurnal Perspektif Hukum Volume 6 Issue 2.

Vol. 1, No. 3, July 2026, pp. 1240-1255
https://doi.org/10.56861/nalarnagara.v1i3.118

of the modern era. AI is now being applied across various sectors, including the digital finance industry.[16]

In Indonesia, this development is increasingly evident in the increasing use of algorithmic trading and trading robots, which are capable of automatically executing transactions based on algorithms designed to read market movement patterns. For many retail investors, these systems offer convenience, efficiency, and the potential for rapid profits without the need for manual market monitoring.

Trading robots are trading support systems that can innovate legitimate business lines and strengthen executive game rules into computerized business models and frameworks that allow computers to operate, replacing the role of humans in modern trading networks. These new systems have the strongest appeal with automated robot trading systems. They can eliminate some of the emotions and tensions of trading and business systems because these trades are oriented towards specific standards, such as legal aspects, efficiency, and innovation in the digital age. Trading robots are believed to help create appropriate investment choices, supporting and simplifying investment decision-making for novice users. [17]

Amidst the high volatility of digital financial markets and 24/7 operations, the use of artificial intelligence-based systems is gaining popularity, among both beginners and experienced traders. However, understanding how they work, their legality, and the risks remains a crucial step before using them. Some crypto asset market investors believe that manual crypto asset trading needs to change its trading patterns due to challenges, including:

a. 24/7 market demands: The crypto market never closes, making it impossible for human traders to monitor opportunities around the clock without intelligent assistance.
b. Emotional decision-making: Fear and greed drive poor trading decisions; humans panic when the market drops and become overly optimistic during rallies.
c. Speed limitations: opportunities can appear and disappear within seconds; manual execution is too slow to capture short-term arbitrage or momentum plays.
d. Data overload: analyzing multiple indicators, order books, sentiment signals, and on-chain data across dozens of assets exceeds human capacity.
e. Inconsistent execution: manual traders struggle to maintain discipline.

The transformation of crypto asset trading is marked by the emergence of AI Crypto Trading Robots, artificial intelligence systems designed to automate cryptocurrency trading by analyzing market data, identifying opportunities, and automatically executing trades based on predetermined strategies or machine learning algorithms. Some considerations for using AI Crypto Trading Robots include: [18]

a. Automated execution: Trading 24/7 without manual intervention across multiple exchanges;

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[16] Dhimas Rudy Hartanto, Lusiani, Legalitas dan Etika Penggunaan Artificial Intelligence Perspektif Hukum Progresif dan Tinjauan Hukum Internasional, 5th Wijayakusuma National Conference (WiNCo) 2024 e-ISSN: 2809-7785, Cilacap, Indonesia, 19 November 2024

[17] Putri Maghfirah Pontoh, Revy Semuel Maynard Korah, Presly Prayogo ildayanti, Rehulina, Tinjauan Yuridis Terhadap Penegakan Hukum Bagi Pelaku (Financial Technology) Robot Trading, Vol. 16 No. 1 (2025): Lex Privatum-Jurnal Fakultas Hukum Unsrat.

[18] Bot Trading Kripto AI: Panduan Lengkap untuk Trading Otomatis Cerdas di Tahun 2026, https://www.jenova.ai/id/resources/ai-crypto-trading-bot, 26 Januari 2026

b. Data-driven decisions: Analyzing vast amounts of market data, technical indicators, and sentiment signals;
c. Strategy optimization: Continuously adapting and improving trading strategies based on market conditions;
d. Risk management: Automatically applying stop-loss, take-profit, and position sizing

AI Crypto Trading Robots, also known as AI Crypto Trading Bots, are artificial intelligence systems in the form of software designed to help investors execute trading strategies automatically. By utilizing algorithms and machine learning, they can be used to: [19]

a. Analyze market data by identifying patterns, trends, and trading opportunities;
b. Predict price movements based on historical data and current market factors;
c. Execute Automated Trading when buying or selling crypto assets according to a predetermined strategy.

AI Crypto Trading Robots are designed to automate crypto asset trading by analyzing market data, identifying opportunities, and automatically executing trades based on predetermined strategies or machine learning algorithms. Unlike simple calculators, AI Crypto Trading Robots combine the capabilities of leading-edge models with crypto expertise, providing comprehensive market intelligence and automated execution.

Artificial Intelligence helps crypto traders and investors by: a) continuously monitoring the market 24/7 across multiple exchanges, b) executing trades instantly when conditions align with strategy parameters, c) analyzing massive amounts of data (price, volume, sentiment, and on-chain) simultaneously, d) eliminating emotional decision-making, and e) maintaining systematic discipline. This automated approach helps traders avoid common mistakes like panic selling or FOMO buying.

AI Crypto Trading Robots use algorithms and artificial intelligence to execute crypto asset buy and sell transactions. The system operates based on strategies preconfigured by the user. Through API connections to crypto exchanges, the bot does not hold funds directly. The funds remain in the exchange account, while the robot simply sends buy and sell orders according to specified parameters. In general, AI Crypto Trading Robots work through three main stages: [20]

a. Collecting and analyzing price data and technical indicators.
b. Identifying opportunities based on the chosen strategy.
c. Automatically executing orders through the exchange API.

The integration of artificial intelligence (AI) into the cryptocurrency ecosystem has been a transformative phenomenon that promises high efficiency, increased security, and innovation in the digital financial system, but also poses significant ethical and regulatory

[19] AI Crypto Trading Bot: Solusi Efisien untuk Trader, https://indodax.com/academy/ai-crypto-trading-bot-solusi-efisien/, 17 Januari 2025

[20] Arief Wibowo, Robot Trading Crypto AI: Panduan Lengkap, Legalitas, dan Rekomendasi Platform Terbaik 2026, https://ratuberita.id/robot-trading-crypto-ai/, 26 Pebruari 2026

Vol. 1, No. 3, July 2026, pp. 1240-1255
https://doi.org/10.56861/nalarnagara.v1i3.118

challenges. [21] And, behind all this convenience, there are various legal risks and vulnerabilities that cannot be ignored

3. The Role of The Financial Services Authority (OJK) As A Supervisory and Regulatory Institution

In the Digital Financial Asset Trading Sector, including Crypto Assets, the Financial Services Authority (OJK) is a state institution tasked with overseeing and regulating the implementation of Crypto Asset Trading. Crypto Asset AI Trading Robots are used by investors in Crypto Asset Trading, while Crypto Asset Trading is carried out by Crypto Asset Traders under the supervision of the OJK.

It's important to understand that the Crypto Asset AI Trading Robot Platform is not a Crypto Asset Trading Platform. It is simply automated software that uses algorithms and artificial intelligence to execute crypto asset buy and sell transactions. This system operates based on strategies pre-configured by the user. Through an API connection to a crypto exchange, the bot does not hold funds directly. Funds remain in the exchange account, while the bot simply sends buy and sell orders according to specified parameters.

Crypto Asset Traders, also known as cryptocurrency exchanges, are where crypto asset traders sell and distribute crypto assets for trading. Cryptocurrency exchange companies have digital platforms that act as intermediaries for the buying and selling of crypto assets. These platforms allow users to buy, sell, and exchange various types of crypto assets. [22]

Some popular AI Crypto Trading Robot platforms that work through API connections to official exchanges include: Pionex, 3Commas, Cryptohopper, Bitsgap, Coinrule, and WunderTrading. To date, there is no specific license for trading bot providers. However, a platform is considered legal if: [23]

a. It is connected to an officially registered exchange.

b. It does not directly manage user funds.

c. It operates through an API system.

Although AI Crypto Trading Robots are designed to minimize human error, they still rely on data and algorithms that can fail or be manipulated. These weaknesses include susceptibility to cyberattacks, technical errors in programming, and data bias that can lead to inaccurate investment decisions. This situation raises serious legal issues, because when losses occur, it is difficult to determine who is responsible—the algorithm developer, the platform provider, or the investor themselves. [24]

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[21] Omasrianto , Muh. Fathir Maulid Yusuf, Pemanfaatan Artificial Intelligence Dalam Evolusi Cryptocurrency: Kajian Sistematis Atas Pelung, Risiko dan Tantangan Regulasi, Jurnal Riset Ilmiah https://manggalajournal.org/index.php/SINERGI E-ISSN 3031-8947, Volume 2 No. 8 2025, 3572 - 3583

[22] Agung Gilang Prayoga, Nanag Tri Budiman, Perlindungan Hukum Bagi Investor Pada Transaksi Aset Mata Uang Digiitak Cryptocurrecy di Indonesia, Welfare State. Volume 1, Nomor 2, Oktober 2022, 225

[23] Arief Wibowo, Robot Trading Crypto AI: Panduan Lengkap, Legalitas, dan Rekomendasi Platform Terbaik 2026,, https://ratuberita.id/robot-trading-crypto-ai, 20 Pebruari 2026

[24] Waluyo, D. E., Paramita, C., Kinasih, H. W., Rafrastara, F. A., & Pergiwati, D. (2024). Optimasi Investasi di Pasar Saham Indonesia: Meningkatkan Keputusan Investasi dengan Prediksi IHSG menggunakan Decision Tree. ABDIMASKU : JURNAL PENGABDIAN MASYARAKAT, 7(1). https://doi.org/10.62411/ja.v7i1.1876. Sebagaimana dikutip oleh Wildayanti, Rehulina, Perlindungan Hukum Bagi Investor Terhadap Kerentanan Sistem Pada Perdagangan Berbasis AI, Jurnal Perspektif Hukum Volume 6 Issue 2.

As the popularity of AI Crypto Trading Robots increases, so too do the various scams. Here are some signs investors should be wary of regarding AI Crypto Trading Robot Platforms:

a. Offering guaranteed profits without risk.

b. Requesting deposits into personal accounts.

c. Using an excessive tiered referral system.

d. Lacking a verifiable company identity.

e. Not connected to an official exchange.

Learning from the Trading Robot cases that have attracted public attention, many people have fallen victim, with losses estimated at billions to trillions of rupiah.

In these cases, many investors suffered significant financial losses due to investing in systems that were not registered with the Financial Services Authority (OJK). These systems promised high returns with low risk, but in reality, they were Ponzi schemes that defrauded investors.

Trading Robots are systems used to make investment decisions, often in foreign exchange trading. Trading Robots are different from AI Crypto Trading Robots, but they can cause problems if they are misused to seek instant profits. The emergence of these irregularities reflects the Indonesian public's weak digital literacy in understanding financial technology and the suboptimal state oversight function, specifically the Financial Services Authority (OJK), of AI-based trading activities.

Digital Financial Asset or Crypto Asset Traders, hereinafter referred to as Traders, are business entities that trade Digital Financial Assets, either on their own behalf and/or facilitating consumers. To become a Trader, a business entity must hold an official permit, previously granted by Bappebti (Commodity Futures Trading Regulatory Agency), but now the OJK has shifted to conducting crypto asset transactions, both on their own behalf and facilitating customer transactions, both buying and selling, in Indonesia. Crypto Asset Traders act as the organizers who interact directly with consumers.

The OJK Regulation regulates the requirements for becoming a Crypto Asset Trader as an ITSK (Information Technology and Finance) Provider, as well as Digital Financial Assets and Crypto Assets, including:

a. Fulfillment of Merchant Requirements, including: capital requirements; having an organizational structure consisting of at least a technology division, an audit division, a legal division, a consumer complaints division, a client support division, an accounting and finance division, and having trading procedures;

b. Fulfillment of online trading system and facilities requirements, including: accuracy, up-to-date, secure, reliable, online, and real-time, as well as compatibility; having features and functions that protect each consumer's access to financial and transaction data; having a business continuity plan; having a database that functions to manage and store Digital Financial Asset transaction data; and having infrastructure with adequate technical specifications.

The scope of activities of Traders in the trading of Digital Financial Assets and Crypto Assets includes:

a. Buying and/or selling between Digital Financial Assets and the Indonesian Rupiah;

Vol. 1, No. 3, July 2026, pp. 1240-1255
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b. Exchanging one or more types of Digital Financial Assets;

c. Storage of Consumer Digital Financial Assets;

d. Transfer or Transfer of Digital Financial Assets between Wallets

In addition, Merchants, when conducting Digital Financial Asset trading activities, have the following authorities:

a. Accept or reject potential customers based on the results of customer due diligence conducted in accordance with statutory provisions;
b. Determine and collect fees for each transaction conducted by the Consumer, the amount of which must take into account the principles of efficiency and fairness.

To create a healthy ecosystem for technological innovation in the financial sector, as well as for digital financial assets and crypto assets, so that they can provide optimal services to the public, the Financial Services Authority (OJK) issued Regulation of the Republic of Indonesia Financial Services Authority (OJK) Number 16 of 2025 concerning the Fit and Proper Assessment and Reassessment of Key Parties in the Financial Technology Innovation Sector, as well as Digital Financial Assets and Crypto Assets. This is necessary for the fit and proper assessment and reassessment of key parties in the financial technology innovation sector, as well as digital financial assets and crypto assets, supported by integrated regulations. [25]

Regarding the phenomenon of Artificial Intelligence (AI), the OJK observes that the financial sector, which possesses large amounts of data (big data), has begun transitioning to data-driven business processes utilizing AI and Machine Learning. This transition will undoubtedly increase efficiency in business process implementation and transaction speed in the financial sector. However, the use of AI will introduce new, possibly unprecedented, risks.

Specifically, the Financial Services Authority (OJK) does not yet have regulations governing AI Crypto Trading Robots. OJK's current regulations relating to Artificial Intelligence (AI) are the Guidelines for a Code of Ethics for Responsible and Trustworthy Artificial Intelligence, specifically in the Financial Technology Industry. This code serves as a framework for risk mitigation and AI optimization in the Fintech industry. It can serve as a guide for Fintech Operators and related parties to ensure that the AI-based applications they utilize comply with the principles of beneficial, fair and accountable, transparent and explicable, robustness, and security. These basic principles are based on studies of several globally applicable guidelines, including the OECD AI Principles and the National Institute of Standards and Technology AI Risk Management Framework. In utilizing AI, Fintech Operators, as pioneers in developing AI-based business models, are guided by the following basic principles: [26]

a. Based on Pancasila;

b. Beneficial;

c. Fair and Accountable;

d. Transparent and Explainable;

e. Robustness and Security

[25] Indonesia. Peraturan Otoritas Jasa Keuangan Republik Indonesia Nomor 16 Tahun 2025 tentang Penilaian Kemampuan Dan Kepatutan Serta Penilaian Kembali Bagi Pihak Utama Di Sektor Inovasi Teknologi Sektor Keuangan Serta Aset Keuangan Digital dan Aset Kripto

[26] Indonesia. Otoritas Jasa Keuangan, Panduan Kode Etik Kecerdanan Buatan (Artificial Intelegence) Yang Bertanggung Jawab dan Terpercaya di Industri Teknologi Fnansial.

From a legal perspective, the use of AI presents new challenges that are not yet fully addressed by the existing legal system. Indonesia has yet to create a comprehensive legal framework to regulate the use of AI. Several regulations can serve as a basis for developing a legal framework regarding AI, including regulations regarding personal data protection. Several important legal questions concern who is responsible when an AI system makes decisions that harm individuals, or how human rights are protected in automated decision-making processes that can undermine justice. These questions remain unanswered within the current legal framework. The potential for this gray area will increase if a legal framework for the use of AI remains undeveloped.

The absence of OJK regulations governing the use of Artificial Intelligence (AI), specifically AI Crypto Trading Robots, in the Trading of Crypto as Digital Financial Assets, demonstrates a legal loophole that business actors can exploit to engage in illegal practices without the threat of clear sanctions. In the context of legal protection, investors should be guaranteed the security and certainty of their invested funds. However, when AI systems are not under the supervision of an official institution, in this case the OJK, legal responsibility becomes unclear. This emphasizes the need for specific OJK regulations governing the use of AI Crypto Trading Robots, including mandatory algorithm audits, system security testing, and compensation mechanisms for investors who suffer losses due to technological failures. [27]

Weak oversight and the absence of regulatory provisions should prevent AI Crypto Trading Robots from being used in cryptocurrency fraud, becoming a new mode of investment fraud. Through AI crypto trading robots, investors can also risk losses, as perpetrators manipulate the trading robot's mechanisms to illegally profit from these transactions. This is due to the lack of regulations established by the relevant authorities, specifically the Financial Services Authority (OJK), specifically governing the use of AI Crypto Trading Robots in crypto asset trading, particularly regarding licensing, operations, reporting, and supervision

CONCLUSION

1. An AI Crypto Trading Robot is an artificial intelligence system in the form of software designed to automate crypto asset trading by analyzing market data, identifying opportunities, and automatically executing trades based on predetermined strategies or machine learning algorithms.

2. The Financial Services Authority (OJK), as a State Institution with specific supervisory and regulatory functions, needs to regulate the use of AI Crypto Trading Robots in crypto asset trading, particularly regarding licensing, operations, reporting, and oversight. This regulation aims to prevent misuse of AI Crypto Trading Robots that could result in losses for consumers as crypto asset investors.

[27] Fadlia, D. H., & . Y. (2015). PERAN OTORITAS JASA KEUANGAN (OJK) DALAM PERLINDUNGAN HUKUM BAGI INVESTOR ATAS DUGAAN INVESTASI FIKTIF. LAW REFORM, 11(2). https://doi.org/10.14710/lr.v11i2.15768 Sebagaimana dikutip oleh Wildayanti, Rehulina, Perlindungan Hukum Bagi Investor Terhadap Kerentanan Sistem Pada Perdagangan Berbasis AI, Jurnal Perspektif Hukum Volume 6 Issue 2.

Vol. 1, No. 3, July 2026, pp. 1240-1255
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3. The OJK (Financial Services Authority) and crypto asset trading providers need to conduct public outreach and education on the scope of crypto assets, including their benefits and risks, and specifically on AI Crypto Trading Robots. This is to protect investors and foster public trust, which will positively impact the ever-growing crypto asset ecosystem.

REFERENCE

Agung Gilang Prayoga, Nanag Tri Budiman, Perlindungan Hukum Bagi Investor Pada Transaksi Aset Mata Uang Digiitak Cryptocurrecy di Indonesia, Welfare State. Volume 1, Nomor 2, Oktober 2022, 225

Ahmad Hasni Fahmi Sadig, Urgensi Penyesuaian Hukum Aset Kripto Sebagai Upaya Pencegahan Pemanfaatan Dalam Transaksi Ilegal, JIHHP: Jurnal Ilmu Hukum, Humaniora dan Politik, Vo. 5 No. 4 2025: 3234-3243

Anaway Alnajah Corrs, Agus Syam, Valentino Aris, Analisis Sentimen Tren Cryptocurrency Menggunakan Machine Learning, Jurnal Kecerdasan Buatan dan Bisnis Digital (RIGGS) Volume 3 Nomor 4, 2025

Arief Wibowo, Robot Trading Crypto AI: Panduan Lengkap, Legalitas, dan Rekomendasi Platform Terbaik 2026,, https://ratuberita.id/robot-trading-crypto-ai, 20 Pebruari 2026

Az Zahra Naskhira Ryan, Aris Prio Agus Santoso, Giovania Madeira Do Carmo, Jonathan James Kurniawan, Zakkiya Muflih Gusma Putra, Perlindungan Konsumen Pada Cryptocurrency di Era Digital, Aliansi: Jurnal Hukum, Pendidikan dan Sosial Humaniora, Volume 1, No.3 May 2024: 198-204.

Dewina Nurul Aini Kosasih, Elsa Benia, Perlindungan Hukum Bagi Konsumen Pada Transaksi Digital Aset Kripto Ditinjau Dari Undang-Undang Nomor 8 Tahun 1999 Tentang Perlindungan Konsumen, Padjadjaran Law Review Volume 10, Nomor 1, 2022, 97-102.

Dhimas Rudy Hartanto, Lusiani, Legalitas dan Etika Penggunaan Artificial Intelligence Perspektif Hukum Progresif dan Tinjauan Hukum Internasional, 5th Wijayakusuma National Conference (WiNCo) 2024 e-ISSN: 2809-7785, Cilacap, Indonesia, 19 November 2024

Dimaz Ankaa Wijaya, Mengenal Bitcoin dan Cryptocurrency, Medan, Puspantara, 2016.

Enriko,, I. K. A., Gustiyana, F. N., & Putra, R. H. (2023). Komparasi Hasil Optimasi Pada Prediksi Harga Saham PT. Telkom Indonesia Menggunakan Algoritma Long Short Term Memory. JURNAL MEDIA INFORMATIKA https://doi.org/10.30865/mib.v7i2.5822. Sebagaimana dikutip oleh Wildayanti, Rehulina, Perlindungan Hukum Bagi Investor Terhadap Kerentanan Sistem Pada Perdagangan Berbasis AI, Jurnal Perspektif Hukum Volume 6 Issue 2.

Fadlia, D. H., & . Y. (2015). PERAN OTORITAS JASA KEUANGAN (OJK) DALAM PERLINDUNGAN HUKUM BAGI INVESTOR ATAS DUGAAN INVESTASI FIKTIF. LAW REFORM, 11(2). https://doi.org/10.14710/lr.v11i2.15768 Sebagaimana dikutip oleh Wildayanti, Rehulina, Perlindungan Hukum Bagi Investor Terhadap Kerentanan Sistem Pada Perdagangan Berbasis AI, Jurnal Perspektif Hukum Volume 6 Issue 2.

Gagas Yoga Pratomo, Alasan Kripto Makin Populer di Kalangan Generasi Milenial https://www.liputan6.com/crypto/read/4887621/alasan-kripto-makin-populer-di-kalangan-generasi-milenial, 15 Pebruari 2022.

Imam Gunawan, Tantangan Hukum Aset Kripto Terhadap Penggunaan Telegram Wallet di Indonesia, Officium Notarium 2024, Universitas Islam Indonesia, Available Online 23 April 202: 149-176.

Omasrianto , Muh. Fathir Maulid Yusuf, Pemanfaatan Artificial Intelligence Dalam Evolusi Cryptocurrency: Kajian Sistematis Atas Pelung, Risiko dan Tantangan Regulasi, Jurnal Riset Ilmiah https://manggalajournal.org/index.php/SINERGI E-ISSN 3031-8947, Volume 2 No. 8 2025, 3572 – 3583

Putri Maghfirah Pontoh, Revy Semuel Maynard Korah, Presly Prayogo ildayanti, Rehulina, Tinjauan Yuridis Terhadap Penegakan Hukum Bagi Pelaku (Financial Technology) Robot Trading, Vol. 16 No. 1 (2025): Lex Privatum-Jurnal Fakultas Hukum Unsrat.

Rusno Haji, Urgensi Penerapan Kerangka Regulasi Aset Kripto Yang Komprehensif, Adaptif, dan Akomodatif, Pusat Riset Ekonomi Makro dan Keuangan BRIN, Indonesia, Oktober 2022.

Shabrina Puspasari, Perlindungan Hukum Bagi Investor Pada Transaksi Aset Kripto Dalam Bursa Berjangka Komoditi, Jurnal Diction. Volume 3 No. 1 Januari 2020. 309.

Waluyo, D. E., Paramita, C., Kinasih, H. W., Rafrastara, F. A., & Pergiwati, D. (2024). Optimasi Investasi di Pasar Saham Indonesia: Meningkatkan Keputusan Investasi dengan Prediksi IHSG menggunakan Decision Tree. ABDIMASKU : JURNAL PENGABDIAN MASYARAKAT, 7(1). https://doi.org/10.62411/ja.v7i1.1876. Sebagaimana dikutip oleh Wildayanti, Rehulina, Perlindungan Hukum Bagi Investor Terhadap Kerentanan Sistem Pada Perdagangan Berbasis AI, Jurnal Perspektif Hukum Volume 6 Issue 2.

AI Crypto Trading Bot: Solusi Efisien untuk Trader, https://indodax.com/academy/ai-crypto-trading-bot-solusi-efisien/, 17 Januari 2025

Bot Trading Kripto AI: Panduan Lengkap untuk Trading Otomatis Cerdas di Tahun 2026, https://www.jenova.ai/id/resources/ai-crypto-trading-bot, 26 Januari 2026

Indonesia. Otoritas Jasa Keuangan, Panduan Kode Etik Kecerdanan Buatan (Artificial Intelegence) Yang Bertanggung Jawab dan Terpercaya di Industri Teknologi Fnansial.

Siaran Pers: OJK Minta Masyarakat Pahami Fundamental Data Sebelum Investasi Kripto, Pembukaan Bulan Literasi Kripto (BLK) 2026 , https://ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/Pembukaan-Bulan-Literasi-Kripto-(BLK)-2026.aspx, 7 April 2026.

Tentang CFX , https://www.cfx.co.id/id/about-us/history, 15 Pebruari 2022.

Indonesia. Peraturan Otoritas Jasa Keuangan Republik Indonesia Nomor 16 Tahun 2025 tentang Penilaian Kemampuan Dan Kepatutan Serta Penilaian Kembali Bagi Pihak Utama Di Sektor Inovasi Teknologi Sektor Keuangan Serta Aset Keuangan Digital dan Aset Kripto

Indonesia. Peraturan Otoritas Jasa Keuangan No. 23 Tahun 2025 tentang Perubahan Atas Peraturan Otoritas Jasa Keuangan Nomor 27 Tahun 2024 tentang Penyelenggaraan Perdagangan Aset Keuangan Digital Termasuk Aset Kripto,