Financial Times 번역요약본 (‘25. 5/13)

1. China and South Korea extend battery battle from EVs to grid storage (‘25. 4/28)

- 전 세계적으로 재생에너지 확대와 데이터센터 수요 급증으로 전력망용 배터리 저장장치 (ESS, Energy Storage System)에 대한 수요가 폭증하고 있으며, 이는 전기차 배터리 생산을 주도해온 중국과 한국 기업 간 경쟁의 새로운 전장이 되고 있음. 중국 내 수요 급증을 바탕으로, 중국산 배터리는 현재 전 세계 ESS 용량의 약 90%를 차지하고 있으며, 미국 내 점유율은 80% 이상, 유럽은 75% 이상에 달함. 하지만 미국의 추가 관세로 인해 중국산 배터리는 현재 155.9%의 실질 관세를 적용받고 있으며, 내년에는 173.4%까지 오를 예정으로 이는 한국 배터리 업체들에게 기회를 제공하고 있음. 미국에서는 중국산 ESS가 군사시설에서 이미 금지된 것과 같이 제약이 있지만, 비용 측면에서 충분히 경쟁력이 있다는 의견도 있음.

2. Europe’s battery makers seek a different growth path after Northbolt’s collapse (‘25. 4/28)

- 스웨덴의 배터리 제조업체 Northvolt가 파산하면서 유럽이 자체적인 배터리 산업을 구축하려는 시도에 의문이 제기되었고, 이에 따라 유럽의 배터리 제조업체들은 야심을 줄이고 아시아 경쟁업체들과의 제휴로 방향을 선회하고 있음. 프랑스의 ACC (Automotive Cells Company), Verkor, 독일의 PowerCo 같은 기업들은 고성능 배터리 생산을 확대하고 CATL, BYD 같은 아시아 경쟁자들에게 도전하고 있지만, 어려운 경제 환경에 직면해 있으며, 투자자들에게 자신들이 Northvolt와 같은 길을 가지 않을 것이라는 신뢰도 확보해야함. 전문가들은 유럽이 배터리 자급자족 목표를 달성하려면 중국 기업이 받은 것과 유사한 수준의 공공자금이 필요하다고 지적함.

3. A $5,000 baby bonus won't raise birth rates (‘25. 4/29)

- 2015년 미국 정부는 자녀를 출생부터 18세까지 양육하는데 드는 비용을 계산한 바 있는데, 현재 가치로 환산하면 그 총액은 31만 5천달러 (대학 학비는 제외, 한화 약 4.4억)가 넘는다. 트럼프 집권 이후 연방정부는 출산율을 높이기 위한 여러 방안의 하나로 5천 달러 (한화 약 7백만원)의 출산 보너스를 제안하고 있음. 미국을 포함한 부유한 국가 전반에 걸쳐 '출산 장려' 정책 대부분은 마치 임신과 출산이 끝인 것처럼 논의되지만, 부모들은 아이가 살아갈 삶, 그들을 어떻게 돌볼 것인지, 어디서 살 것인지, 부모 자신의 직업 전망은 어떻게 될지를 고민하고 있음. 이러한 현실적 문제들을 무시하다 보니, 특히 워킹맘을 돕는 실질적인 정책은 아예 실종된 상태임. 출산율을 높이기 위해서는 자녀 양육에 대한 경제적 계산과 유인 구조 자체를 바꾸는 정책을 만들어야 하고, 왜 아이를 낳지 않는지에 대해서도 진지하게 고민해야 함. 결국 정책 입안자들에게는 1) 전반적인 경제적 유인책 강화 (특히 여성들이 더 일찍 자녀를 낳도록 장려) 2) 싱글 여성의 양육을 보다 쉽게 만들거나, 아니면 더 늦은 연령까지 출산 가능성을 유지하도록 투자하는 것이라는 주장.

4. The real lessons from the Plaza and Louvre accords (‘25. 4/29)

- 1985년 9월, 미국/독일/일본/영국/프랑스의 G5 국가 대표들은 달러화 가치 상승 문제를 해결하기 위해 회동하고, 그 결과인 플라자 협정과 1987년 2월의 루브르 협정은 오늘날까지도 국제 경제정책 공조의 성공적 사례로 평가받고 있음. 이 협정들의 목적은 과도하게 고평가된 달러를 질서 있게 평가절하하고, 미국의 막대한 무역적자를 줄이며, 그로 인한 보호무역주의 압박을 완화하는데 있었고, 실제적으로 1987년까지 달러 가치는 질서 있게 하락했고, 1989년까지 GDP 대비 무역적자 비중은 1/3 수준으로 줄어들었음. 이 과정에서 외환시장 공동 개입이 달러 약세와 무역적자 축소에 결정적인 역할

을 했다는 믿음이 널리 퍼져있으나 이는 사실이 아님. 실증 연구와 학계 연구 결과에 따르면, 실제로 달러 약세를 주도한 결정적인 요인은 미국 연준의 금리 인하 (미국 연준은 1984년부터 1986년까지 기준금리를 12%에서 6%로 절반 가까이 인하하였음. 이는 플라자 협정보다 먼저 시작되었으며, 달러 가치는 이에 거의 맞물려 하락)와 미국 정부의 재정 긴축 (레이건 행정부는 1981년에 감세와 국방비 증액을 단행했지만, 이후에는 의회와 협력해 재정 긴축 조치를 도입, 그 결과 미국의 재정적자는 약 40% 감소하였고, 이는 확정적 경기 속에서도 무역적자 축소에 크게 기여하였음) 이었음. 결론적으로 성공적인 국제 정책 공조는 단순한 환율 개입이 아니라, 금융/재정/지정학적 차원의 신뢰할 수 있는 다면적 공약이 전제되어야 함.

5. Spain and Portugal balckout blamed on solar power dependency (‘25. 5/1)

- 4/28일 발생한 스페인의 대규모 정전 사태의 핵심 원인 중 하나는 스페인의 전력망이 태양광 발전의 이례적으로 높은 공급을 제대로 관리하지 못한 것이라고 전직 규제기관 관계자들과 에너지 전문가들이 밝힘. 사고 당시 스페인 전력 공급의 약 55%가 태양광으로부터 나왔으며, 5초 이내에 15GW 규모의 발전설비가 전력망에서 이탈하면서 스페인과 포르투갈 전역의 전력 시스템이 마비됨. 여러 유럽 전문가들은 스페인이 ’기저부하 전력 (firm power)’, 즉 필요시 가감이 가능한 안정적인 에너지 공급원 (화석원료/수력/원자력 등)을 충분히 확보하지 못하였다고 지적. 스페인 당국은 사고의 정확한 원인을 아직 파악하지 못했다고 밝혔지만, 프랑스 전문가는 스페인 전체 전력 생산의 2/3가 ‘비조절성‘ 자원이며, 이들은 내부 전력망의 안정성에 기여하지 않는다고 주장. (4/28일 총 기준 26GW의 전력 공급 중 기저부하 전원은 5GW뿐이었고, 이에 대해 수력/원자력/화석연료 발전을 적절히 배치하지 못한 그리드 관리 실패였다는 비판이 있음. 이에 대한 대책으로 스페인에서는 원자력이 가장 저렴한 해법이라는 주장과, 배터리 저장 기술 도입의 가속화와 국제 전력망 연결 강화

를 통한 전력 수입 증가 등을 제시함.

6. Scientists use AI facial analysis to predict cancer survival outcomes (‘25. 5/9)

- 과학자들이 암 환자의 얼굴을 인공지능으로 분석하여 생존 가능성을 예측하였고, 일부 경우에는 임상의들의 예측을 능가하는 성과를 보였음. 연구진은 딥러닝 알고리즘을 이용해 생물학적 나이를 측정했으며, 암 환자의 얼굴 특징은 실제 나이보다 평균 약 5세 더 늙어 보이는 경향이 있다고 밝힘. 이 기술 도구는 FaceAge (페이스 에이지)라고 불리며, 신체 기관의 노화 정도를 질병 위험의 바이오 마커로 활용하려는 시도의 일환이며, AI 기술의 발전은 대규모 건강 데이터를 학습하고 이를 바탕으로 위험 예측을 수행하는 능력 덕분이며, 이러한 연구는 가속화되고 있음. 이 연구는 건강한 사람 58천여명의 얼굴 사진으로 FaceAge를 학습시키고, 이후 방사선 치료 시작 시점의 얼굴 사진을 사용해 암 환자 6천여명을 대상으로 알고리즘을 테스트 하였음. 결과적으로 FaceAge가 높을수록 생존율이 낮았으며, 이는 실제 나이, 성별, 암 유형을 조정한 후에도 유의미한 결과였음. 한계로는 데이터 편향이나 AI 모델 자체의 오차로 인한 왜곡 가능성을 언급함.

7. Asian investors fear more volatility after ‘extraordinary’ currencies moves (‘25. 5/9)

- 아시아 투자자들이 최근 미국 달러의 급격한 변동성에 대비해 방어적인 조치를 취하고 있음. 대만 달러는 이달 들어 미국 달러 대비 약 6% 상승하였고, 홍콩 금융관리국 (HKMA)은 자국 통화가 달러 페그 상한선을 넘지 않도록 2020년 이후 최대 규모로 외환시장에 개입하였음. 이러한 환율 급변은 미국 수출 증가로 인해 아시아 국가들이 축적해온 달러 자산 수조 달러에 대한 불확실성을 반영하며, 이에 각국 중앙은행들이 대응할 경우 미국이 ’환율조작국‘으로 지정

할 위험에 노출됨. 대만의 생명보험회사들은 지난 10년간 약 7천억 달러 상당의 달러 자산을 축적했으며, 이는 대만 GDP와 맞먹는 수준이고 이중 1/3은 환헤지를 하지 않은 상태임. 한국도 4월말에 1400원/달러 밑으로 떨어지며 (1,387.95원) 6개월 만에 원화가 최고치를 기록했으며, 이는 한국과 미국의 무역 협상에서 관세 인하 기대가 반영된 결과임. 한국은행 이창용 총재는, 최근 아시아 통화가 강세를 보이는 것은 미-중간 협상에서 합의가 있을 것이라는 기대 때문이지만, 실제로 협상 진행 상황을 아무도 모른다고 지적하며 변동성은 계속될 것이라고 설명함.

Batteries

China and South Korea extend battery battle from EVs to grid storage

China has upper hand on technologies but fresh tariffs mean rival can better exploit US market

Huawei showed off its energy storage systems at Shanghai's Smart Energy Expo last year © Bloomberg

Christian Davies and **Song Jung-a** in Seoul and **Edward White** in Shanghai

Published 6 HOURS AGO

A global surge in renewable energy and data centre demand is powering a boom in using batteries for storage on electricity grids, creating a new front in the battle between Chinese and South Korean companies that have dominated cell production for electric vehicles.

Fuelled by surging demand within China itself, Chinese batteries account for nearly 90 per cent of global capacity for energy storage systems (ESS), including a market share of more than 80 per cent in the US and more than 75 per cent in Europe.

But having suffered an 11 per cent US tariff last year, the total now imposed by President Donald Trump and his predecessor Joe Biden mean that Chinese battery companies now face an effective rate of 155.9 per cent, which is due to rise to 173.4 per cent next year — offering hope to Korean battery companies attempting to stage a comeback in the US and Europe.

Energy storage systems, consisting of racks of battery modules regulated by management software, help national electricity networks — as well as individual homes, businesses and factories — cope with fluctuating wind and solar energy supplies.

They also provide backup power for grids set to come under intensifying pressure over the next decade due to the energy demands of artificial intelligence-related hardware and clean technologies such as EVs and heat pumps.

According to an International Energy Agency report released this month, global electricity demand from AI data centres is projected to more than double over the next five years and will account for almost half of the growth in US electricity demand between now and 2030.

“Energy storage is often seen as the least sexy aspect of the renewables industry,” said Iola Hughes, head of research at battery consultancy Rho Motion. “But this is the technology that will prevent countries from experiencing blackouts in the coming years.”

ESS has grown to 20 per cent of the global battery market from 5 per cent in 2020, according to Rho Motion. After global battery storage capacity grew by 52 per cent between 2023 and 2024, the consultancy predicts it will now more than double from 340 gigawatt hours of storage last year to 760 GWh in 2030 — equivalent to the batteries of 7.6mn EVs combined.

The booming sector has also helped Tesla to offset disappointing EV sales with a surge in those of its energy storage systems — the Powerwall system for home use and the grid-scale Megapack. Tesla chief executive Elon Musk told an earnings call last year that ESS was “growing like wildfire”.

However, Tesla still relies on other battery makers, principally China’s CATL, to supply cells for its products because of persistent problems scaling up production of its in-house 4680 batteries. Its chief financial officer Vaibhav Taneja warned this week of an “outsized” impact of tariffs on its energy storage business as it worked to reduce its dependence on battery cells from China. “It will take time,” he said.

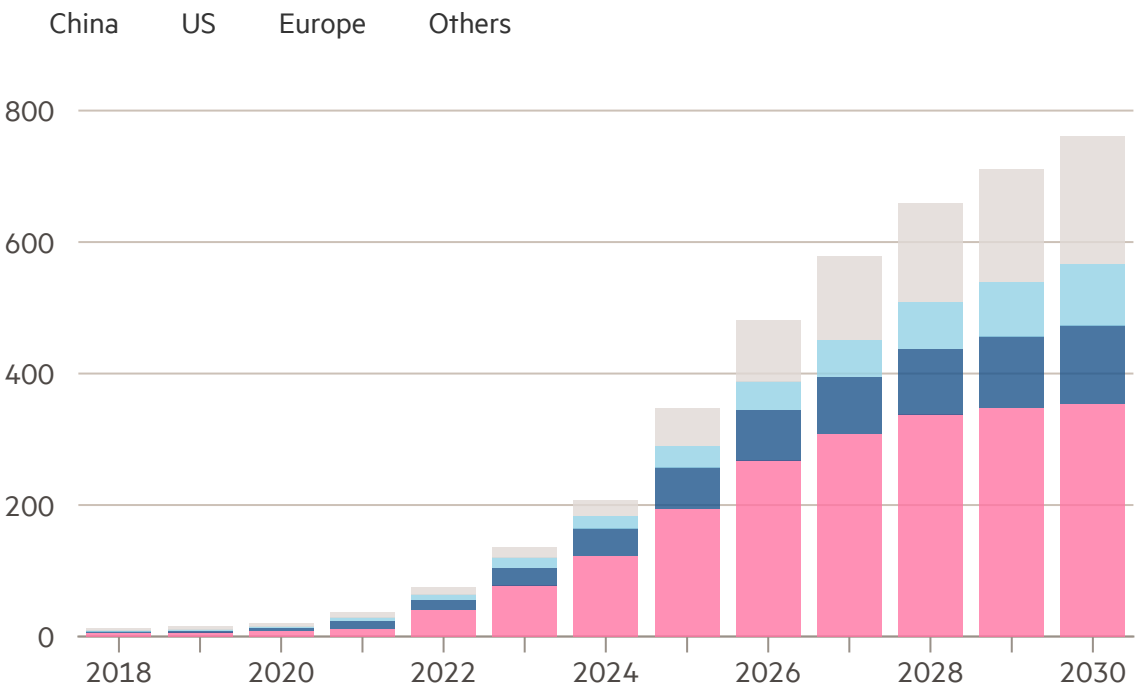
Hughes noted Korean battery makers had once led the sector as they specialise in “high nickel” batteries, which offer higher energy density than the lithium iron phosphate (LFP) batteries preferred by Chinese makers.

But a series of fires involving Korean high-nickel batteries, coupled with the rise of cheaper and increasingly high-performance Chinese alternatives, has led to a shift over the past decade towards LFP.

Tesla's EV rival BYD is a significant player, but CATL dominates both the EV and storage battery markets and now accounts for 90 per cent of the industry profit pool. Its economies of scale have enabled increased spending on research and development, further strengthening its position.

China has the lion's share of annual energy storage installations

Annual installed capacity for energy storage systems (GWh), by area, *2018-30



Source: Rho Motion • *Data includes projection made in Q1 2025. Europe refers to EU, EFTA and UK. Data includes grid storage and systems installed at customer sites.

CATL's total production capacity is expected to more than double to 1.5 terawatt hours in 2027, from 684 GWh at the end of last year, reflecting a compound annual growth rate of around 30 per cent.

By contrast, Korean companies have slashed their near-term capital spending plans as profit margins have swung into negative territory after EV sales fell far short of US carmakers' projections.

Neil Beveridge, who leads Bernstein's energy research in Hong Kong, said the divergent fortunes of Chinese and Korean energy storage players amounted to "a tale of two battery markets".

"CATL is not only the largest scale player in the industry, but it also has the best technology and the highest utilisation levels [at its battery plants]," Beveridge says. "This gives it a clear advantage."

But China's ESS dominance has caused unease for some western policymakers, particularly in the US, where Chinese battery systems have already been banned from military facilities.

That has given hope to Korean companies who are building new LFP production lines, converting some high-nickel ones and even switching EV battery production lines to produce cells for energy storage.

LG Energy Solution, the world's largest non-Chinese battery producer, told the Financial Times that tariffs meant that the US market was "becoming favourable to non-Chinese companies with [American] production bases".

But Hughes noted that Chinese exporters could potentially withstand tariffs even of more than 150 per cent, given their existing cost advantages over Korean high nickel batteries, cheaper lithium prices and a series of technological innovations that have driven down battery prices.

"A Chinese system in the Chinese market may sell for around $80 per kilowatt hour, whereas in the US market they'd be looking at $130-140 per KWH, which gives them quite a lot of headroom," said Hughes, noting Chinese companies were also setting up manufacturing facilities in south-east Asian countries presently subject to much lower tariffs.

Tim Bush, a battery analyst at UBS, noted that while leading Korean makers including LG and Samsung SDI were likely to "take a larger share of a smaller market" due to US tariffs, they were yet to prove they could produce LFP batteries at scale and at a competitive cost.

Another possibility, however, is that the US decides to ban Chinese batteries from grid-scale energy storage projects altogether on security grounds.

"You can take a very broad bet and say ultimately I don't think the US is going to allow itself to be in a situation of total China dependency when it comes to this grid-scale energy," said Bush.

Chinese energy storage makers are also expected to focus on other markets such as Europe, as they struggle at home with low profit margins due to oversupply and brutal competition.

“They are very keen to expand overseas,” said Hughes. “And if China is not supplying to the US, there is going to be an abundance of cheap supply for other markets.”

Follow the topics in this article

Electric power

Batteries

Technology sector

Asia-Pacific companies

Electric vehicles

Batteries

Europe's battery makers seek a different growth path after Northvolt's collapse

Companies scaling down ambitions even as Europe is locked in race to reduce dependence on China

Ian Johnston in Dunkirk and **Andy Bounds** in Eindhoven

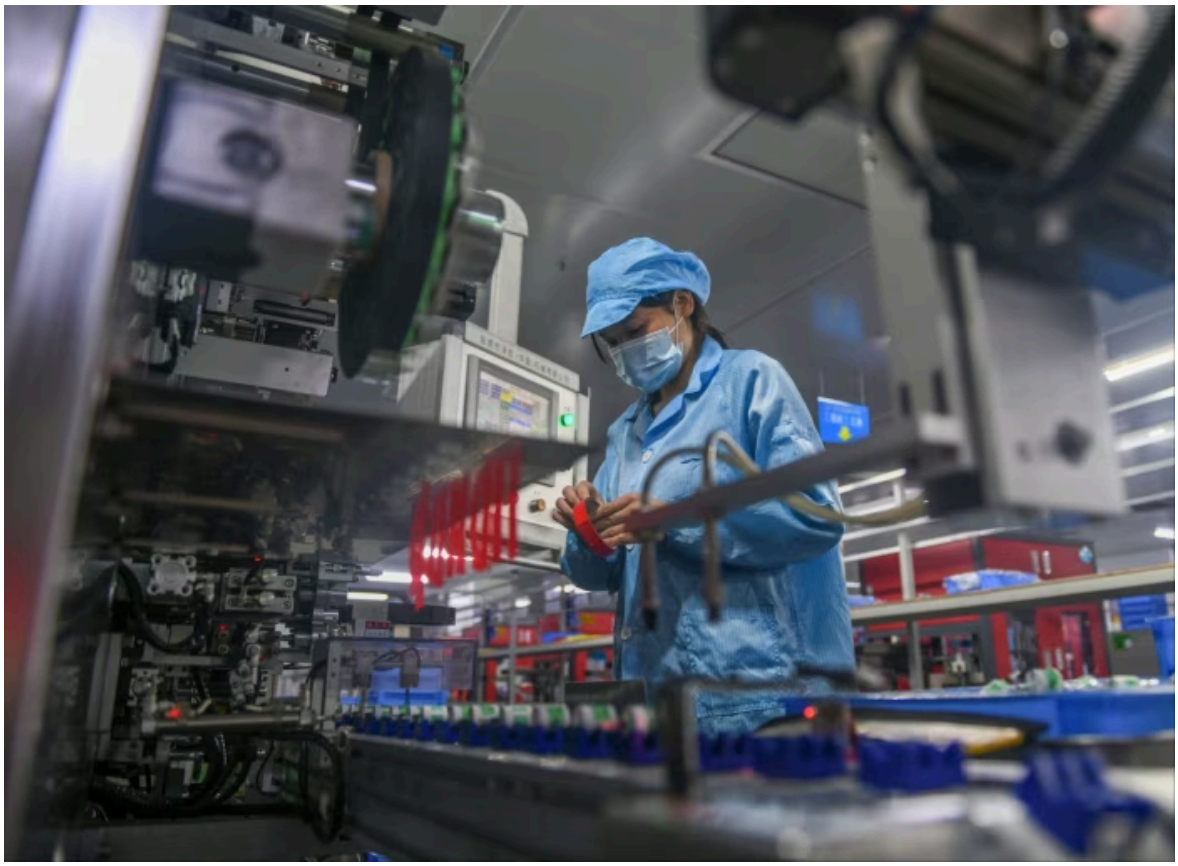
Published YESTERDAY

European battery companies are scaling back their ambitions and striking deals with Asian competitors after Northvolt's collapse cast doubt on the region's attempts to build an independent industry.

The Swedish group was one of Europe's best funded start-ups over the past decade and raised $15bn from governments and investors before going bankrupt in March.

Northvolt is now a cautionary tale for other start-ups who are key to achieving the EU's strategic goal of breaking its reliance on China for batteries as customers shift to electric vehicles, but remain years behind Chinese and Korean competitors.

Groups such as the French Automotive Cells Company and Verkor, and Germany's PowerCo, are trying to scale up the production of high-power batteries and challenge Asian counterparts such as CATL and BYD.



A lithium battery production line in Yongzhou, China © Costfoto/NurPhoto/Getty Images

But they face an even more challenging economic environment, while also needing to reassuring potential financial backers that they will not overextend themselves.

“Investors are asking companies to prove they are not the next Northvolt,” an industry adviser told the Financial Times at Batteries Event, a recent industry conference in Dunkirk.

Europe wants to make 90 per cent of batteries within the continent by 2030. But production capacity will still lag behind China. McKinsey Battery Insights analysts expect Europe’s announced battery production capacity to reach 720 gigawatt hours in 2030, up from 150GWh last year, compared with the 4,370GWh estimate for mainland China.

While some Asian companies have operations in Europe, executives and politicians say European companies must also contribute to the effort.

“We need this industry in Europe, not to provide 100 per cent, but to provide a significant portion,” said Yann Vincent, chief executive of ACC. “It’s a critical element of European sovereignty.”

Meanwhile, European carmakers, including Stellantis and Renault, are already equipping vehicles with batteries made by Asian companies and Chinese companies are extending their dominance of the technology.

The Northvolt Ett 'gigafactory' in Sweden. The collapsed company is now a cautionary tale for other start-ups © Northvolt/ABACA/Reuters

CATL and BYD recently unveiled batteries that can be fully charged within five minutes, tackling a barrier to growth of EVs and putting pressure on European challengers to show they can efficiently scale up production.

ACC, a joint venture between Stellantis, Mercedes-Benz and TotalEnergies, is building towards 16GW capacity for the first industrial bloc at its site in Douvrin, northern France, by 2026. It faces similar challenges to those that confronted Northvolt — how to keep production yield high and limit the costly generation of scrap products in the production of battery cells.

"We're in a period until mid 2026 where we'll receive all the blows but not yet reach full turnover," Vincent said, adding that the company needed to cross this "valley of death".

To preserve capital amid a slowing EV market, ACC abandoned plans to open new factories in Germany and Italy. It is also in discussion with an unnamed "Chinese partner" to learn from its production processes and accelerate efforts to catch up, Vincent said.

Northvolt stretched itself thin by trying to create a value chain of battery-related services, including recycling and cathode manufacturing — a mistake the remaining groups want to avoid.

Kevin Brundish, chief executive of Dutch start-up LionVolt © Sarah Van Looy/FT

"Northvolt had the great luxury of being able to raise lots of money quickly. That may also have caused their fall," said a banker working in the sector.

PowerCo, the Volkswagen-owned producer of battery cells for EVs, has also scaled back original plans. It expects to start producing batteries at its converted plant in Salzgitter this year, but will build one, rather than two production lines as originally envisioned.

Renault-backed Verkor, which has raised more than €2bn to build a gigafactory in Dunkirk, would adopt a "humble" approach by taking on fewer projects and focusing on a single client, said chief executive Benoit Lemaignan.

"We need to be modest in setting up the first part of the project, even if it sounds good on paper to have multiple different workstreams," he said. Verkor will provide batteries for some of Renault's sports cars and vans.

Kevin Brundish, head of LionVolt, is among executives who have cautioned against the capital-intensive route taken by Northvolt, and instead favour smaller-scale projects. The Dutch start-up uses technology pioneered in the semiconductor industry to make cells that produce up to twice the range of current battery models and charge twice as quickly.

Companies should not be "trying to compete with entities that have a 10- year head start", said Brundish. LionVolt has raised €30mn for the commercial manufacturing of its patented anodes in Eindhoven and for a factory in Scotland.

Nard Sintenie, co-founder of Innovation Industries, a Dutch venture capital firm that has invested in LionVolt, said while Northvolt was "me, too" technology, his fund preferred technology that was "disruptive".

Europe wants to make 90% of batteries within the continent by 2030. But production capacity will still lag behind China © Costfoto/NurPhoto/Getty Images

But experts warned that Europe's goal to become self-sufficient in battery manufacturing would not be achieved without greater public funding similar to that enjoyed by Chinese companies.

ACC, Verkor and Taiwanese solid-state battery developer ProLogium have received more than €3bn in French public funds in recent years to set up operations in the "battery valley" of Dunkirk, which also benefits from access to nuclear energy.

But Dunkirk mayor Patrice Vergriete warned that it would be hard to maintain such support do to France's high budget deficit.

"France has accompanied these industries but we have less means today and we're turning towards the European Commission, saying . . . isn't this re-industrialisation project a European project?"

A commission spokesperson said "the competitiveness of our industry is the number-one priority", and pointed out that its clean industrial deal had "unlocked" €100bn to promote clean manufacturing.

ACC's Vincent and Verkor's Lemaignan called for funding to coalesce around businesses that could realistically produce batteries at scale, while one banker said they expected "consolidation" in the sector.

"Even with strong shareholders, they are under a very strong pressure," Vincent said. "We're turning towards the European Commission saying that we need help to cross this valley of death."

Additional reporting by Patricia Nilsson in Frankfurt

Follow the topics in this article

European companies

Batteries

Ian Johnston

Andy Bounds

Opinion **Demographics and population**

A $5,000 baby bonus won't raise birth rates

Too much 'pro-natal' policy is the result of discussions between those who see maternity wards as the end of the story

STEPHEN BUSH

© Ewan White

Stephen Bush

Published 2 HOURS AGO

In 2015, the US government came up with a calculation that estimated how much it would cost to raise a child from birth to the age of 18. In today's money the total would be over $315,200. Meanwhile, the federal government under Donald Trump is mulling a range of options to increase the birth rate, including paying a birth bonus of $5,000.

Given that the estimated bill doesn't include university costs, prospective parents had better hope that they are raising a mathematical prodigy. But you don't need to be a prodigy to understand why a $5,000 baby bonus is not going to provide any sort of meaningful incentive.

That $310,000 gap embodies the huge hole in so much "pronatalist" policymaking: an obsession with the process of child rearing that is paired with at best indifference, and in some cases outright contempt, for the lives and the bank balances of the parents who have to raise those children.

Even when politicians attempt to support parents, they can introduce new problems. One of the other mooted US policies is that 30 per cent of places on the study abroad Fulbright scholarship programme be reserved for parents or married couples. But who, exactly, will be looking after these children when their parents are studying, and will the cost of that childcare be more, or less, than $5,000?

Whether the cost of raising children is direct, because both parents keep working and must pay for care, or indirect, because one parent (often the mother) gives up working and sacrifices their salary to do so, if your wizard plan to get birth rates up is to hand out a mere five grand, you need to think more deeply. Even generous countries like Norway come nowhere near matching the actual cost. In the UK, child benefit is capped at two (below replacement rate), while the most economically successful parents receive nothing at all.

Across the rich world, a great deal of "pro-natal" policy appears to be the result of discussions between those who see pregnancy and birth as the end of the story. But very few parents think only about what happens in the maternity ward. They are thinking about the life of their child, how they will provide for them, where they will live and what will happen to their job prospects.

Because so many of these questions are neglected by pro-natalists, serious policy ideas that might help working parents, particularly mothers, are wholly absent. The implied, and sometimes explicit, argument is that women should give up work, or at least advancement, in order to raise children. (Presumably that is how the Fulbright scholar will be able to focus on their work — their partner will be changing the nappies and doing the school run.)

For most of us, our partner's success is, at least in part, our success. It is a key contribution to the holidays we can afford to take, the homes we can afford to buy, and it adds an element of relief from stress and worry to be in a house with two earners and not just one.

That household story is mirrored across the economy: even if you think concerns like "women are human beings with agency and should be treated as such" are a sign of excessive wokery, I have bad news for you. The entrance of women into paid work has become economically load-bearing not just for individual households but for most western societies. Doing without that contribution is not an easy option.

If governments want to increase birth rates, they need to do things that will shift the calculation and the balance of incentives for raising children (if parents are lucky, this is an 18-year financial commitment, but one that could run for the rest of their lifetime).

They also need to think more carefully about the people who are not having children. The big fall-off in much of the rich world is lower birth rates among teenage girls and women in their twenties. It is largest among working women and professional couples.

Reducing teen pregnancy to negligible levels has been a major public policy success that we would not wish to unpick. It is the missing children of people in their twenties who might want to have them that are worth thinking about.

That leaves policymakers with two options: doubling down on economic incentives for parents in general and women in particular to have children earlier, including making it easier for single women to raise children alone, and/or invest in ways that extend fertility later in life. In either case, they must start by asking what serves the interest of the people raising children. Birth rates are not something you can fix by handing out small sums of cash upon delivery.

stephen.bush@ft.com

Follow the topics in this article

Stephen Bush

Demographics and population

Parenting and families

UK society

US society

Opinion **Markets Insight**

The real lessons from the Plaza and Louvre accords

Sustainable adjustments to trade imbalances require supportive monetary and fiscal policies — not just currency intervention

RICHARD CLARIDA

In September 1985, representatives from the G-5 nations of the US, Germany, Japan, the UK, and France convened to address the appreciation of the dollar © Mario Cabrera/AP

Richard Clarida

Published 2 HOURS AGO

The writer is former vice-chair of the Federal Reserve and global economic adviser at Pimco

The September 1985 Plaza Accord and the subsequent February 1987 Louvre Accord are justly lauded today as significant successful examples of international economic policy co-operation.

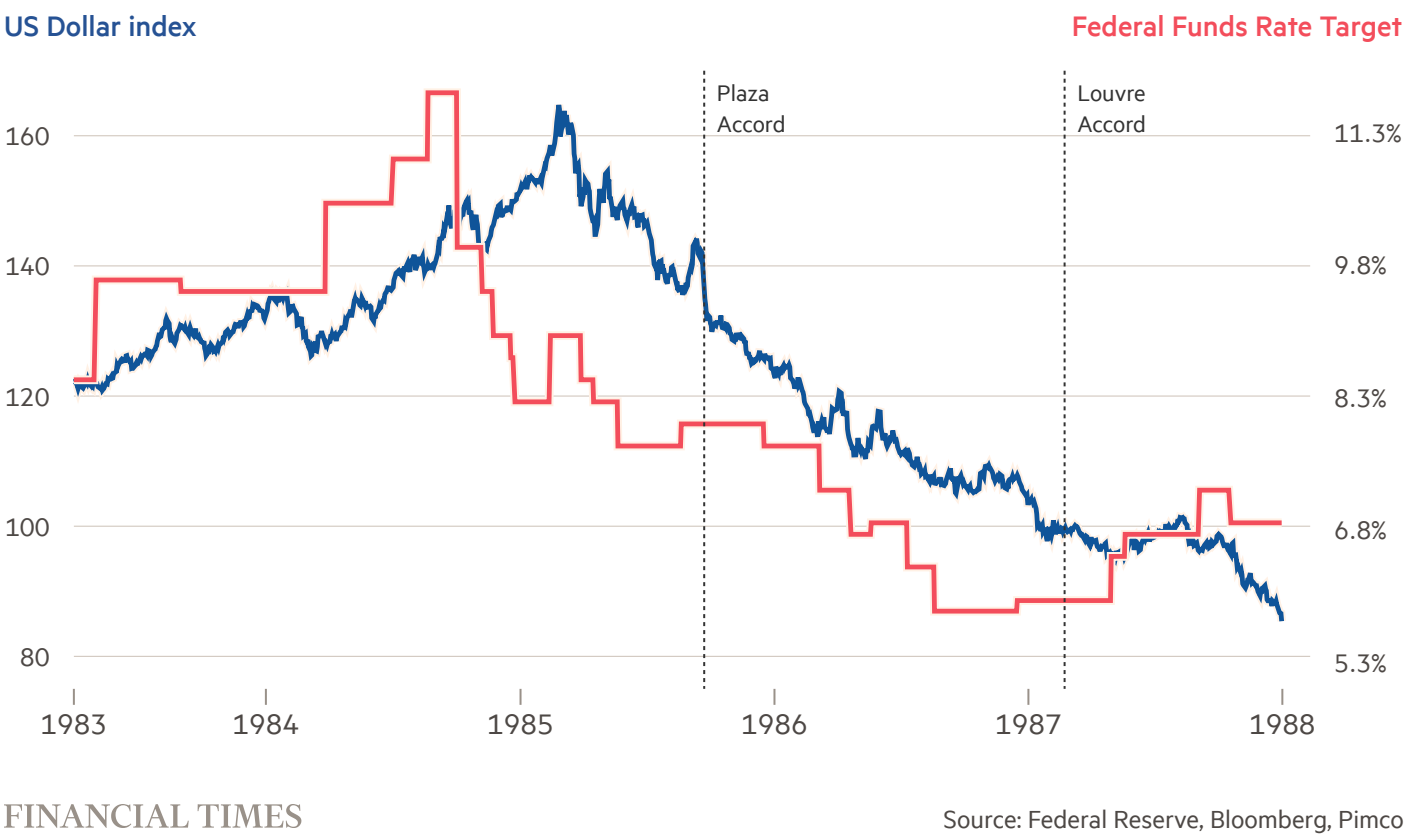
These agreements aimed to engineer an orderly depreciation of a very overvalued dollar and to reduce what had become a massive US trade deficit as well as to turn back the rising protectionist pressures triggered by it. In the event, by 1987 the orderly dollar depreciation had been delivered and by 1989, the trade deficit as a share of GDP had been cut by two-thirds. Plaza-Louvre: Mission Accomplished.

Direct foreign exchange currency market intervention has been widely believed to have played a significant, perhaps decisive role, in delivering the weaker dollar and smaller trade deficits. This, however, is a myth that has persisted.

It is an appealing one. Wouldn't it be remarkable if a country could virtually eliminate its trade deficit simply by coordinating foreign exchange market intervention with like-minded allies? But it is also wrong. In fact, the historical record provides a much different set of lessons that should be relevant to any current discussion or plans for a so-called Mar-a-Lago currency agreement aimed at reducing the US trade deficit.

In September 1985, representatives from the G-5 nations of the US, Germany, Japan, the UK, and France convened to address the appreciation of the dollar. The resulting Plaza Accord committed the participating countries to co-ordinated foreign exchange interventions. The primary motivation was to alleviate protectionist pressures and reduce the US trade deficit, which had reached about 3 per cent of GDP.

Two years later, the Louvre Accord was signed in Paris. This agreement marked a shift in policy, as the participating nations concluded that the dollar had depreciated sufficiently and agreed to stabilise exchange rates around existing levels to prevent further volatility.



However, empirical evidence and academic research suggests that co-ordinated intervention, although symbolically significant, was not the primary driver of the dollar’s depreciation between 1985 and 1987.

Instead, it was the substantial easing of US monetary policy under Federal Reserve Chair Paul Volcker that played the decisive role. Volcker by late 1984 had successfully broken the back of the double-digit inflation he inherited in 1979, had plenty of room to cut interest rates. Indeed, between October of 1984 (11 months prior to the Plaza Accord) and December 1986 (2 months before the Louvre Accord), the Fed cut interest rates from 12 per cent to 6 per cent and a weaker dollar soon followed and in near lockstep with these rate cuts.

US fiscal consolidation was also crucial to reducing the trade deficit. Despite making initial tax cuts and defence spending increases in 1981, the Reagan administration in later years worked with the Congress to enact significant fiscal tightening measures. These measures taken together reduced US budget deficits by nearly 40 per cent and were essential in narrowing the US trade deficit in the context of an expanding economy. Crucially, the original Plaza Accord communiques explicitly highlighted that fiscal adjustment in the US, Japan and Germany would be required to reduce global trade imbalances, and, at least in the US, they were delivered.

Recent discussions have emerged regarding a potential “Mar-a-Lago Accord”, drawing analogies to the Plaza and Louvre Accords. Advocates such as economist Zoltan Pozsar and chair of the US Council of Economic Advisers Stephen Miran have in the past discussed co-ordinated interventions to weaken the dollar, coupled with novel fiscal arrangements, including swapping short-dated US Treasury holdings for long-dated or perpetual bonds held by foreign central banks. Additionally, some proponents suggest linking currency co-operation with security arrangements and tariff reductions.

The Plaza and Louvre Accords provide valuable historical lessons. While co-ordinated currency intervention can signal policy intent and temporarily influence exchange rates, sustainable adjustments require supportive monetary and fiscal policies. The proposed Mar-a-Lago Accord, while conceptually similar, faces distinct contemporary challenges, including limited monetary policy flexibility, uncertain fiscal consolidation prospects, and complex geopolitical considerations.

Policymakers must recognise that successful international co-ordination requires credible commitments across monetary, fiscal, and geopolitical dimensions, rather than relying solely on currency intervention.

Solar power

Spain and Portugal blackout blamed on solar power dependency

Electricity experts point to dangers of grid instability when renewables dominate output

The reliance on solar energy at the time of the outage has led to criticisms of Spain's grid operator Red Eléctrica © Eva Manez/Reuters

Ian Johnston in Madrid and **Alice Hancock** in Brussels

Published YESTERDAY

The inability of Spain's electricity grid to manage an unusually high supply of solar power was a key factor in Monday's catastrophic blackout, former regulators and experts have said.

About 55 per cent of Spain's supply was from solar sources when 15 gigawatts of electricity generation disconnected from the grid within five seconds on Monday afternoon, triggering a wide-ranging shutdown of power systems in Spain and Portugal.

Several European experts said Spain appeared to lack enough firm power — readily available, reliable energy supply from sources such as fossil fuels or nuclear that can be reduced or raised — to kick in when the grid's frequency dropped sharply at 12.33pm on Monday. Frequency, the rate at which electrical current alternates, must be kept stable for the grid to function.

Spanish grid operator Red Eléctrica has said it does not know the exact cause of the outage. Chief executive Beatriz Corredor denied renewables "made the system more vulnerable" in an interview with El País on Wednesday.

But André Merlin, the founder and former chief executive of France's grid operator RTE, told the Financial Times: "Two-thirds of [Spain's electricity] production was made up of non-controllable resources. These non-controllable resources . . . don't contribute to the stability of the internal electrical system."

Red Eléctrica chief Beatriz Corredor denied renewables 'made the system more vulnerable' in an interview with El País on Wednesday © Eduardo Parra/Europa Press/AP

Jorge Sanz, a leading former Spanish energy official and International Energy Agency board member, told Spanish television on Wednesday evening that an oversupply of electricity may have initially caused the problem.

Normally, the grid operator would have managed this by asking traditional plants to moderate their output but this was not possible because so few plants were on line, Sanz said.

This would have been followed by a disconnection of electricity generation to avoid damage to equipment, leading in turn to an outage.

Sanz said: "There was an imbalance of supply. [The grid operator] needed to reduce electricity supply, but when it resorts to firm facilities to reduce load, it can barely do so because they were barely connected."

Last month, transport minister Óscar Puente revealed via his X account that “an excess of voltage in the network” had caused a failure that left some high-speed rail lines out of operation for several hours.

Meanwhile, one energy adviser close to the European Commission also said experts were exploring if the country’s high renewable reliance and lack of firm power to balance out intermittent supplies contributed to the blackout.

Grid operators must constantly balance supply and demand of electricity to keep the frequency of the grid stable, and avoid damaging equipment or outages. This stability is easier to achieve with turbines powered by fossil fuels, hydroelectric or nuclear energy than with renewable technologies such as solar. Spain’s grid frequency dropped sharply below the optimal 50Hz rate at 12.33pm on Monday.

The reliance on solar energy at the time of the outage has led to criticisms of Red Eléctrica. Normally about a fifth of the country’s supply comes from solar power.

Sanz, a former adviser on the energy transition to the Spanish government, said there was “poor management” of the grid, by not having enough nuclear, hydroelectric or fossil fuel energy scheduled to balance the system. Of the scheduled 26GW of electricity supply on Monday, just 5GW came from non-intermittent sources.

The Brussels-based adviser pointed to Red Eléctrica’s 2024 annual report, which said disconnections caused by “high renewable penetration” without enough “necessary technical capabilities for an adequate response to disturbances” was a risk to the system.

Merlin was less critical of the operator but said renewables policy should be reviewed in the light of the incident. “I don’t think there’s been bad management from the Spanish or Portuguese operators. Simply put, we need to be careful about the policy of maximum development and maximum use of intermittent renewable energy to the detriment of more conventional means.”

PLAY | 00:14

Spain's power outage caused large parts of the country to shut down © Reuters

Some experts say a cascade of events, rather than a single problem, could have been responsible for the outage. “What we normally find is a couple of things that went wrong at the same time,” said Kristian Ruby, secretary-general of the industry body Eurelectric.

Merlin suggested solar plants may have been the first to fail. He offered a different theory to Sanz’s idea of solar oversupply, suggesting that heavy cloud cover could have prompted production to drop rapidly at some solar plants, directly affecting grid frequency.

Corredor of Red Eléctrica, who is under intense pressure to explain what happened, said the company had yet to identify the cause of the outage and could not say solar plants were behind the disconnection. She said the operator had observed a sudden disconnection in the south-west region of Spain, where many solar plants are located.

But she launched a stern defence of Spain’s renewable systems and pointed to unreliability of other energy sources, including nuclear. “[Renewables] are not insecure technologies. The proof is that the system operates with renewables every day . . . It’s not true that higher penetration of renewables has made the system more vulnerable.”

As well as reducing carbon emissions and the production of nuclear waste, Spain’s renewable energy network has contributed to lower energy prices than many other European countries, thus helping industry and economic growth.

Pedro Sánchez's government has set out plans to raise renewables production to 80 per cent of electricity generation by 2030, compared with more than half in 2023.

But Sánchez has come under fire from opposition politicians for plans to phase out Spain's costly nuclear network, and several experts including Merlin have advocated for greater use of nuclear power in Spain to ensure energy security.

Iberdrola's executive chair Ignacio Galán on Tuesday said nuclear was "the least expensive solution to secure system stability".

Another solution is an accelerated rollout of battery technology or storage systems, or improving connections with other countries to import more power.

"More storage capacity should be a main focus for the country at the moment," said Pratheeksha Ramdas, an analyst at Rystad Energy.

Additional reporting by David Sharrock in Madrid

Follow the topics in this article

Renewable energy

Solar power

Utilities

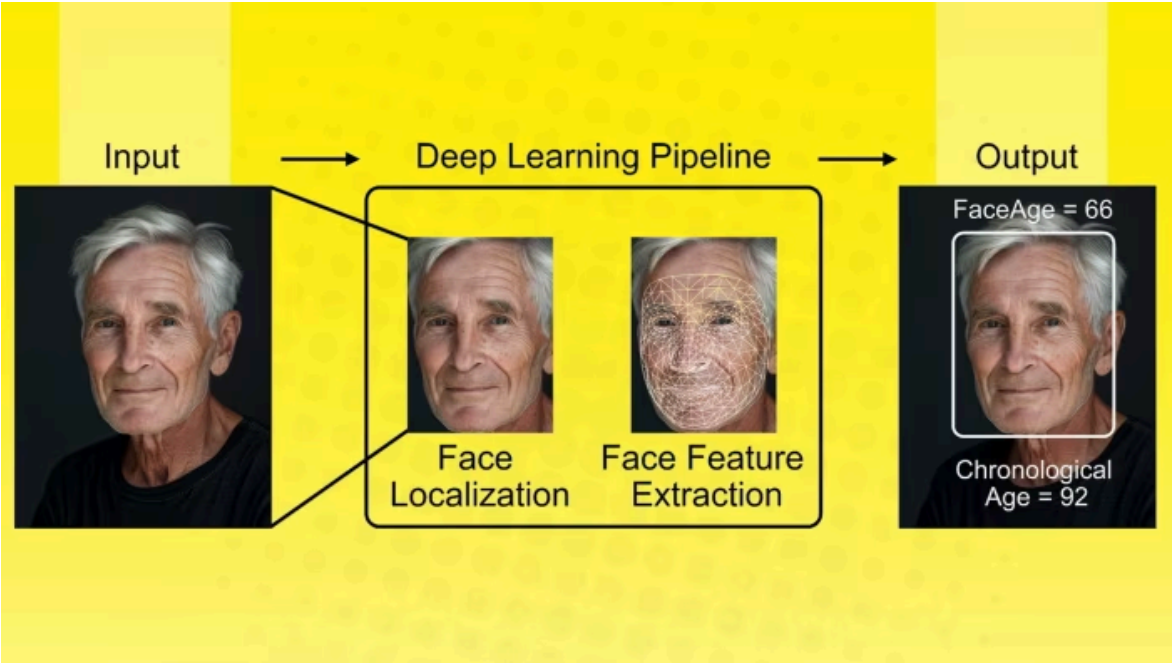
Spain

Ian Johnston

Artificial intelligence

Scientists use AI facial analysis to predict cancer survival outcomes

FaceAge algorithm outperforms some clinicians' life expectancy forecasts



The new technological tool, known as FaceAge, adds to efforts to use estimates of ageing in bodily organs as biomarkers for potential disease risks © FT montage

Michael Peel in London

Published 8 HOURS AGO

Scientists have used artificial intelligence analysis of the faces of cancer patients to predict survival outcomes and in some cases outperform clinicians' short-term life expectancy forecasts.

The researchers used a deep learning algorithm to measure the biological age of subjects and found that the features of cancer sufferers appeared on average about five years older than their chronological ages.

The new technological tool, known as FaceAge, is part of a growing push to use estimates of ageing in bodily organs as so-called biomarkers of potential disease risks. Advances in AI have boosted these efforts because of its ability to learn from large health data sets and make risk projections based on them.

The research showed the information derived from pictures of faces could be "clinically meaningful", said Hugo Aerts, co-senior author of a paper on the study published in Lancet Digital Health on Thursday.

"This work demonstrates that a photo like a simple selfie contains important information that could help to inform clinical decision-making and care plans for patients and clinicians," said Aerts, director of AI in Medicine at Massachusetts-based Mass General Brigham.

"How old someone looks compared to their chronological age really matters — individuals with FaceAges that are younger than their chronological ages do significantly better after cancer therapy", he added.

The scientists trained FaceAge on 58,851 photos of presumed healthy people from public data sets. They then tested the algorithm on 6,196 cancer patients, using photos taken at the start of radiotherapy.

Among the cancer patients, the older the FaceAge, the worse the survival outcome, even after adjusting for chronological age, sex and cancer type. The effect was especially pronounced for people who appeared over 85.

The scientists then asked 10 clinicians and researchers to predict whether patients receiving palliative radiotherapy for advanced cancers would be alive after six months The human assessors were right about 61 per cent of the time when they had access only to a patient photo, but that improved to 80 per cent when they had FaceAge analysis too.

Possible limitations of FaceAge include biases in the data and the potential for readings to reflect errors in the model rather than actual differences between chronological and biological age, the research team said.

The scientists are now testing the technology on a wider range of patients, as well as assessing its ability to predict diseases, general health status and lifespan.

The study of biomarkers for ageing is a subject of intense research activity. In February, scientists unveiled a simple blood test to detect how fast internal organs age and help flag increased risks for 30 diseases, including lung cancer.

Face ageing is an area of growing interest, with scientists exploring various techniques. One is the concept of perceived ageing: in other words, how old a person looks to experienced healthcare professionals rather than how old they are biologically.

Perceived ageing has emerged as a potential predictor of mortality and several age-related diseases, researchers say. The drawback is generating the data by human observation is time-consuming and costly.

The evaluation of FaceAge appeared to be “quite thorough”, said Jaume Bacardit, a Newcastle University AI specialist who has done work applying the technology to perceived ageing.

But there needed to be more explanation of how the AI technique worked, to check for potential distorting factors, he added.

“That is, which parts of the face are they basing their predictions on?” Bacardit said. “This will help identify potential confounders that may go undetected otherwise.”

Follow the topics in this article

Health

Science

Healthcare

Artificial intelligence

Michael Peel

Asia-Pacific economy

Asian investors fear more volatility after ‘extraordinary’ currencies moves

Traders uncertain about what local companies will do with trillions of dollars of US assets

A night market in Taipei. Taiwan’s dollar has surged almost 6% against the greenback this month © Eric Lafforgue/Art in All of Us/Corbis/ Getty Images

Arjun Neil Alim and **Cheng Leng** in Hong Kong and **William Sandlund** and **Joseph Cotterill** in London

Published 4 HOURS AGO

Asian investors have been rushing to shield themselves from big swings in the US dollar, putting upward pressure on their local currencies and forcing Hong Kong authorities to intervene in the market.

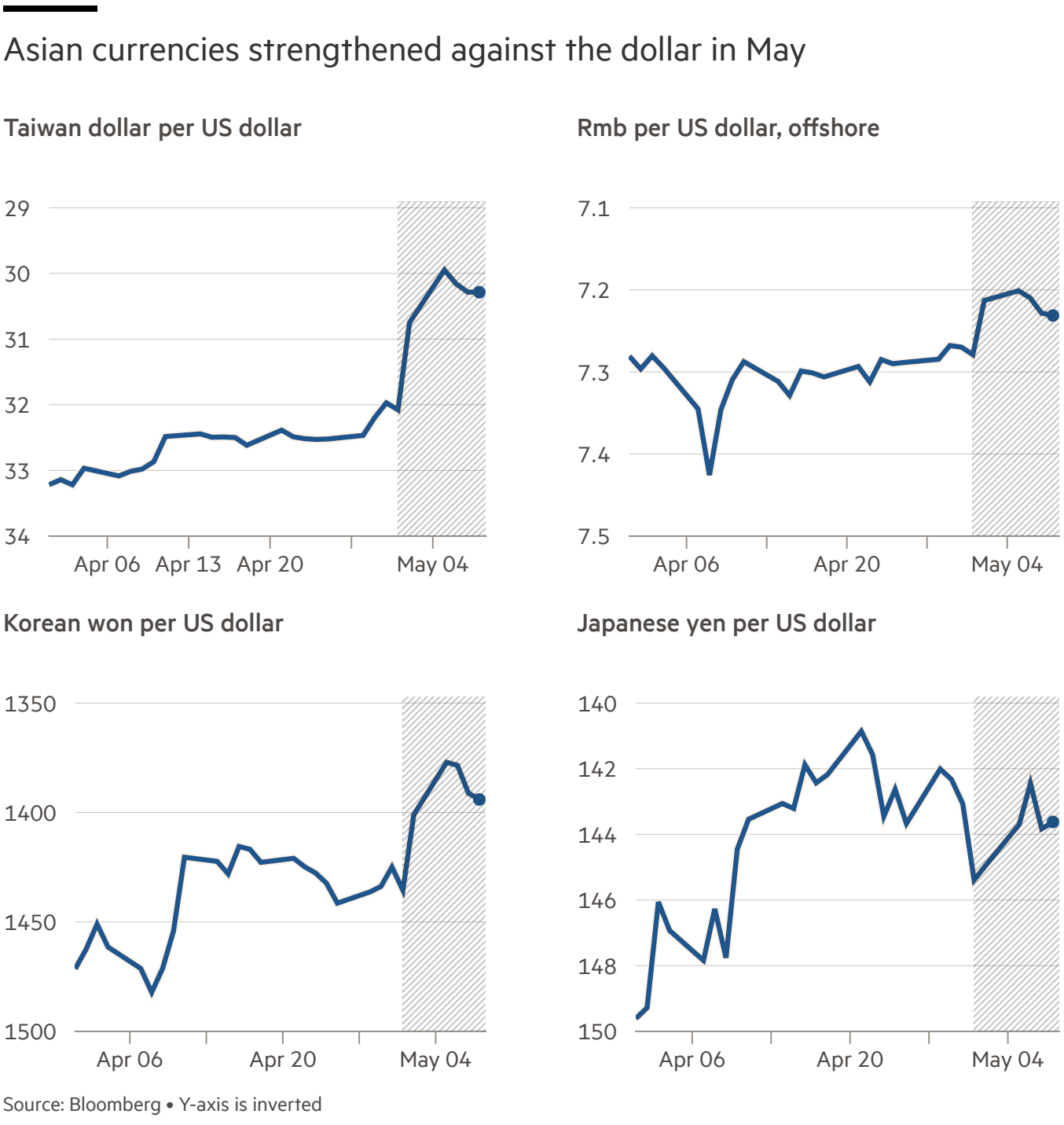
Taiwan’s dollar has surged almost 6 per cent against the greenback this month, posting the biggest single-day moves since the 1980s, while Hong Kong’s monetary authority spent the largest weekly amount since 2020 to stop the city state’s currency strengthening beyond a US dollar peg.

“It is not even once in a decade — it has been a once in a lifetime event. It has been an extraordinary move” in the Taiwan dollar in particular, said Mark Ledger-Evans, a portfolio manager at emerging markets investment firm Ninety One.

The moves reflected uncertainty over what Chinese manufacturers, Taiwanese insurers and other Asian investors will do with the trillions of dollars of US assets built up due to surging exports to the US. These assets are now hostage to a weakening greenback.

While central banks have theoretically unlimited firepower to fight these moves by using their currencies to buy up dollars, many are reluctant to be tagged as a “currency manipulator” — a label given by the Trump administration to China in 2019 — by the US as they try to persuade it to lower trade tariffs.

Taiwanese markets in particular, Ledger-Evans said, had been hit by a “perfect storm” triggered by speculation that US trade talks would result in a stronger local currency. Investors rushed to buy domestic stocks and sell American bonds held via local funds, dumping the greenback and hitting one of the biggest, and least hedged, dollar piles of any Asian economy.



Over the past decade, Taiwan’s life insurance companies built up a roughly $700bn pile of dollar investments, according to analyst estimates, nearly as large as the country’s GDP, as they looked abroad to higher bond yields than at home in order to help them pay out on policies and attract savers.

Along with assets held by the central bank and other investors, this made the island nation a top-ten international holder of US Treasuries and US corporate bonds, owning approximately 4 per cent of foreign holdings in both, according to JPMorgan.

To benefit from dollar rates, and to avoid the costs of hedging, insurers opted not to protect about one-third of these assets against currency moves, according to analyst estimates.

But after the recent sharp currency swings, buying a hedge is more expensive. At the start of this week the cost of hedging moves in the Taiwan dollar over the next month, using forward contracts in which no physical settlement takes place, rose as high as 24 per cent, well above its usual level.

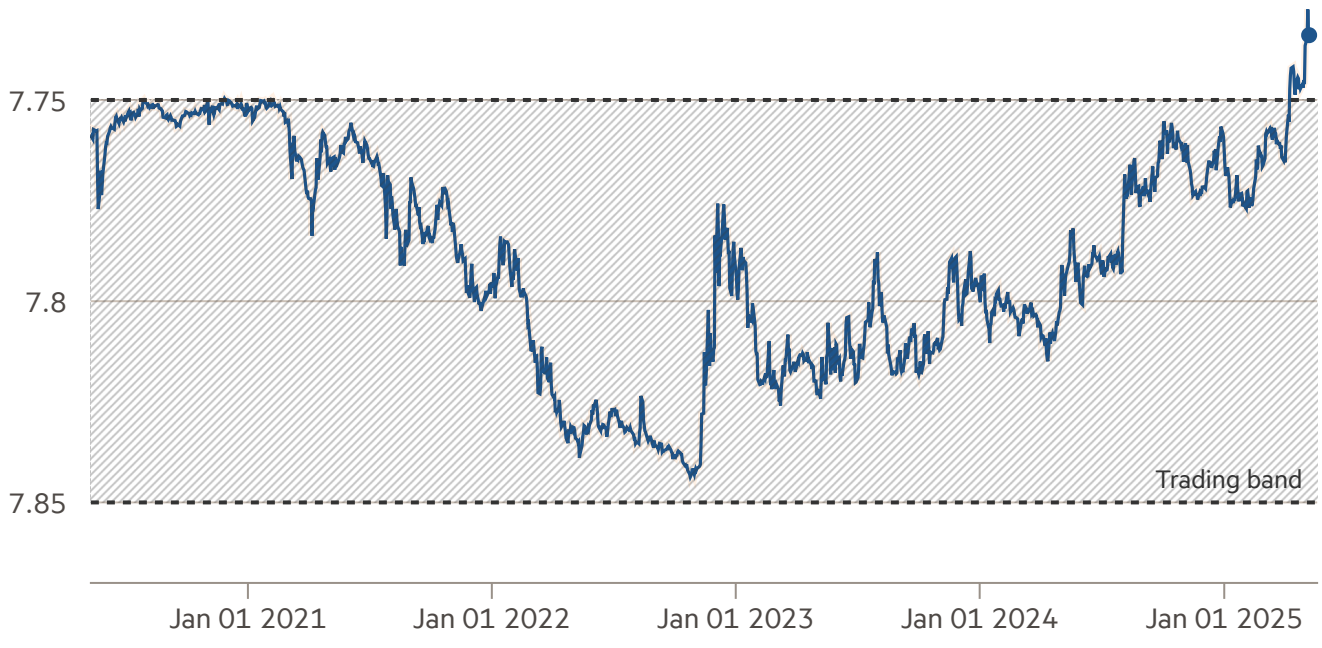
Stephen Jen, chief executive of hedge fund Eurizon SLJ, said in a note that exporters in China, Taiwan, Malaysia and Korea were collectively holding trillions of US dollars offshore that could be repatriated, which would cause an “avalanche” of rising local currencies.

“We are still waiting for more triggers, but we see the sharp sell-off in [the US dollar against the Taiwanese dollar] this week from this avalanche perspective. We predict there will likely be other sudden lurches lower in [the US dollar against Asian currencies],” he wrote.

However, some investors believe this is unlikely as long as trade surpluses are still producing US dollars that need to be recycled into markets.

3-month Hong Kong dollar forwards have moved beyond the currency peg range

HK dollar per US dollar, 3-month forward rate



Source: Bloomberg, FT calculations • Hong Kong dollar is pegged to the US dollar within a trading band of HK$7.75 to HK$7.85. Y-axis is inverted

A treasurer at one large Taiwanese life insurer said they believed the central bank allowed the currency appreciation as part of trade negotiations between the US and Taiwan. Taiwanese officials have insisted the US has not asked for such a currency move.

“We will keep hedging . . . but are not selling our US dollar assets,” the treasurer said.

The US Treasury has defined a “currency manipulator” as a country spending more than 2 per cent of its GDP on intervention over a 12-month period, in addition to large trade surpluses. This, say analysts, means the Taiwanese central bank could buy up to $16bn in dollars to weaken the currency if needed while avoiding the US label.

In Hong Kong, which maintains a so-called linked exchange rate system — a trading band between HK$7.75 and HK$7.85 to the dollar in which the currency can trade — forward contracts are showing some traders are betting the Hong Kong dollar will strengthen out of the band for the first time since 2020.

Hong Kong’s monetary authorities have intervened to buy close to $17bn since May to stem the appreciation of the Hong Kong dollar, according to HKMA data. Much of its rise has been driven by large inflows, in part from mainland Chinese investors, into the local capital markets to buy listings such as that of battery maker CATL.

The South Korean won hit a six-month high on Wednesday of 1,387.95 per dollar amid optimism over trade talks with the US leading to lower tariff levels.

Rhee Chang-yong, Bank of Korea governor, warned that volatility in Asian currencies would continue as long as uncertainty over global trade persisted.

“Asian currencies have strengthened recently on expectations for some kind of agreement in US-China talks. But no one knows what is happening in the talks,” he told reporters on Monday. “Therefore, volatility will continue.”

Additional reporting by Robin Harding, Haohsiang Ko and Jung-a Song

---
