FT Alphaville Equities

The ChatGPT market shock

An attempt to quantify the impact of the generative AI frenzy

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Robin Wigglesworth YESTERDAY

People love to debate the impact of AI, debate the debate about AI, and debate the debate about the debate about AI. But let's take a look at what *actually* matters: the impact on financial markets.

A couple of weeks ago we wrote about how JPMorgan had estimated that generative AI hype had already generated about $1.4tn of market cap this year, mostly by using the 2022 market value added by generative-AI-adjacent stocks like Alphabet, Microsoft, Meta and Nvidia.

It felt a little weak (eg Alphabet was initially punished for the perceived weakness of its ChatGPT-killer Bard), but investors are definitely on the prowl for winners and losers from the potential AI revolution (hello Chegg!).

But three researchers — Andrea Eisfeldt, Gregor Schubert and Miao Ben Zhang — have in a just-published NBER paper attempted to come up with something a little more comprehensive and systematic. Here's their conclusion, with Alphaville's emphasis below:

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> What are the effects of recent advances in Generative AI on the value of firms? Our study offers a quantitative answer to this question for U.S. publicly traded companies based on the exposures of their workforce to Generative AI. Our novel firm-level measure of workforce exposure to Generative AI is validated by data from earnings calls, and has intuitive relationships with firm and industry-level characteristics. **Using Artificial Minus Human portfolios that are long firms with higher exposures and short firms with lower exposures, we show that higher-exposure firms earned excess returns that are 0.4% higher on a daily basis than returns of firms with lower exposures following the release of**

> **ChatGPT.** Although this release was generally received by investors as good news for more exposed firms, there is wide variation across and within industries, consistent with the substantive disruptive potential of Generative AI technologies.

That's pretty chunky! A daily 0.4 per cent excess return translates into over 100 per cent on an annualised basis.

This may be mostly froth driven by the frankly insane levels of attention paid to ChatGPT since its launch, but as the researchers note, the current view of investors seems to be pretty unequivocal: "ChatGPT represents an important shock to corporate valuations."

Of course, markets have a long and distinguished history when it comes to getting overexcited about new technologies. And even when the hype ultimately proves true (eg railways or the internet) they still have a hilarious tendency to lose money in the process.

Further reading:

— ChatGPT vs the markets

— ChatGPT vs the sellside

— An AI just passed a university exam (but don't panic: it was only economics)

— Good news: ChatGPT would probably fail a CFA exam