Deepseek sends shockwaves across AI industry and financial markets

Coface

On 27 January 2025, a tremor swept through the financial markets and the artificial intelligence industry. Chinese start-up DeepSeek has developed an open-source, cost-efficient artificial intelligence model which has left some analysts skeptical but could threaten hundreds of billions invested in AI infrastructure.

A new threat to the AI giants?

Start-up DeepSeek recently unveiled its DeepSeek-V3 model, an intelligent assistant capable of competing with the best solutions on the market, including OpenAI's ChatGPT. What sets this model apart, beyond its performance, is its remarkably low development cost, estimated at between $5 and $6 million - a fraction of the sums invested by Western companies such as OpenAI or Meta. The impact on financial markets was immediate, affecting not only semiconductor giants such as Nvidia (-17% and a loss of nearly $600 billion in market capitalization) and Broadcom (-17%), but also service providers such Oracle (-14%), and data center infrastructure providers such as and Cisco (-5%).

An open-source model that could reshuffle the deck

One of the most striking aspects of DeepSeek-V3 is its openness. Unlike most of its competitors, DeepSeek has chosen to make its model free to access and modify under one of the most open open-source licenses. This decision could radically transform the AI ecosystem by enabling a large number of players beyond China's borders to benefit from this technological breakthrough. Historical precedents (IBM PC compatible standards in the 1980s, Mozilla Firefox web browser in the 2000s, Android operating system in the 2010s) show that open architectures have often fostered innovation while reducing barriers to entry for new market entrants.

AI performance models called into question

DeepSeek's announcement challenges the prevailing assumption that the performance of AI models improves with increasing parameters, data used for model training and computing power. If DeepSeek's model is confirmed and were to be widely adopted in the industry, a large share of the massive AI infrastructure currently being built could end up in excess capacity, causing prices to fall and AI investment strategies to be reassessed. For the semiconductor, cloud services and data center industries, the stakes are high. A reduction in demand for cutting-edge equipment could precipitate an overcapacity crisis, leading to a reassessment of the entire AI value chain.

Financial markets: greater short-term volatility

In the short term, markets should prepare for a period of volatility as investors reassess the valuation of companies involved in AI. Technology giants such as Nvidia, Broadcom, and ASML,

which aretop providers of the most cutting edge semiconductor technologies, could see a sustained decline in their value. But the risks are not limited to listed companies. Venture capital funds and institutional investors who have invested heavily in AI in recent years are also under pressure. However, we need to differentiate the effects over time. While this correction is inevitable in the short term, it could, in the medium term, create a more favorable environment for innovation, by stimulating less expensive and more targeted AI models.

Geopolitics: a challenge to US influence

DeepSeek is being promoted against a backdrop of technological rivalry between the United States and China. Its founder, Liang Wenfeng, operates an AI center in Hangzhou, China, and recently met Chinese Premier Li Qiang. DeepSeek's frugal approach and the media attention it has attracted can thus be seen as a strategic response to the growing restrictions on China's access to advanced technologies from the United States. Cheaper AI models would significantly reduce the impact of US restrictions on China's AI ecosystem, which has historically relied heavily on US technologies (DeepSeek itself is said to have been trained using advanced, but not cutting-edge, Nvidia chips). They could also be beneficial for regions of the world with a strong interest in AI applications but limited AI infrastructure, such as Europe.

Beyond these initial announcements, however, we need to question the possible limitations of DeepSeek, in particular the underestimated costs associated with data cleansing, networking equipment, energy consumption, salaries of AI engineers and the open-source resources. As such, the full cost of building the model is likely higher than claimed.

> More about the US vs China tech war in our economic publication.