Embracing AI in the world of finance
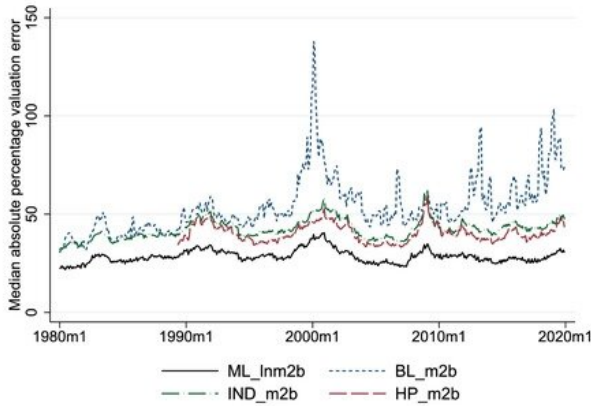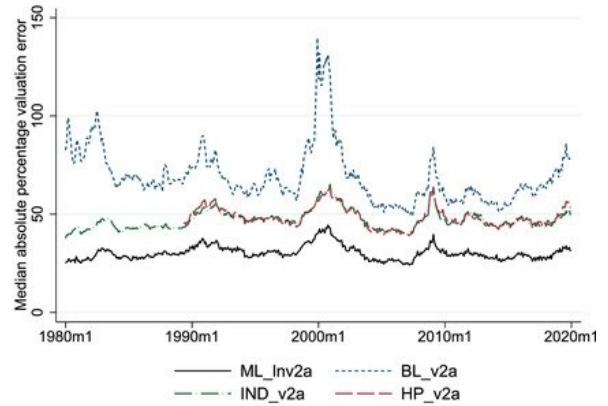
May 23 2023, by Helen Lu
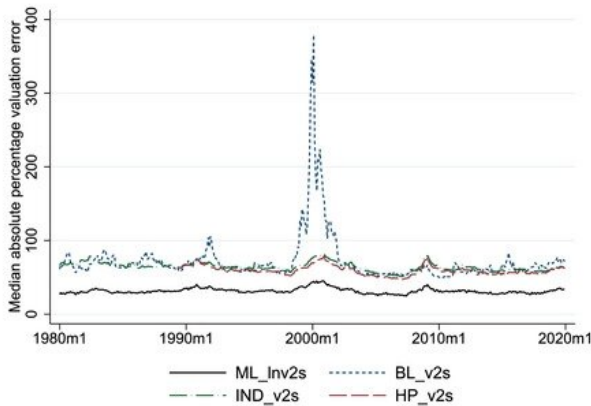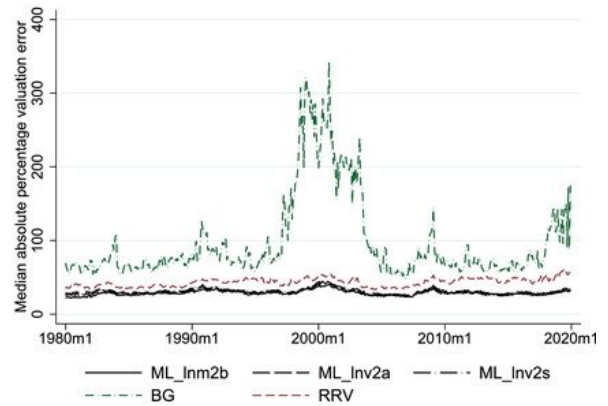
A: Models targeting *m2b*

B: Models targeting *v2a*

C: Models targeting *v2s*

D: *ML* models, *RRV* and *BG*

E: ML models only
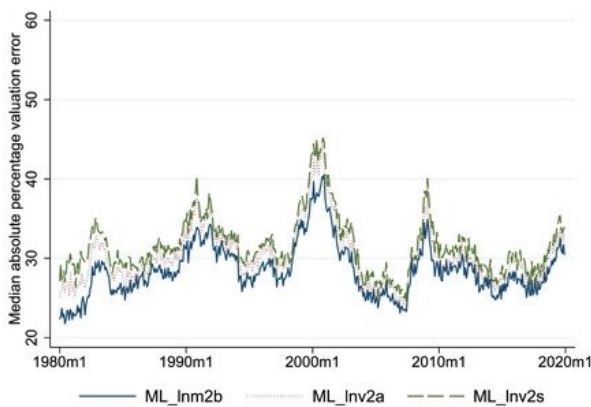
Comparison of model valuation errors over time. These figures depict medians of absolute valuation errors (med(|ε|)) from the three base machine learning models and those from traditional models across time. Panels A, B, and C compare models targeting *m2b*, *v2a*, and *v2s*, respectively. Panel D compares base machine learning models targeting *m2b*, *v2a* and *v2s* and those from *RRV*

(targeting *lnm*) and *BG* (targeting *m*). Panel E compares the machine models. ε is the percentage valuation error: $\varepsilon := (\hat{M}/M) - 1$. $\hat{M}$ is the predicted equity value and *M* is the actual equity value. The sample period runs from January 1980 to December 2019. Credit: *Journal of Accounting Research* (2022). DOI: 10.1111/1475-679X.12464

Large Language Models (LLMs) like ChatGPT are shaking up the world of finance. Morgan Stanley is testing an OpenAI-powered chatbot to assist their financial advisors. The bot, trained on the bank's own research reports, offers rapid access to their extensive proprietary knowledge base.

Private equity firms and insurers were also early adopters, using these innovations for pre-screening investments and automating claims. As LLMs steadily diffuse throughout the finance industry, we need to thoughtfully embrace and adapt to this game-changing shift.

Substitutes or complements?

Against this backdrop, it's natural to wonder if finance professionals could become obsolete. However, this apprehension arises from a simplistic view of AI as a substitute for humans. Large language models should not be seen as a replacement for skilled professionals, but rather as a powerful tool that can enhance their abilities.

By complementing human expertise with AI-driven insights, tools like ChatGPT can help financial professionals make better decisions, automate mundane tasks, and stay ahead of the curve in an increasingly competitive market.

Both a productivity booster and an equalizer

Contrary to the common association of innovation with inequality, early evidence suggests that adopting LLM-enabled technologies has leveled the playing field at work.

In call centers of large software companies, chatbots improved the productivity and quality of underperforming workers more than that of "superstars."

In a separate study, researchers conducted experiments and found that ChatGPT substantially improved the productivity of university-educated professionals in writing tasks, particularly benefiting the slower writers.

Lower cost, higher demand?

With this boost in productivity comes the potential to reduce the cost of providing services. This increased efficiency allows financial professionals to focus on high-value activities, such as client relationship management and strategic decision-making.

Moreover, as technological innovations like LLMs make financial services more affordable and accessible, the demand for these services could grow due to their newfound affordability and accessibility, ultimately leading to an increased need for financial professionals.

Revolutionize knowledge sharing and flatten the organizational structure

The rise of interactive LLMs democratizes access to knowledge. These AI models allow people of all computer literacy levels to tap into vast repositories of information. Moreover, by using this technology to mine emails, recorded discussions, and other resources, we can facilitate seamless sharing of organizational "know-how." This can reduce the

need for specialization and prompt a re-evaluation of traditional organizational structures.

Instead of viewing such AI as substitutes for human workers, we must recognize their potential to reduce service costs and increase demand for financial services. By making professional advice more accessible, we could create a world where many more financial professionals are needed.

How should professionals prepare?

To prepare for the impact of large language models, finance professionals (and professionals in other industries) should focus on cultivating organizational AI literacy. Here are some steps to consider:

- Encourage entry-level professionals to use models like ChatGPT, providing training to help them understand the technology's strengths and limitations.
- Develop a strategy to turn institutional "know-how" and culture into easily accessible information with the assistance of LLMs.
- Anticipate initial impacts on work efficiency and quality, addressing any discontent among "superstars" who might not benefit as much from the technology.
- Rethink team organization, taking advantage of decreased specialization requirements to create more versatile and adaptive structures.
- Alleviate apprehension about AI by highlighting its potential to improve overall productivity and job satisfaction.

Ultimately, the integration of LLMs into the finance sector has the potential to revolutionize the way that professionals access and share knowledge. By embracing AI and adapting to its implications, finance professionals can secure their place in a rapidly evolving industry.

Provided by University of Auckland