



Legitimacy Of Artificial Intelligence Dashboard Management As A Financial Advisor Within The Indonesia Ministry Of Finance

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Abstract. *The development of artificial intelligence has led the Indonesian Ministry of Finance to launch an innovation called Artificial Intelligence for Financial Advisor (AIFA) to improve financial management by local governments throughout Indonesia. The research method used a normative legal approach with a literature study. The primary legal materials used include Law Number 17 of 2003, Law Number 1 of 2004, Presidential Regulation Number 95 of 2018, and Government Regulation Number 71 of 2019. Secondary legal materials include books, scientific articles, and official publications. The analysis was conducted using descriptive analysis. The results of the study show that the AIFA Dashboard has initial legitimacy through the Electronic-Based Government System or Sistem Pemerintahan Berbasis Elektronik (SPBE) framework and the principles of state financial management, but there are no specific regulations that directly regulate artificial intelligence in the bureaucracy. As a result, there are still regulatory gaps related to transparency, accountability, and the determination of legal responsibility for system analysis errors. System errors also have the potential to cause financial losses and weaken the accuracy of local government fiscal data. The implications of this study conclude that it is necessary to establish specific regulations, strengthen accuracy standards, improve data security, and clarify the division of responsibilities to ensure that the use of AI in the public sector is safe, accountable, and responsible.*

Keywords: *Artificial intelligence, financial advisor, local government, government system*

Received Januari 15, 2026; Revised Januari 19, 2026; Accepted Januari 20, 2026

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INTRODUCTION

Digital technology in the current era has developed rapidly following the emergence of the Industrial Revolution 4.0, a phase of technological transformation in which digital innovations such as Artificial Intelligence (AI) have become central to changing the way we produce, provide services, and interact socially. Industry 4.0 essentially reflects the massive spread and adoption of digital technology, which drives efficiency, automation, and connectivity across business processes. The financial sector is one of the fastest to welcome and adopt this transformation. It is at the forefront of implementing technology to improve service efficiency, strengthen transaction security, expand financial inclusion, and deliver a more optimal user experience.

Artificial Intelligence has a variety of functions that make human work easier, ranging from natural language processing, movement, reasoning, to object manipulation. With the advent of AI, humans act as the party that gives commands or control, while intelligent systems or robots are tasked with carrying out operational work. This technology is capable of processing data provided by humans and producing output automatically, even with a level of knowledge that can exceed human capabilities. An easy example to find is Google, a search engine equipped with intelligence to display search results that are far more relevant than just the keywords entered. This kind of intelligence continues to evolve and become increasingly complex as technology advances.

The current development of AI technology has been implemented by the Ministry of Finance of the Republic of Indonesia. Through this institution, the government has begun to encourage the development of AI technology by launching an innovation based on artificial intelligence called Artificial Intelligence for Financial Advisor (AIFA), which is intended to provide automatic, real-time, and online financial advice to local governments in terms of public services. The initial implementation of AIFA in government is in line with efforts to realize an Electronic-Based Government System or Sistem Pemerintahan Berbasis Elektronik (SPBE) carried out by the Ministry of Finance through the Directorate General of Fiscal Balance or Direktorat Jenderal Perimbangan Keuangan (DJPK). AIFA can help improve regional financial management by evaluating the performance of the Regional Revenue and Expenditure Budget or Anggaran Pendapatan Belanja Daerah (APBD), predicting budget realization to improve cash management, and detecting possible fraud as an early warning system.

The use of AI in the financial sector has beneficial effects, but also poses risks to the stability of the financial system. The Financial Services Authority or Otoritas Jasa Keuangan (OJK) warns that the use of AI in the banking industry poses risks such as algorithmic bias,

deepfakes, or the ability to make autonomous decisions that could harm consumers. Currently, the implementation of AI at the regional level still faces various obstacles, such as a lack of competent human resources, technological infrastructure disparities, and regulations that do not fully support the optimal development of AI. In addition, there is a gap in the standards of financial reporting data to the Ministry of Finance from each region, resulting in diverse and difficult-to-process data. Therefore, a clear legal and policy framework is needed to ensure that the Ministry of Finance's use of the AIFA Dashboard remains within the corridor of the Electronic-Based Government System or Sistem Pemerintahan Berbasis Elektronik (SPBE) and is in line with the principles of prudence, transparency, and accountability as stipulated in the applicable laws and regulations.

Research on the AIFA Dashboard conducted by Munandar, et al (2024) entitled “Aktualisasi Pembentukan Kebijakan di Bidang Keuangan Berbasis Kecerdasan Buatan” or Actualization of Policy Formation in the Field of Artificial Intelligence-Based Finance explains the actualization of AI-based financial policy formation, one of which is the AIFA Dashboard, which helps make financial management more efficient and effective. However, the use of AI needs to be monitored so as not to cause bias. The difference with the research written by the author is that it explains in more detail the implications if the AIFA Dashboard causes bias in the form of inappropriate suggestions or analyses. Another relevant study on the AIFA Dashboard was conducted by Anggraeni, et al (2022) entitled “Strategi Pengambilan Keputusan Keuangan Berkelanjutan dengan Artificial Intelligence For Financial Advisor (AIFA)” or Strategies for Sustainable Financial Decision Making with Artificial Intelligence for Financial Advisors (AIFA) which explains strategies to improve the AIFA Dashboard and reduce bias through collaboration between stakeholders and academics, as well as regulations on the use of the AIFA Dashboard. The difference with this study is that it discusses regulations that legitimize the use of the AIFA Dashboard and the need to develop regulations regarding the imposition of legal liability if the analysis is inaccurate. This article aims to analyze the legal position and juridical basis of the use of the AIFA Dashboard by the Ministry of Finance in the context of the Electronic-Based Government System or Sistem Pemerintahan Berbasis Elektronik (SPBE) based on applicable laws and regulations, as well as to describe the legal implications and accountability challenges arising from the use of the AIFA Dashboard.

RESEARCH METHODE

The research method used in this study is normative legal research because this study examines the legal basis for the application of artificial intelligence within the bureaucracy of the Ministry of Finance, as well as reviewing legal concepts and theories related to the implications

of errors in the AIFA Dashboard analysis. The data in this study was obtained through a literature study using primary legal materials in the form of Law No. 17 of 2003, Government Regulation No. 71 of 2019, and Presidential Regulation No. 95 of 2018, as well as secondary data such as books and scientific journals relevant to the issue. This research was reviewed by applying a descriptive-analytical method, providing a description of the legal basis for the use of the AIFA Dashboard in the government bureaucracy, particularly the Ministry of Finance, and the implications of AIFA analysis errors on financial management policies in government.

DISCUSSION

Legal Analysis of the Use of the AIFA Dashboard

The use of the AIFA Dashboard as a regional financial analysis tool needs to be placed within the applicable legal framework to ensure accountability, transparency, and clarity of responsibility. Presidential Regulation No. 95 of 2018 concerning the Electronic-Based Government System or Sistem Pemerintahan Berbasis Elektronik (SPBE) regulates the use of digital technology in government administration. This regulation requires all government agencies to develop integrated, reliable, and secure digital services. The AIFA Dashboard is a digital innovation from the Ministry of Finance that falls under the scope of SPBE because it functions as a tool to support data-based decision-making by local governments. This provision provides initial legitimacy that the development of AIFA is part of the digital transformation of government. The AIFA Dashboard was officially developed by the Directorate General of Fiscal Balance or Direktorat Jenderal Perimbangan Keuangan (DJPK) of the Ministry of Finance in early 2020 to optimize regional financial management for local governments.

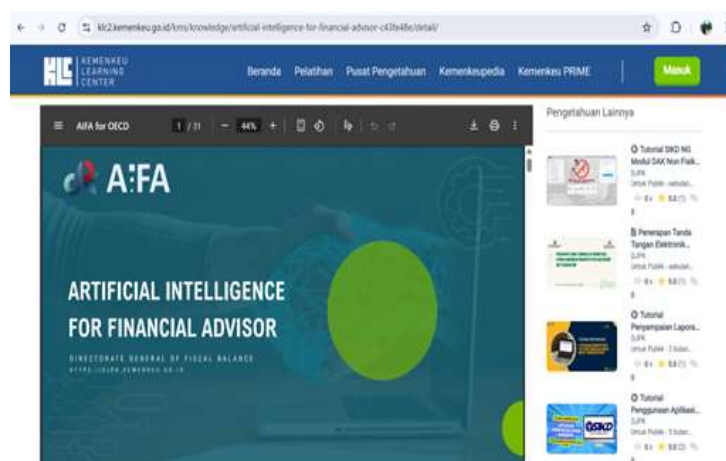


Figure 1. AIFA dashboard display

[Source: klc2.kemenkeu.go.id]

In terms of state financial management, Law No. 17 of 2003 on State Finances and Law No. 1 of 2004 on State Treasury emphasize the principles of prudence, honesty, and reliable information-based management. The use of AIFA as an analysis tool must comply with these principles, especially since any recommendations it generates may influence regional fiscal policy. IBM describes the concept of human-in-the-loop as a system in which humans remain actively involved in decision-making to ensure accuracy, accountability, and ethical value in AI output. Basically, AI is a device or tool designed to assist human work through human-like thinking and reasoning abilities based on given instructions. Although designed to mimic human intelligence, AI has advantages in terms of speed and accuracy because it can process information in a much shorter time, making it capable of competing with and even surpassing human capabilities in this regard. Reinforced by the contents of Article 14 paragraph (1) of the European Union Artificial Intelligence Act of 2024 (EU AI Act), which is the world's first legal framework for AI, AI systems must always be under human supervision. This means that humans still have full control over the decisions made by AI.

In the realm of data protection and system security, AIFA must also comply with Government Regulation No. 71 of 2019 concerning the Implementation of Electronic Systems and Transactions, which regulates the obligations of government electronic system operators regarding data integrity, information security, and system risk control. In addition, data processed by AIFA must also comply with Law No. 27 of 2022 concerning Personal Data Protection with the aim of implementing technical protection measures in the processing of sensitive data or personal data of officials/the public. The obligation to protect personal rights is also regulated in Article 28G paragraph (1) of the 1945 Constitution of the Republic of Indonesia, which states that every person has the right to protection of their personal self, family, honor, dignity, and property under their control. This is because personal data is a strategic asset that is often misused, thereby violating individual privacy integrity. This is in line with the basic requirements of processing law, the principle of accuracy, and the obligation to control data. These provisions are important because AIFA has access to regional fiscal e-data, which is considered strategic data. Therefore, high security standards are necessary to prevent leaks or manipulation.

According to an analysis by Nusantara Legal Partnership, there are no specific regulations governing artificial intelligence in Indonesia, even though the Electronic Information and Transactions Law refers to AI as an electronic agent. This situation shows that the Law, which was actually expected to address various issues related to technology and information systems and provide legal certainty, has not yet fully accommodated the development of AI adequately. This legal vacuum persists to this day, potentially leading to uncertainty in determining the party

responsible in the event of errors in analysis or recommendations from AIFA. Thus, the use of AIFA requires a stronger legal framework, either through technical guidelines or specific regulations related to the use of AI in the public sector, to ensure legal certainty and accountability in the management of state finances.

Implications of the AIFA Dashboard in Providing Incorrect Advice or Analysis

The AIFA dashboard is a concept of government management that utilizes AI technology to promote a data-driven culture for more efficient, transparent, and accountable state financial management. Although AIFA is accessed directly by the government, it also indirectly provides positive services to the public. The use of AI in local government public services is not just a technological innovation, but also changes the way the government interacts with the community. This technology helps the government provide more responsive, predictive, and data-driven services.



Figure 2. AIFA dashboard menu

[Source: Youtube DitjenPK Kemenkeu RI]

To access the AIFA Dashboard, local governments must have a Ministry of Finance SSO account to log in to the dashboard. The AIFA Dashboard has four main menus, namely Data Anomaly Detection, which is an early warning system that detects imbalances between regional revenue and expenditure that could cause financial distress using Benford's Law. Next is the Regional Revenue and Expenditure Budget or Anggaran Pendapatan Belanja Daerah (APBD) Performance Evaluation to ensure that the implementation of the APBD is in accordance with the APBD draft. Third is Forecasting, which aims to improve the quality of regional cash management. Finally, Expenditure Priority Analysis can be used to map the absorption of the APBD for things that are more beneficial to the welfare of the community.

However, the successful implementation of AI in public services depends on the readiness of digital infrastructure, the capabilities of the human resources operating it, and regulations that ensure such innovation can run sustainably. This raises questions about the implications if the suggestions or analyses provided by the AIFA dashboard are inaccurate, especially since AIFA is often used in important decision-making in the local government finance sector.

If the advice or analysis provided is inaccurate, this poses a risk to decision-making and may result in losses for users. Incorrect data analysis can lead to strategic missteps in business, as the data displayed on the dashboard is invalid and tends to present misleading insights and obscure important information. This makes it difficult to conduct a thorough analysis and make the right decisions. Concerns also arise from the limited competence of human resources (HR) in the field of AI. If AIFA provides incorrect advice or analysis, the risk of decision-making errors will increase, especially in agencies whose HR does not fully understand how AI works. In addition, the Ministry of Finance does not yet have specific regulations governing the transparency of AI use in the decision-making process.

The inaccuracy of AIFA's ongoing decision-making has the potential to cause significant financial losses. Errors in AIFA's analysis can lead to a decline in financial management performance at both the central and regional levels. This can be seen from the inaccuracy of the Consolidated Report and Government Finance Statistics (GFS), which are important data to support the process of effective and transparent fiscal policy-making. The inaccuracy of these data and analyses hinders comprehensive financial performance evaluation, resulting in suboptimal strategic decision-making. The failure of AIFA to provide accurate revenue and expenditure forecasts can cause local governments to set unrealistic budgets, triggering waste and misuse of public funds, and ultimately damaging fiscal transparency and public trust. Therefore, regular monitoring and evaluation of the digitization program is very important to identify areas for improvement and maximize the potential of AIFA to prevent these risks.

The various implications resulting from errors in the AIFA Dashboard analysis have a fatal impact on state financial management, whereas state finances are vital and therefore require precision and accuracy in their management. The AI decision-making process is complex and crucial, requiring accountability and a legal framework as a standard guideline for implementation. Indonesia's legal system regarding the use of artificial intelligence is still underdeveloped and does not provide specific regulations, so it is unclear whether responsibility for errors in the AIFA Dashboard analysis lies with the system developer or the user. This is further evident because Government Administration Law No. 30 of 2014 only emphasizes that every decision remains the responsibility of officials, without providing specific provisions

regarding the use of AI recommendations in the decision-making process. As a result, the legal basis for determining who is responsible when an AIFA analysis error occurs is still unclear, whether it is the programmer or the user.

Artificial Intelligence is only viewed as a tool created by humans by inputting algorithms and operational instructions, so AI is only considered a legal object. Legal responsibility can only be imposed on legal subjects. AI cannot determine its own will unless there is human intervention. If an analysis error occurs, legal responsibility is imposed on the programmer or user. This is in line with the Chinese Room Theory, which states that AI does not have the same mind as humans and cannot stand on its own. The AIFA dashboard is, of course, regulated and programmed by humans. If there is an error in analysis, it can be caused by two things: an algorithm created by a programmer or incorrect instructions from the user. This makes it clearer that legal liability can be imposed on the programmer or user. This is reinforced by Article 57 paragraph (12) of the European Union Artificial Intelligence Act of 2024 (EU AI Act), which is the world's first legal framework on Artificial Intelligence, stating that legal responsibility for losses caused by AI remains with the developer, operator, or party controlling the AI, not with the AI itself. In other words, even if AI causes harm, legal responsibility still lies with the humans who operate and control AI. It is crucial for the government to establish a legal framework that regulates AI operational standards within the government, prevents data bias risks, clearly defines the division of responsibilities, and provides compensation mechanisms in the event of errors so that the AIFA Dashboard system can run more effectively. It is also necessary to develop human resource competencies to maximize the potential of AIFA in managing the country.

CONCLUSION

This study found that, legally speaking, the Ministry of Finance's use of the AIFA Dashboard has initial legitimacy through the Electronic-Based Government System or Sistem Pemerintahan Berbasis Elektronik (SPBE) framework in accordance with Presidential Regulation No. 95 of 2018 and the principles of financial management in Law No. 17 of 2003. However, there is currently a legal vacuum due to the absence of specific regulations governing operational standards and limitations on the use of Artificial Intelligence (AI) in the Indonesian public sector. In terms of legal status, AIFA is classified only as a legal tool or object, not a legal subject, because it does not have independent will. Therefore, legal responsibility for errors in analysis or advice generated by the system cannot be attributed to AI, but remains with human elements. Absolute responsibility is attributed to the programmer in the event of an algorithm error or the user in the event of an operational instruction error. This study emphasizes the urgency of filling regulatory gaps to ensure legal certainty. It shows that the absence of specific rules causes

uncertainty in terms of transparency, accountability, and mechanisms for determining legal responsibility in the event of system failure. This study also identifies that data protection in AIFA must comply with Government Regulation No. 71 of 2019 and the Personal Data Protection Law to maintain the integrity of the country's strategic data. Incorrect analysis triggers strategic decision-making errors that can lead to financial losses and misuse of public funds. In addition, it undermines the accuracy of the Consolidated Report and Government Finance Statistics, which can hamper financial performance evaluations and damage public trust. Therefore, monitoring, periodic evaluation, and human resource development are key to maximizing AIFA.

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