Tuomas Välimäki: From promise to practice - how AI is transforming the economy, the financial sector and financial supervision

Opening remarks by Mr Tuomas Välimäki, Board Member of the Bank of Finland, at the "Impact of AI on economy, finance and supervision" seminar, Helsinki, 5 November 2025.

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Good morning, ladies and gentlemen.

I am delighted to welcome you to this seminar, whether you are here in Helsinki or online. This is the second time we are organising this event under the title '*Impact of AI on the Economy, Finance and Supervision*'.

The seminar is jointly organised by the Bank of Finland and the Finnish Financial Supervisory Authority as part of our shared **Data Economy initiative**, and in support of one of the Bank's strategic priorities, '*Data and AI in the economy and workplace'*.

This year, we will focus especially on how artificial intelligence is being applied in the financial sector and in supervisory work. We will do our best to avoid the hype, and instead demonstrate, through practical examples, the real added value that AI brings, and can potentially bring, to us all. We will hear several examples not only from Finland but also from colleagues across Europe.

Bank of Finland's experience

In these opening remarks, I would like to share a few examples of how we have applied AI at the Bank of Finland over the past few years.

One such example is our machine-learning '*robot economist'*, which has been working hard at the Bank of Finland for several years now.

This robot forecasts Finnish GDP growth using the very latest data in a nowcasting model. It also independently publishes its forecasts on social media. Back in 2020, for instance, the robot tweeted its forecasts nearly one hundred times.

As I represent the employer side, I'm happy to have an economist who never asks for a coffee break or a pay rise. But, on the other hand, when assessing the usefulness of having a robot economist working for us, I must also consider the time spent coding and updating it, and whether we really are better off with such frequent forecasts.

Impact of AI on the economy

Let me turn to the first part of our title – *the impact of AI on the economy*.

At the Bank of Finland, we recently published a review of the potential impact of artificial intelligence on growth and employment.

AI tools are driving a new kind of structural change in the Finnish labour market. Thanks to new technologies notably large language models and generative AI it is now possible to automate many kinds of work and tasks that previously were beyond automation, including services and expert roles.

At the same time, technological advances are creating demand for new kinds of skills. Companies and organisations must invest in new tools and systems, and in genuinely transforming their ways of working and building the competences of their employees.

This inevitably involves costs, but it is the only way to achieve the broad productivity gains and higher economic growth that AI makes possible in the longer term.

Looking at the bigger picture, it is essential that Europe keeps pace with AI development and does not become overly dependent on other jurisdictions. We need investment, education and innovation in Europe, and the European Commission has several initiatives supporting this. Moreover, Europe is a wealthy continent, with a vast number of highly educated, talented people. We therefore have all the ingredients needed to harnessing the benefits of AI. We just need to ensure we use these resources wisely and locally, within Europe. A stable and competitive Europe is our goal. Later today, we will hear more about this from the European Commission.

Impact of AI on the financial sector

I shall now turn to the second part of our title, *the impact of AI on the financial sector*.

Central banks have been early adopters of machine learning. As highlighted by a BIS Bulletin last year, typical use cases include predictive modelling for monetary policy or financial stability, including GDP nowcasting and crisis prediction.

The Bank of Finland has also published some of this work, for example on the use of Bayesian VAR models for GDP nowcasting and neural networks for predicting systemic financial crises.

Today, we will hear a presentation from the **Financial Stability Board**, on AI and financial stability, and from the **Bank of England** on its approach to AI. We will also have two presentations from academia and two from the banking sector, as well as a contribution from the **European Commission**.

In addition, the **Finnish Financial Supervisory Authority** – the **FIN-FSA** – will summarise the key findings of a recent survey on the use of AI in the financial sector.

More broadly, AI can enhance operations, improve services and open new opportunities for data use and risk management. But we also need to understand how the AI models work and recognize when they hallucinate.

Unlike us humans, when AI hallucinates, it does so with great confidence, which can be both impressive and dangerous. Then again, you might feel that some humans hallucinate confidently and dangerously too – and judging by the news we see, you might be right.

Cybersecurity risks and dependence on third-party service providers are also key concerns. It's not enough to know which banks are systemically important. We must also identify the critical service providers behind our banking sector services, including the providers of AI models.

And we must understand how the demand for financial services is changing. How soon will we reach a world where customers no longer make their own spending or investment decisions, but instead rely on their personal AI agents to manage their finances autonomously?

Quantum technology and AI

The pace of development is rapid, and it does not stop with AI.

At the Bank of Finland, we recently conducted a survey in the financial sector on the prospects, benefits and risks of quantum technology.

What will be the impact of AI in combination with quantum computing and other emerging technologies? Their combined impact could bring a substantial transformation once the technologies mature.

The financial sector is closely monitoring developments regarding quantum technology, but few institutions have run practical tests or trials, given the early stage of the technology. Our survey found that opportunities are seen especially in risk management, information security and investment activities.

However, data protection concerns remain prominent. Four out of five respondents considered 'harvest now, decrypt later' attacks to be a relevant risk.

As quantum computing develops, it has the potential to revolutionise current IT solutions. Therefore, all financial sector institutions should follow developments closely and assess what quantum computing could mean for their own business, and how to prepare for it.

Cybersecure solutions and trust in financial services are foundational to modern society. A resilient economy and financial system are essential under all circumstances.

Impact of AI on financial supervision

Finally, a few words about *AI in financial supervision*.

Artificial intelligence is increasingly being used in the work of public authorities, and we will hear several practical examples from across Europe.

Striking the right balance between trust and innovation is key. We are all in the business of trust, so trials and pilots must not undermine confidence in our work and services. But we are also learning by doing, and sometimes we learn best from mistakes. As someone wisely observed, "*artificial intelligence is still far behind natural stupidity*" – though it is catching up one pilot project at a time.

Not all ideas can be success stories, but we should not be discouraged if we try something and fail. If we never try at all, our AI journey will have failed before it even begins.

As part of the Bank of Finland and FIN-FSA's shared **Data Economy initiative**, our **Analytics Center of Excellence**, or **ACE** for short, plays a key role in developing our data science culture. Together with partners, ACE has built a cloud-native data science platform that enables advanced analysis of microdata.

The effort invested in our cloud transformation is already paying off: our first major initiative – the new granular personal credit register and cloud-based analytics platform – has already attracted a **Central Banking Award**.

Another example is our newly launched **Innovation Accelerator**. It began earlier this year with a contest for new ideas across our organisations. Three AI use cases were selected as the best proposals, and these have since been developed further in internal hackathons and workshops.

We are also active outside our own walls, for example as members of **AI Finland**, a nationwide AI network, and as partners in next week's **Junction hackathon**, where young experts will tackle challenges using the latest AI tools. The challenge we will bring to the hackathon is a look at the simplification of financial sector regulation and policies. And yes, I know simplifying financial regulation sounds almost as ambitious as solving the AI alignment problem!

This seminar is a valuable opportunity not only to hear about the latest developments, but also to exchange ideas and learn about real-world experiences.

Tomorrow, we will dedicate the entire day to these practical examples with seven case studies from supervisors and central banks, each showing how AI is being applied in practice.

Thank you all for your time and engagement, and a very warm thank you in advance to all the speakers for your contributions.

I wish you all, both here in Helsinki and online, a very fruitful and inspiring seminar.