

EMEAP Note on AI: Implications for Economy, Financial Stability, and Central Banking Operations

September 30, 2026

1. Introduction

Artificial intelligence (AI) is fast evolving, hence it is important to keep pace with the developments in AI technologies and their potential importance on the real economy, financial stability and central banking functions. AI's impact is unlikely to present itself as a single shock. Rather, it may generate multiple, potentially simultaneous shocks, with complex interactions and feedback effects that could be difficult to identify and assess in real time.

This note explores the impacts and the issues regarding the rapidly expanding adoption of AI across the world including the EMEAP region. The note consists of two parts. The first part explores the impact of AI on the real economy and financial stability. The second part introduces how member institutions are adopting AI, drawing from the results of a survey conducted in 2025 and the subsequent discussions among EMEAP members.

2. Economic impact of AI adoption

This section provides an overview of the economic impact of AI, especially from the following six viewpoints— (i) productivity gains, (ii) fixed investment, (iii) industrial production, (iv) labour market, (v) consumption, and (vi) inflation. AI adoption is expected to stimulate capital expenditures and industrial production in IT-related sectors and boost productivity through efficiency gains in everyday work. However, the benefits might be heterogeneous across economies, sectors and workers, which raises concerns about the loss of job opportunities for young cohorts and widening inequality.

Productivity Gains

In the long run, AI adoption is expected to drive economic growth through productivity gains by enabling more efficient information processing and more automated execution of tasks. These efficiency gains are particularly beneficial for emerging economies, which may face potential labour shortages due to aging populations in the future. While micro-level studies demonstrate AI-driven productivity improvements in specific tasks, these benefits have yet to materialize in macro-level data, likely due to the work process changes required at scale. While AI is expected and holds potential to drive growth over the long run, its impact on short-term productivity growth may remain limited.

However, it should be noted that although researchers agree on some positive impact of AI adoption on economic growth, they have different views on the magnitudes of these impacts. Additionally, it is expected that productivity gains may not emerge uniformly and could potentially widen disparities between economies, as well as among economies, sectors, and firms. For example,

the link with increasing AI demand is more connected to digital services than manufacturing. Construction of data centers is currently being undertaken by a select group of large firms in key economies. These disparities may potentially drive the wealth and income gap between and within jurisdictions.

Fixed investment

In parallel with AI adoption, the demand for data centers and cloud infrastructure has been driving global increases in capital expenditure (Figure 1). Although AI investment is still concentrated in major economies, the EMEAP region has started to benefit from a gradual diversification of digital hubs. Inward FDI for the construction of data centers has been growing in this region. However, some critics are skeptical about the sustainability of such a rapid pace of investment growth and cautious about concentrated investments in specific sectors. Additionally, it remains uncertain whether the rapid growth in data center investment will have material spillovers to the broader economy.

Industrial production

The advancement of AI technology is driving an increase in the industrial production of high-performance semiconductors and stable power supply systems. Figure 2 shows that the growth rate of exports in the EMEAP region has been significantly boosted by IT-related products. However, this increasing exposure to global IT cycles may potentially lead to larger economic fluctuations once economic outlooks deteriorate, as the region's economic growth has been supported by the positive impact of AI-related exports, a slowdown in the AI sectors could consequently pose risks to economic growth. The recent surge in energy prices could also raise operating costs and compress margins for AI-related sectors, thereby impacting economic growth.

Figure 1

Capital expenditures by hyper-scalers

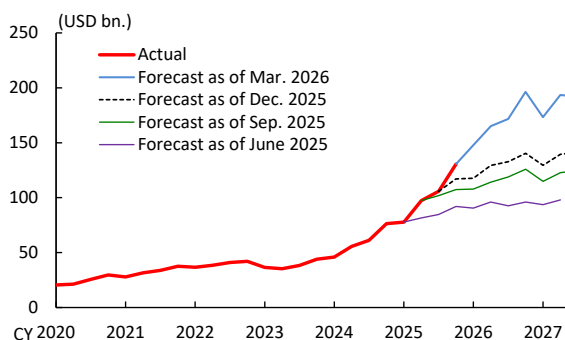
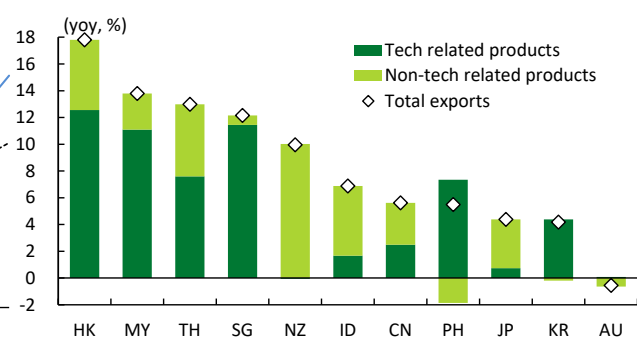


Figure 2

Export growth in 2025 by sector in EMEAP region



Note: In the right chart, "tech related" products refer to products falling under the HS code 8419, 8470-8473, and 85.

Sources: S&P Global Market Intelligence, EMEAP's calculations

Labour Market

AI adoption has already started to cause some shifts in labour markets, although there has been

little aggregate effects on the labour market. Figure 3 shows the share of AI job postings in total job postings has nearly doubled over the past two years in the United States, indicating the intense competition to hire AI talent. The wages of AI-related roles are also rising. The EMEAP region is not an exception. At the same time, an increase in unfilled vacancies for specialized professional positions, including AI-enabled ones, could point to skills mismatches, that would require close monitoring, particularly across sectors, age groups and job types.

The scope and magnitude of labour substitutability caused by AI are nuanced, depending on factors such as technological developments and the costs of AI relative to those when humans are executing the tasks. Some research suggests AI could substitute for tasks performed by highly skilled workers (e.g. professionals, analysts and programmers), while complementing others. Others argue that AI will enhance the working efficiency of high-skilled workers while replacing low-skilled routine positions, which may potentially result in widespread unemployment among young cohorts and low-educated workers and widen the wage gap between different groups.

The world has already started to observe early signs of this phenomenon. Figure 4 shows the employment of entry-level software engineers in the United States began to decrease after the release of ChatGPT, although the effects may be partly attributable to non-AI factors such as the rate hikes by central banks. Tasks performed by skilled workers which require high levels of expertise and judgment are harder to codify. In contrast, tasks typically performed by entry-level engineers often involve knowledge that can be put into a system of rules, making them more susceptible to the impact of AI. Thus, it is important to closely monitor how AI causes job augmentation and labour displacement. Against this backdrop, policy responses such as educational programs to provide workers with opportunities to update their IT skills are considered as particularly effective.

Consumption

Given the ongoing developments in the labour market, the impact of AI on consumption in the near term will be dependent on the extent to which gains from job creation and productivity improvements outweigh the effects of labour market adjustments. Over the medium term, as labour reallocation stabilises and upskilling initiatives gain traction, stronger income growth and enhanced earning potential could support sustained household consumption. Notwithstanding this, downside risks to consumption may emerge if reskilling efforts and the reallocation of workers across sectors fail to keep pace with AI adoption. If left unaddressed, this could exacerbate income inequality, dampen aggregate demand and weaken the transmission of productivity gains into broader economic welfare. Considering this, more robust and effective redistribution frameworks will be needed to promote a more equitable distribution of AI-driven gains.

Figure 3

AI job postings in the United States

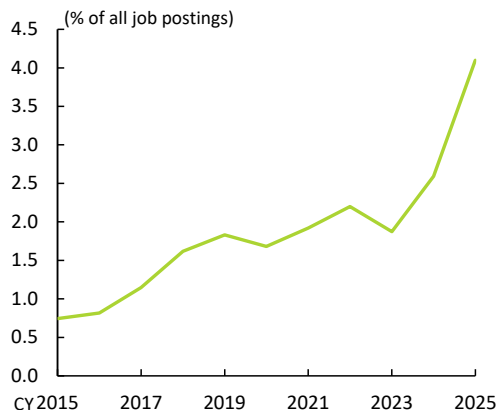
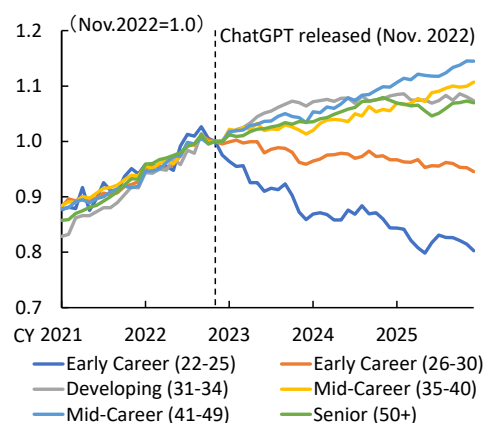


Figure 4

Headcount for software developers by age in the United States (normalized)



Sources: Brynjolfsson et al. (2025), Lightcast (2025), Stanford University Artificial Intelligence Index Report (2026)

Inflation

On the impact of AI on inflation, it was noted that positive demand shocks such as increased investment in data centers can be inflationary for a while. AI could also affect inflation through import prices. Strong global demand for AI-related goods, such as semiconductors, may raise the cost of imported technology and capital goods, adding to domestic inflation pressures. In the long term, productivity gains can be disinflationary through lower production costs, but how much time it takes for the effect to unfold remains uncertain.

3. Financial Stability Implications of AI adoption

This subsection discusses the implications of AI adoption on financial stability, especially focusing on the following three perspectives: (i) the fluctuations in asset prices of AI-related firms, (ii) the financial leverage in AI-related sectors, and (iii) the issues resulting from the heterogeneous degrees of AI adoption in the financial industry.

Asset prices

The increasing popularity of AI-related services and the expanding demand for semiconductors have significantly supported stock prices not only in the United States (Figure 5), but also in the EMEAP region. However, the rapid rise in AI-related stock prices has raised concerns about potential market corrections. For example, when tech firms such as DeepSeek and Anthropic launched new AI products, the stock prices of related semiconductor and software companies declined based on the fear that their business models might lose competitiveness. These price fluctuations can occur in response to the incoming news of technological developments including ones that may affect the timing and pace of hyper-scalers' capital expenditure implementation.

Trading by AI agents may introduce additional complexity to market dynamics, depending on the level of market liquidity and prevailing market conditions, whether stable or stressed. The broader implications of these developments for market stability, as well as the evolving role of human decision-making, remain uncertain and require further in-depth analysis.

Financial leverage

Financial leverage among AI-related firms varies by scale. It warrants monitoring that the financing sources of capital expenditure have gradually shifted from retained earnings to corporate debt, which implies an early sign of a broader leveraging cycle in the IT sector (Figure 6). Financial authorities need to monitor the financing needs of the capital expenditures by AI-related firms to detect hints of excessive leverage.

Figure 5: Semiconductor Sector Stock

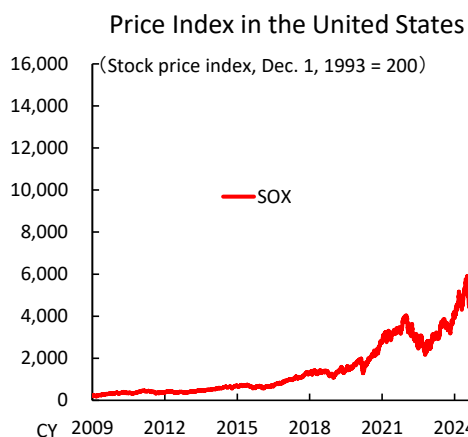
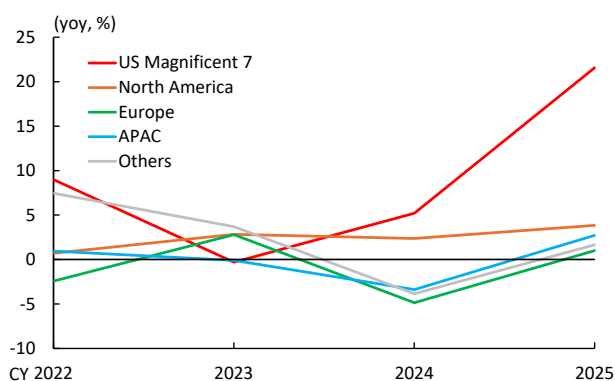


Figure 6: Debt growth of AI-related firms by region



Note: In the left chart, latest data as of June 23, 2026. In the right chart, “US Magnificent Seven” consists of seven large IT firms in the United States, specifically Google, Apple, Meta Platforms, Amazon, Microsoft, Tesla and Nvidia.

Sources: Fred, EMEAP’s calculations

AI adoption in financial institutions

Even though major financial institutions in the EMEAP region are increasingly adopting AI for various purposes - in areas such as customer analysis, risk management, and fraud detection - they remain cautious about AI deployment in higher-risk use cases such as trading activities. In contrast, non-bank financial intermediaries (NBFI) such as hedge funds are actively using AI in various ways in information processing and trading decisions. This gap between NBFI and domestic financial institutions can lead to some disparities in the financial industry in that banks which lag in AI adoption may face competitive pressures and reduced profitability.

Other issues

Some EMEAP member institutions pointed out other important issues that will be potentially caused by AI adoption. The issues include model opacity, which introduces regulatory and compliance

concerns, risks from AI-enabled deepfakes and scams, correlated use of similar models and datasets in trading, and the sovereignty of AI service providers.

Dependence on a small number of third-party providers is also a significant issue, given that it is costly to change AI service providers (i.e. the “lock-in effect”). Growing dependence on a small number of third-party AI and cloud providers creates single points of failure, legal uncertainty over liability, and cross-border data sovereignty risks.

Cyber vulnerability is an emerging issue, given the emergence of frontier AI models such as Claude Mythos. AI-driven cyberattacks can affect not only central bank operating systems but also the broader financial system. AI’s data-intensive nature also increases privacy and cybersecurity risks, including data leakage, re-identification, and cyberattacks, while model risks such as limited explainability, hallucinations, prompt injection, and embedded bias can lead to operational failures or unfair outcomes.

Mitigating the Risks and Responses

At the systemic level, the financial stability implications of AI are unlikely to arise from any single institution or model failure. Rather, systemic risk is more likely to emerge through the interaction of increasingly interconnected institutions that rely on similar technologies and common service providers. Moreover, common reliance on similar AI providers and models may amplify financial stability risks through service disruptions, similar trading behavior across banks, potential collusion, and procyclical market dynamics.

These developments underscore the importance of strong governance, robust risk management and effective supervisory oversight regarding AI adoption in financial institutions. In addition, this condition also reinforces the importance of complementing micro-prudential supervision with macro-prudential supervision to gain a system-wide perspective in understanding the development and mitigating the risks.

4. AI Adoption in Central Banks

This section introduces AI adoption in member institutions according to the survey conducted among EMEAP members from September to October in 2025, “Generative AI Use Cases in EMEAP Central Banks.” As of 2025, the survey showed that about half already used AI for general tasks, and some were extending its application to more specialized tasks. Advanced pilot initiatives were often led by top management, who were actively promoting AI adoption. Most members have established frameworks or guidelines to address the risks and challenges associated with AI adoption. Members were committed to maintaining human-in-the-loop approaches in their workflow to reduce critical risks such as information leakage and hallucination. Additionally, members were providing training

opportunities for staff to address challenges related to talent acquisition.

Even though central banks in the EMEAP region, overall, might adopt a more gradual approach compared to industry or other public organizations in AI usage, the member institutions are continuously working on improving environments so that they can achieve central banking functions more effectively. It would be a significant step forward to regularly conduct surveys on AI adoption in central banks and share the insights obtained from the surveys among the members. The key findings and implications can be categorized into three main areas: the current state of AI adoption, risks and challenges along with corresponding responses, and cooperation among EMEAP members.

Current state of AI adoption

Approximately half of EMEAP members are using AI for general tasks such as generating documents, summarizing information and drafting programming codes (Table 1). Some members are extending their application to more specialized tasks such as aggregating news in the financial market and monitoring loan advertisements (Table 2). For example, approximately half of the members have launched pilot research projects by employing Generative AI to make real-time forecasts on the economy or creating new sentiment indicators from text data. These projects are expected to help central banks fulfill their mandates more effectively. Furthermore, advanced pilot initiatives are often led by top management, who are actively promoting AI adoption. Yet, it should be noted that the degree of pursuing advanced projects may vary across institutions depending on organizational culture, governance arrangements and risk appetite.

Table 1: Use cases for general tasks in central banks

Function	Use Cases	Tasks	Impact
Organization-wide	Document generation	• Draft minutes, emails & reports	• Enable staff to focus on ensuring accuracy, tone and completeness
	Information processing	• Search & summarize publicly available information	• Reduce the time staff spend on routine tasks
	Coding	• Draft codes • Support debugging	• Enable staff to automate existing tasks easily
Administration	Q&A chatbot	• Respond to inquiries about internal rules	• Speed up decision-making • Reduce manual response efforts

Risks, challenges and responses

Policymakers play a key role in balancing the benefits and risks of AI in banking by monitoring its use and adapting regulatory frameworks. Many central banks use surveys to monitor how banks use

AI, but monitoring raises several challenges, as it is difficult to measure how deeply banks depend on AI and to distinguish AI-related incidents from other risk factors.

Table 2: Use cases in core central bank functions

Function	Use Cases	Tasks	Impact
Public communication	Call center assistance	• Produce call summaries • Classify conversations by topic	• Reduce after-call work
Research	News aggregation	• Search, classify & summarize news	• Eliminate repetitive tasks
	Detailed analysis	• Analyze granular economic and payment data	• Improve forecasting and understand consumption patterns
	Nowcasting	• Infer sentiment and other qualitative aspect drawn from textual data	• Empower traditional nowcasting approach by increasing prediction accuracy
Supervision	Monitoring	• Monitor loan advertisements	• Expand coverage from sampling to full review

Furthermore, most members have established frameworks or guidelines to address the key risks associated with AI adoption, such as information leakage, bias, hallucination, and copyright violation as well as third-party risk and sovereignty. Their approaches include human-in-the-loop workflows and technical safeguards that are in line with responsible AI principles. These frameworks to promote responsible AI adoption are launched either through national strategies or financial sector-specific guidelines, alongside practical measures such as data governance rules, data-sharing standards, AI sandboxes, and tested application libraries. Existing technology-neutral regulations, such as fair lending rules and operational risk requirements, already address some AI-related risks, but targeted measures may be needed to provide supervisory expectations as guidance to the industry for issues such as third-party dependence and model risk, including vulnerability assessment, penetration testing, stress testing, business continuity procedures, contractual management, and fairness assessment toolkits.

Authorities are also monitoring potential financial stability risks such as herding, collusion, and procyclicality, and are considering enhanced stress testing and human oversight requirements. International cooperation is also essential, particularly given the cross-border provision of AI services and greater interconnections.

Talent acquisition and retention are also important challenges for central banks, as young skilled staff may be attracted to organizations that better value their skills. Members are providing training opportunities for staff to enhance overall capabilities of AI usage. There is also a challenge in applying

Generative AI in central bank operations when this requires integration with legacy systems. Budget and computational resource constraints are addressed by prioritizing high-impact projects and optimizing resource allocation.

Cooperation among EMEAP members

Most members are interested in sharing best practices on AI uses among central banks. Members should continue to share threat intelligence and enhance coordination of cross-border cyber incident response by aligning escalation triggers, communication channels, and information sharing during major incidents. Regular surveys could help identify common challenges, track progress, and raise AI awareness across central banking functions.

5. Conclusion

First, this note provides an overview of the economic and financial impacts and issues associated with AI adoption among member institutions. The results of the survey on central banks' AI use cases have revealed that it is beneficial to observe the status of AI adoption and share the high-impact practices across the EMEAP region.

In terms of adoption of AI in central banks, there should be more focus on human oversight, transparency and explainability, audit and assurance.

As AI is recognized as a priority area for EMEAP, fostering collaboration and the exchange of perspectives among member institutions remains pivotal in navigating both the opportunities and risks that AI presents. By sharing knowledge and insights, EMEAP aspires to empower member institutions to enhance their effectiveness and adapt to the rapidly evolving landscape of AI.