

Financial Times 번역요약본 ('25. 9/26)

1. Quantum computing company raises a record \$1bn : 양자 컴퓨팅 기업, 10억 달러 투자 유치 ('25. 9/10)

- 양자 컴퓨팅 스타트업 '사이퀀텀 (PsiQunatum)'이 10억 달러 (약 1.4조원)을 조달하며 양자 컴퓨팅 기업 사상 최대 규모의 투자 라운드를 기록했으며, 이는 난해한 과학적 문제를 풀 수 있는 연산 능력을 제공할 것으로 기대되는 기술 상용화를 둘러싼 경쟁을 더욱 가열시키고 있음. 미국에 본사를 둔 사이퀀텀은 이번 자금으로 2028년까지 100만개의 큐비트 (qubit)를 탑재한 양자 컴퓨터를 개발하겠다고 밝혔으며, 현재 가장 앞선 기계들도 수백 개 수준의 큐비트만을 보유하고 있음. 이 야심찬 계획은 구글과 IBM을 제치고 올 10월 말까지 완전한 양자 시스템을 구축하려는 경쟁에서 앞서 나가게 할 수도 있다는 전망. 양자 컴퓨터는 신소재 개발, 신약 발견과 같은 과학적 돌파구를 여는 데 도움을 줄 수 있으며, 블랙록, 테마섹, 베일리 기포드가 주도한 이번 투자 라운드로 사이퀀텀의 기업 가치는 70억 달러에 이름. 그럼에도 불구하고 사이퀀텀은 여전히 단일 광자를 방출하고 제어할 수 있는 부품 개발과 같은 난제를 안고 있으며, 오류 수정 기술은 아직 입증하지 못하였음.

2. In ageing Japan, warehouse work becomes a job for machine : 고령화 일본에서 물류 창고 일자리는 기계의 몫이 되고 있음 ('25. 9/14)

- 고령화가 심화되는 일본은 물류 기업들이 노동력 부족을 극복하고 신속한 배송을 유지할 수 있는지 시험대가 되고 있음. 도쿄 인근 지바에 위치한 아마존 물류센터에서는 직원 2천명보다 로봇 수가 더 많고, 보관 능력은 일반 창고보다 40% 높음. 이곳에서 아마존은 물품 크기에 맞춰 자동으로 포장지를 조절하는 종이 포장 기계와, 여

러 물품을 하나의 상자나 가방에 담기 위해 복잡하게 협업하는 분류 시스템을 선보이고 있으나, 일단 물건이 도로에 나으면 여전히 사람의 몫이 됨. 노무라 종합연구소에 따르면, 일본에서 65세 이상 인구가 30%에 달하면서 2030년까지 트럭 운전자 인력은 1/3이 줄어 48만 명에 그칠 것으로 예상함. 일본 통운 (Nippon Express)은 자율주행 지게차, 자동화된 그리드형 보관, 회수 시스템, 선반을 움직이는 로봇, 피커용 첨단 전동 휠체어 등을 시험하고 있으며, 일본은 세계 최대 산업용 로봇 공급국이지만, 아마존을 제외한 물류 창고당 로봇 수는 0.17대에 불과하며 이는 미국 (0.68대), 중국 (0.57대)보다 낮음. 이같은 격차는 성실한 노동자, 도시 집중, 전자상거래 비중이 10% 미만이라는 낮은 온라인 쇼핑 확산률, 좁은 국토와 산악 지형으로 인해 다층 구조의 작은 창고가 많다는 점 등과 관련이 있음.

3. China's flying car start-ups take their case to the skies : 중국의 플라잉카 스타트업, 하늘로 도전장을 내다 ('25. 9/18)

- 중국 플라잉 택시 제조업체 '이항 (EHang)'은 곧 광저우와 허페이에서 단거리 관광 비행 티켓을 판매하기 시작할 계획이며, 장기적으로는 대중교통, 물류, 긴급서비스로 사업을 확장할 계획임. 전기 수직이착륙 (eVTOL) 항공기 지지자들은 저렴한 배터리 기반 헬리콥터가 도시 내외의 교통, 물류를 혁신할 미래를 기대하고 있으며, 전문가들은 배터리 생산 우위와 규제 환경 덕분에 중국의 플라잉카 산업이 세계에서 가장 앞서 있다고 평가함. 그러나 전 세계적으로는 수년간의 허위 출발, 규제 장벽, 안전 우려고 어려움을 겪고 있으며, 규제 당국은 비행 경로, 추락 시 대응, 소음 문제 같은 난제를 풀어야 함. 업체 관계자들은 실물 기체 개발 능력을 입증했지만, 대중적 상용화까지는 수 년이 걸릴 것이라고 경고함.

4. Federal Reserve's Jay Powell signals further US interest rate cuts are not guaranteed : 미 연준 파월 의장, 추가 금리 보장할 수

없다고 시사 ('25. 9/24)

- 제롬 파월 미국 연방준비제도 (Fed) 의장은, 향후 몇 달간 추가 금리 인하에 대한 기대를 일축하며 정책 결정자들이 인플레이션 억제와 고용 보호 사이에서 어려운 상황에 직면해 있다고 밝힘. 많은 투자자들은 25년 말까지 추가로 두 차례 0.25% 인하를 예상하고 있으나, 파월 의장은 9/23일 '중앙은행이 지나치게 공격적으로 완화하면 인플레이션 억제를 마무리하지 못하고, 목표인 2% 수준으로 되돌리기 위해 다시 긴축해야 하는 상황이 생길 수 있다'고 경고함. 또한 노동시장 악화가 '인플레이션에만 지나치게 집중했던 정책 기조를 완화해 균형 잡힌 접근이 필요함을 보여준다'고 말하며, 미국의 차입비용이 여전히 제약적이라 '인플레이션 억제에는 기여하지만 성장에도 부담을 준다'고 덧붙임. FOMC에서 연말까지 추가 2회 이상의 인하를 지지하는 위원이 근소한 다수 (10명)인 반면, 7명은 인하 반대 또는 금리 인상을 원하고 있음.

Quantum technologies

Quantum computing company raises a record \$1bn

PsiQuantum backed by BlackRock, Temasek and Baillie Gifford as investment race intensifies



Google is the only company to have shown it can control the 'noise' that builds up inside a quantum system © Reuters

Richard Waters in San Diego and **Stephen Morris** in San Francisco

Published YESTERDAY

PsiQuantum has raised \$1bn in the largest funding round for a quantum computing start-up, intensifying the race to commercialise a technology that promises the computing power needed to solve some of the most difficult scientific problems.

The deal caps a burst of investment and soaring valuations for [quantum](#) companies this year, despite warnings from some experts that a truly useful quantum machine could still be decades away.

The US company said the cash would help it build a quantum computer by 2028 with 1mn quantum bits, the basic units that encode information, far more than the hundreds of qubits in today's most advanced machines.

The ambitious timeframe could put it ahead of Google and IBM, which are in a race to build a full-scale quantum system [by the end of this decade](#).

A computer that big would be able to solve “commercially valuable problems that nobody else on the planet will ever solve” without a quantum machine, said Peter Shadbolt, PsiQuantum’s chief scientific officer.

Quantum computers could help unlock scientific breakthroughs such as developing new materials and drug discovery.

PsiQuantum said the deal valued the company at \$7bn, including the funding, compared to a \$3.2bn valuation when it last raised money in 2021.

The latest funding highlights the broadening interest among investors as the promise of workable quantum machines comes closer to reality.

It was led by BlackRock, Temasek and Baillie Gifford, along with a slate of new investors that included Nvidia’s venture capital arm.

The chipmaker’s backing comes despite a warning from chief executive Jensen Huang earlier this year that a workable quantum computer could still be 20 years away.

Quantum machines are expected to perform specialised calculations alongside supercomputers running Nvidia’s GPUs, leading the AI chips group to work closely with a number of quantum companies, including PsiQuantum.

The investment comes after rival Quantinuum this month announced a \$600mn fundraising at a \$10bn valuation, while Finnish company IQM raised \$300mn.

The investments mirror a burst of enthusiasm in the stock market that began late last year and accelerated with a series of recent technical breakthroughs in the field.

Three publicly traded companies in the US that are trying to build quantum systems, IonQ, Rigetti and D-Wave, have seen their combined stock market value jump to \$22bn, from less than \$5bn in November.

[Start-ups](#) such as PsiQuantum are also in a race with some of the biggest and best-funded tech companies, including Amazon and Microsoft.

However, the field as a whole still faces steep technical challenges.

Google is the only company to [have shown](#) it can control the “noise” that builds up inside a quantum system and drowns out calculations as more qubits are added, a critical hurdle known as error correction.

Shadbolt pointed to Google’s achievement as the most important in a number of breakthroughs that had ignited interest in the industry and raised hopes for practical quantum machines.

“There were people who said physics will conspire against you to stop this from happening,” he said. “The whole field of quantum computing has been emboldened by some of these recent results.”

PsiQuantum, which was founded in the UK nine years ago before [moving to Silicon Valley](#), has placed a bet on a different core technology to most other quantum computers.

Its qubits are based on photons rather than the electrons and atoms. The company claims its quantum chips based on photons are easier to manufacture in existing chip facilities, giving it a quicker path to reaching large scale. Its systems also don’t need to operate at the extremely low temperatures required by companies like Google and IBM, greatly reducing the cryogenic equipment needed.

Luke Ward, an investment manager at Baillie Gifford, which first invested six years ago, said PsiQuantum had “hit all their technical milestones”, greatly reducing the technical risks and making it more like a traditional semiconductor investment.

“Now they don’t have to invent any new devices or any new science, it’s about integrating what they have.”

PsiQuantum has still faced daunting technical hurdles, including inventing components capable of emitting and controlling single photons. It has yet to show it can handle error correction. The company missed a five-year goal it set to build a full-scale machine by 2024.

The company said it expected to begin construction on its first full-scale site later this year in Australia, where it has received government equity and loan commitments of A\$940mn (\$619). It also has agreements to build a full-scale quantum system in Chicago.

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Robotics

In ageing Japan, warehouse work becomes a job for machines

Amazon makes promising advances but the pool of human truck drivers is shrinking dramatically



Japanese consumers are not used to seeing delivery robots, with ecommerce still less than 10 per cent of retail sales © AFP via Getty Images

Harry Dempsey in Chiba

Published YESTERDAY

Ageing Japan is becoming a test bed for whether logistics companies can overcome labour shortages and maintain faster delivery times, as the bulk of the sector lags behind Amazon in embracing robots.

At its fulfilment centre in Chiba near Tokyo, where robots outnumber the 2,000 employees and storage capacity is 40 per cent higher than a regular warehouse, Amazon showcased a new paper wrapping machine that automatically adjusts to the item’s size and a dizzyingly complex sorting system that coordinates multiple items for packing into a single box or bag.

But humans take over once a package is out on the road. With almost 30 per cent of Japanese citizens over 65, the pool of truck drivers is expected [to shrink](#) by a third to 480,000 by 2030, according to Nomura Research Institute.

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Truck driver numbers are projected to decline more steeply than freight volumes in Japan

Number of commercial truck drivers ('000) Freight volume by commercial trucks (bn tonnes)



Source: Nomura Research Institute

Amazon is going more local with automation and sees room to squeeze out efficiencies throughout the supply chain. Kohei Shimatani, vice-president of operations at Amazon Japan, said that robotics was on the verge of spreading beyond fulfilment centres to enable automated packing at smaller delivery hubs closer to customers. Automation would race ahead of Japan’s rapidly shrinking working-age population, he predicted.

“I don’t think the ageing population itself will be the showblocker” to achieving faster delivery times, such as expanding same-day delivery to more products, said Shimatani. “A lot of people are over 65 . . . but I don’t think that problem itself will be critical.”

On a global level, Amazon is introducing an artificial intelligence model called DeepFleet to control all its robots and gain a further competitive edge. The AI model has already improved the robots’ speed by 10 per cent.

However, the US company’s deeply held confidence in the power of technology to overcome labour challenges is not shared by logistics rivals in Japan that are dealing with far greater variations in customer demands and items that make standardisation and robotic handling harder.

At a warehouse in east Tokyo, Nippon Express has been testing out autonomous forklifts, automated grid-style storage and retrieval systems, robots shuffling shelves around and a high-tech mobility wheelchair for pickers.

But its executives are far from convinced that investments in automation will pay for themselves.

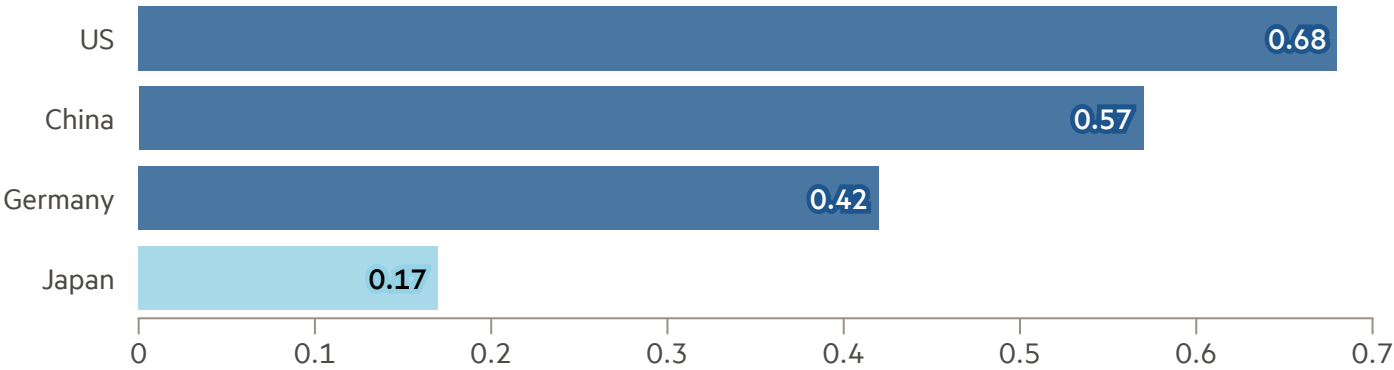
“If we’re just talking about simply replacing a certain workload with this technology, I don’t think we can really measure the efficacy,” said Akira Unno, an executive leading business development at Nippon Express.

“Much of this technology is in the demonstration phase. I think this is a transition period where we see whether they will undergo explosive development or whether humans are better.”

Despite the world’s fourth-largest economy being called the land of the rising robots, due to its role as the world’s biggest supplier of industrial robots, there are only 0.17 robots per non-Amazon warehouse in the country itself, versus 0.68 units in the US and 0.57 in China, according to data from Interact Analysis.

Japan lags behind the US and China in logistics automation

Mobile robots per warehouse, 2024



FINANCIAL TIMES

Source: Interact Analysis • Data excludes Amazon and robots deployed in factories

Hard-working employees, urban concentration and a [slow uptake of online shopping](#) have all contributed to Japan’s less rapid adoption of robots in logistics. The mountainous nation’s limited availability of land also means that its warehouses tend to be smaller, L-shaped, and span multiple floors, making it harder to integrate robotics systems.

“The fundamental reason for their slow rollout is the significant cost to deliver robots into existing warehouses,” said Ryoichi Kakui, chief executive at Tokyo-based e-LogiT, a logistics consultancy. “The key for third-party logistics companies to improve their efficiency is to get rid of handling exceptional items.”

Elsewhere, concerns flared up last year around what Japanese media dubbed the “2024 problem” of new legislation that restricted truck drivers’ working hours. Now, NRI’s 2030 prediction of far fewer drivers is gaining attention as Japan loses 10,000 from the industry every year.

Logistics executives fear Japan will not be able to handle any take-off in ecommerce, which is still less than 10 per cent of retail sales versus 27 per cent in the UK, for example.

SBS Holdings, one of the nation’s biggest trucking groups, is not banking on autonomous driving being the panacea in the near term. It plans to hire hundreds of foreigners in the coming years to work as truck drivers.

For Nippon Express and its peers, the calculus for introducing robots is evolving beyond a simple comparison of cost savings to one of whether Japan can keep delivering.

“We can see that there definitely will not be enough human resources and we see no response to the [low] birth rate. There’s only 1mn people who are 18 years old — there used to be 2mn,” said Unno.

“The discussion quickly turns to: ‘How many years will it take to recoup the investment?’ — and that’s understandable. But that’s not the only point . . . there’s also the fundamental question of whether we can even maintain the supply chain.”

Flying cars

China’s flying car start-ups take their case to the skies

EHang gains first approval to operate tourist flights as sector tries to prove commercial viability

William Langley in Guangzhou and Gloria Li in Hong Kong

Published 7 HOURS AGO

The white egg-shaped drone started with a flutter and then a whirr as it lifted its sole passenger about 20 metres into the air, hovering for about a minute before returning to the ground.

The recent demonstration in southern China’s Guangzhou showcased the technology of flying taxi maker EHang, which this year became the world’s first company to receive approval from its national regulator to operate unmanned passenger flights on tourist routes.

“We believe [airspace] below 1,000 metres . . . is currently humanity’s most under-developed natural resource,” said company vice-president He Tianxing, referring to the height at which many drones fly.

EHang hopes to start selling tickets soon for short sightseeing trips in Guangzhou and Hefei — the two cities where it has received approval to operate such flights — and eventually expand into public transport, logistics and emergency services.

Proponents of electric vertical take-off and landing (eVTOL) aircraft envisage a future where cheap, battery-powered helicopters revolutionise transport and logistics between and within cities. Analysts say China’s [flying car](#) sector is the world’s most advanced, driven by the country’s dominance of battery production and supportive regulation.

Globally, however, the sector has been frustrated by years of false starts, regulatory hurdles and safety concerns. Regulators have to unpick thorny issues such as which routes vehicles can take, how to deal with crashes and potential noise pollution from hundreds of small helicopters flying over densely populated areas.

On Tuesday, two eVTOL aircraft by Chinese carmaker Xpeng collided during a demonstration flight in north-east China, with one catching fire while landing. Xpeng’s flying car unit Aeroht said all personnel involved were safe and that it was investigating the cause.

PLAY | 01:50

EHang demonstrates its pilotless EH216-S aircraft in Guangzhou © William Langley/FT

While paid tourism flights will be a major commercial milestone, analysts said the most compelling example of large-scale deployment would be flying taxis, which hinges on officials resolving the complexities of urban flight and companies proving the real-world utility of their products.

“To really get to be profitable . . . they need to ramp up volume,” said Neil Beveridge, an analyst at wealth manager Bernstein. “To ramp up volume they need to start showing that they can fly passengers.”

Bernstein analysts estimate the global market for urban air mobility will be worth nearly \$24bn a year by 2030, up from about \$5bn last year. [China](#)’s state planner has established a department dedicated to developing the sector, prompting local governments to begin laying the groundwork for flying cars.

The southern tech hub of Shenzhen plans to have 1,200 landing pads for low-altitude aircraft by next year. Guangzhou last year committed to investing more than Rmb10bn (\$1.4bn) on developing infrastructure for the sector by 2027, including the construction of more than 100 landing pads.

A growing number of carmakers, including GAC, FAW and Geely, have unveiled plans to use their battery and motor technologies to produce models.

“Funding has increased a lot in the past year after the government released a series of supportive policies,” said Jun Jiang, co-founder of TCab, a flying car start-up in Shanghai. “We’re seeing more investment and even EV suppliers entering the aerospace sector.”

China’s hopefuls are participants in a global race that has been marred by missed milestones and liquidity issues. Several start-ups, including German developers Lilium and Volocopter, have filed for bankruptcy. California-based Joby Aviation, a leading US group, [inched closer to commercial deployment](#) this year after completing piloted test flights in Dubai.

One advantage Chinese producers have is price, said Bernstein’s Beveridge. “Two million dollars is out of the reach of the normal person. But if it’s Rmb2mn . . . then it’s something you can see being used,” he said, adding that traditional helicopters typically cost about \$5mn.



Xpeng's Land Aircraft Carrier, a van with a two-seat, battery-powered helicopter attached © Sun Shijie/VCG/Getty Images

Prior to this week's crash, more than 4,000 people had placed pre-orders for Xpeng's Land Aircraft Carrier, a silver van with a two-seat, battery-powered helicopter attached. Xpeng's flying car unit Aeroht expects to start mass-producing the Rmb2mn vehicle next year.

Wang Tan, vice-president of Aeroht, said the product was initially designed to appeal to affluent travel enthusiasts but could be broadened to search-and-rescue and medical transport.

While companies are demonstrating the ability to develop working aircraft, some warn that mass adoption remains years away.

“China has the largest number of flying car players in the world, and the sector is currently experiencing a surge in financing activity,” said Sun Kewen, chair of Chinese mapping company MXNavi, which provides location services to autonomous cars and drones. “However, a problem . . . is that they heavily focus on the aircraft itself, rather than the potential applications.”

Eugene Hsiao, an analyst at Macquarie, said eVTOL companies would only prove their value to investors by demonstrating large-scale use cases, adding that it was likely to take at least five years for even a “small degree” of commercialisation to take root.

“It's only meaningful if it's going to be in the robotaxi service, not: ‘I'm going to have a handful of drone-type vehicles at tourist hotspots,’” he said.

Back in Guangzhou, He of EHang conceded that the age of flying taxis could be a long way off, pointing to the fact that it took decades for aeroplane manufacturers and regulators to develop a complete civil aviation system.

“The complexity of future low-altitude flight — including realising normalised air transport flights within cities — is much greater,” He said. “It will be more complicated than everyone thinks.”

Additional reporting by Eleanor Olcott in Shanghai

Federal Reserve

Federal Reserve's Jay Powell signals further US interest rate cuts are not guaranteed

Central bank faces 'challenging situation' as it weighs inflation risks while jobs market softens



Federal Reserve chair Jay Powell warned keeping rates 'restrictive' for too long meant 'the labour market could soften unnecessarily' © Getty Images

Claire Jones in New York

Published 9 HOURS AGO

Updated 03:14

Federal Reserve chair Jay Powell pushed back on expectations of more interest rate cuts in the coming months, saying policymakers faced a “challenging situation” in deciding whether to prioritise fighting inflation or protecting jobs.

The [Fed](#) last week cut borrowing costs by a quarter-point to a range of 4 per cent to 4.25 per cent amid signs of weakness in the labour market and data showing the impact of tariffs on price pressures remained modest.

Many investors are banking on another two quarter-point cuts before the end of 2025. But Powell on Tuesday signalled those moves were far from a done deal, saying if central bankers “ease too aggressively”, then they “could leave the [inflation](#) job unfinished and need to reverse course” to restore price increases to their 2 per cent goal.

Inflation has been above the central bank’s target since 2021 and is expected to rise further as President Donald Trump’s [tariffs](#) push up prices for US shoppers.

However, Powell also warned keeping rates “restrictive” for too long meant “the labour market could soften unnecessarily”.

“Near-term risks to inflation are tilted to the upside and risks to employment to the downside — a challenging situation,” he said in prepared remarks for a speech in Rhode Island. “When our goals are in tension like this, our framework calls for us to balance both sides of our dual mandate.”

US stocks slipped on Tuesday, led by a decline in tech companies that gave back some of the previous session’s gains.

The tech-heavy Nasdaq Composite fell 0.9 per cent, with Nvidia down 2.8 per cent and Oracle losing 4.4 per cent. The blue-chip S&P 500 dipped 0.5 per cent.

Powell said most of the cost of tariffs had been shouldered by US businesses and not — as the White House has claimed — foreign companies.

“We’re collecting a good chunk of revenue, we’ve got a \$300bn-a-year pace. The question is who’s paying for that?” he said in a response to questions. “It’s incredibly early days, but it doesn’t look like overseas exporters are carrying the bulk of it. It looks like it’s . . . retailers and it’s importers. And they’re not passing along to consumers that much of the cost.”

The Fed’s latest cut — the first since December — came during fierce pressure from Trump, who has labelled Powell a “numbskull” for keeping borrowing costs on hold.

Powell said the worsening of conditions in the labour market signalled to rate-setters that their “stance of having a really tight focus on inflation really needs to moderate towards a more balanced approach”.

US borrowing costs remain restrictive, constraining inflation but weighing on growth too, the Fed chair added in his prepared remarks.

While 10 members of the rate-setting Federal Open Market Committee backed a quarter-point cut, [Stephen Miran](#), a Trump ally who joined the Fed’s board on the morning of last week’s meeting, backed a bigger [half-point](#) move. The FOMC has 19 members but only 12 are able to vote at any one time.

While a narrow majority of 10 on the FOMC support two or more cuts by the end of the year, a sizeable minority of seven want no cuts at all, or for rates to rise.

Additional reporting by George Steer in New York

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Jerome H. Powell