FINANCIAL TIMES

WEDNESDAY 22 FEBRUARY 2023 — INTERNATIONAL NEWSPAPER OF THE YEAR — ASIA

A chance to make the World Bank greener
BIG PAGE, PAGE 15

Politicians should resist the urge to be daring
JANAN GANESH, PAGE 17

Putin imperils post-cold war order by freezing nuclear arms treaty with US

● Halt called on New Start pact ● Biden counters with Warsaw speech ● EU warns on heightened risk

MAX SEDDON AND ANASTASIA STOGNEI — RIGA
HENRY FOY — BRUSSELS
FELICIA SCHWARTZ — WARSAW

Vladimir Putin has said Russia will suspend its remaining nuclear weapons treaty with the US, a move western officials said spelt the end of the post-cold war arms control regime.

In a state-of-the-nation address ahead of the anniversary of his invasion of Ukraine, the Russian president said Moscow would freeze its participation in the New Start agreement with Washington that limits the number of the two countries' deployed strategic nuclear weapons.

"Our relations have degraded and that's completely and utterly the US's fault," Putin said in his long-delayed speech to Russia's political elite yesterday, just hours before US president Joe Biden offered a sharply different assessment in his own set speech in neighbouring Poland.

Reacting to the suspension of the arms control deal, US secretary of state Antony Blinken said the Russian leader's decision was "irresponsible", while Josep Borrell, the EU's chief diplomat, said Putin was "demolishing the security system that was built after the end of the cold war". Nato secretary-general Jens Stoltenberg added: "More nuclear weapons and less arms control makes the world more dangerous."

The US warned in January that Russia was failing to comply with the 2010 treaty after a breakdown in talks on resuming nuclear weapons inspections, halted during the peak of the pandemic.

Moscow's suspension of the treaty means it will share less information with the US on its nuclear arsenal, though Russia's foreign ministry later said some notifications would continue.

Russia has said talks on the treaty, which is due to expire in 2026, are unlikely to resume unless the west agrees to hold negotiations on Ukraine without Kyiv's participation, which the US has called unacceptable.

Putin also hinted at resuming nuclear tests, though he claimed Russia would only do so in response to the US. "If the US conducts tests, then so will we. Nobody should have any illusions that global strategic parity can be destroyed," he said. But he did not repeat veiled threats to use nuclear weapons against the west or Ukraine.

Putin's speech was intended to demonstrate Moscow's resolve, despite the failure of its initial blitzkrieg plan in Ukraine and the devastating losses Russia has suffered. "This is about the very existence of our country," Putin said. Referring to the west he added: "They're the ones who started the war. We are using force to stop it."

In Biden's own set-piece speech, delivered against the backdrop of Warsaw's Royal Castle a day after he paid a surprise visit to Kyiv, the US president countered Putin's claim that western belligerence caused the war. "The west does not seek to attack Russia, as Putin said today . . . Every day the war continues is his choice," Biden said.

The timing of the set-piece speeches sharpened the contrast between Putin and Biden, two veteran leaders schooled in the cold war whose legacies might be defined on the battlefields of Ukraine.

The Kremlin had postponed Putin's address, his first in nearly two years, and cancelled his end-of-year press conference after his attempted annexation of four Ukrainian provinces backfired disastrously last year.

In apparent acknowledgment of his country's huge casualties, which the UK said might reach 200,000, Putin said Russia would set up a state foundation to support war veterans and their families. Western estimates show that the Ukrainian side has suffered roughly half the Russian casualties.

News & analysis pages 2 & 3

Vladimir Putin delivers his state-of-the-nation address yesterday as the anniversary of his invasion of Ukraine approaches
Dmitry Astakhov, Sputnik, Kremlin Pool Photo via AP

Kremlin ally Prigozhin's cash rolls in

An FT investigation has found that sanctions against Yevgeny Prigozhin, Wagner mercenary group founder, failed to stop his generating revenues of more than a quarter of a billion dollars from oil, gas, diamond and gold extraction in the years prior to the Russian invasion of Ukraine. **Wagner chief, Page 2**

Briefing

▸ **HSBC raises dividend in bid to block break-up calls**
The UK-Hong Kong bank has raised its payout to a four-year high as profit almost doubled and as it seeks to fend off split calls from investor Ping An.— PAGE 6

▸ **Eurozone forges ahead**
Business activity has grown faster than expected, strengthening the rebound from last year's energy crisis and reinforcing calls for rate rises to tackle inflation.— PAGE 4

▸ **EU carbon landmark**
The price for allowances traded in the bloc's emissions trading system has climbed above €100 a tonne, a milestone for a main EU climate tool.— PAGE 10; LEX, PAGE 18

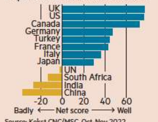
▸ **Israel central bank clash**
Ultranationalist finance minister Bezalel Smotrich has vowed to maintain the independence of the bank after criticism of its rate rises.— PAGE 4; MARTIN WOLF, PAGE 17

▸ **Fresh Credit Suisse blow**
Shares in the bank have hit a new low after a report that a regulator is examining comments by chair Axel Lehmann over how much clients had withdrawn.— PAGE 6

▸ **Teck sets up coal spin-off**
The Canadian mining group has said it will split off the business to focus on metals that are vital for lower-carbon energy, completing a shift out of fossil fuels.— PAGE 8

Datawatch

View from Ukraine
How well have these countries responded to the Russian invasion?



Source: Kekst CNC/MSC, Oct-Nov 2022

Differing reactions to Russia's invasion are reflected in the views of Ukrainians when asked how individual nations have responded. The UK has the highest net approval, followed by the US. India and China's response is seen as most negative

Language and chip trouble hurt China's chatbot push

Analysis ▸ PAGE 8

SEC fines Mormon church over effort to conceal part of $100bn investment

ORTENCA ALIAJ — NEW YORK

The Mormon church and a non-profit organisation that manages its $32bn equity portfolio have been fined by the US Securities and Exchange Commission over attempts to conceal the true value of the investments.

Ensign Peak Advisers, the firm owned by the Church of Jesus Christ of Latter-day Saints (LDS), set up more than a dozen shell companies to help hide the size of the church's portfolio, according to a statement released by the US regulator yesterday. It also failed to file quarterly disclosures known as 13F forms.

The SEC's order provides rare insight into how Ensign, which is thought to manage more than $100bn in donations on behalf of the Mormon church, seeks to keep its investments and their value hidden from public view. The Salt Lake City-based adviser invests in a range of assets, including stocks, bonds and real estate, but little else is known about its operations.

"We allege that the LDS church's investment manager, with the church's knowledge, went to great lengths to avoid disclosing the church's investments, depriving the commission and the investing public of accurate market information," said Gurbir Grewal, director of the SEC's enforcement division.

Ensign has agreed to pay $4mn to settle the charges while the church will pay $1mn. Neither has admitted to any wrongdoing.

Ensign, which was founded by the Mormon church in 1997 and is considered to be among the world's largest investment vehicles, created 13 shell companies with locations across the US. Between 1997 and 2019, these companies, rather than Ensign, filed 13F forms, according to the regulator.

"Ensign Peak developed its approach to filing forms 13F in the names of these LLCs with the knowledge and approval of the church, which sought to avoid disclosure of the amount and nature of its assets," the order stated.

The SEC pointed to interactions between Ensign and senior church leaders, including a plea for Ensign "to ensure that neither the 'Street' nor the media [could] connect the new entity to Ensign Peak". Ensign expressed concern that the shell companies could "attract unwanted attention" as assets grew.

The church said Ensign "received and relied upon legal counsel regarding how to comply with its reporting obligations while attempting to maintain the privacy of the portfolio", adding that it regretted "mistakes made".

World Markets

STOCK MARKETS

	Feb 21	Prev	%chg
S&P 500	4011.78	4079.09	-1.65
Nasdaq Composite	11544.99	11787.27	-2.06
Dow Jones Ind	33279.01	33826.69	-1.62
FTSEurofirst 300	1831.43	1835.09	-0.20
Euro Stoxx 50	4248.89	4271.18	-0.52
FTSE 100	7977.75	8014.31	-0.46
FTSE All-Share	4349.62	4375.01	-0.58
CAC 40	7308.65	7335.61	-0.37
Xetra Dax	15397.62	15477.55	-0.52
Nikkei	27473.10	27531.94	-0.21
Hang Seng	20529.49	20886.96	-1.71
MSCI World $	2783.26	2779.88	0.12
MSCI EM $	1005.21	999.42	0.58
MSCI ACWI $	646.14	645.03	0.17
FT Wilshire 2500	5329.89	5346.62	-0.31
FT Wilshire 5000	41642.39	41767.79	-0.30

CURRENCIES

Pair	Feb 21	Prev	Pair	Feb 21	Prev
$/€	1.068	1.069	€/$	0.936	0.936
$/£	1.214	1.203	£/$	0.824	0.831
£/€	0.880	0.888	€/£	1.136	1.126
¥/$	134.715	134.060	¥/€	143.923	143.277
¥/£	163.537	161.267	£ index	77.506	77.452
SFr/€	0.989	0.987	SFr/£	1.124	1.111

CRYPTO

	Feb 21	Prev	%chg
Ethereum	1666.76	1703.10	-2.13
Bitcoin ($)	24376.80	24838.00	-1.86

COMMODITIES

	Feb 21	Prev	%chg
Oil WTI $	76.34	77.48	-1.47
Oil Brent $	82.81	84.07	-1.50
Gold $	1845.80	1833.95	0.65

GOVERNMENT BONDS

Yield (%)	Feb 21	Prev	Chg
US 2 yr	4.70	4.63	0.08
US 10 yr	3.92	3.82	0.10
US 30 yr	3.94	3.87	0.07
UK 2 yr	3.93	3.79	0.13
UK 10 yr	3.61	3.47	0.14
UK 30 yr	4.01	3.89	0.11
JPN 2 yr	-0.03	-0.05	0.02
JPN 10 yr	0.50	0.50	0.00
JPN 30 yr	1.48	1.49	-0.01
GER 2 yr	2.94	2.90	0.05
GER 10 yr	2.53	2.46	0.07
GER 30 yr	2.46	2.41	0.06

Prices are latest for edition
Data provided by Morningstar

Australia	A$7.00(inc GST)
China	RMB30
Hong Kong	HK$33
India	Rup220
Indonesia	Rp45,000
Japan	¥650(inc JCT)
Korea	W4,500
Malaysia	RM11.50
Pakistan	Rupee 350
Philippines	Peso 140
Singapore	S$5.80(inc GST)
Taiwan	NT$140
Thailand	Bht140
Vietnam	US$4.50

Subscribe In print and online

www.ft.com/AsiaSubs
Tel: (852) 5803 3388
Fax: (852) 2905 5590
email: subseasia@ft.com

© THE FINANCIAL TIMES LTD 2023
No: 41,254 ★

Printed in London, Liverpool, Glasgow, Dublin, Frankfurt, Milan, Madrid, New York, Chicago, San Francisco, Tokyo, Hong Kong, Singapore, Seoul, Dubai

Forum Auctions

Banksy (b.1974)
Choose Your Weapon, Gold
Screenprint in colours, 2010, signed and numbered from the edition of 25.
Est. £150,000-200,000 (+ fees)

Only Banksy
AUCTION 22 FEBRUARY | LONDON
editions@forumauctions.co.uk | +44 (0) 20 7871 2640
forumauctions.co.uk

Warsaw speech

Biden vows Putin will 'never' win in Ukraine

US president warns allies 'bitter' fight lies ahead in defence of democracy

FELICIA SCHWARTZ — WARSAW

Joe Biden attacked Vladimir Putin for starting a war of "choice" in Ukraine that Russia would "never" win, as the US president sought to rally the west for a long and bloody campaign to defend democracy in Kyiv.

Speaking against the backdrop of Warsaw's Royal Castle, Biden challenged head on accusations of US belligerence by Russia's president in his own speech earlier yesterday. "The west does not seek to attack Russia, as Putin said . . . this war was never a necessity, it's a tragedy. Every day the war continues is his choice."

The addresses, delivered just hours apart, laid out starkly different world views ahead of Friday's anniversary of Russia's invasion of Ukraine, an era-defining war that has reshaped the international order.

Addressing an enthusiastic crowd in the Polish capital, Biden mocked Putin's strategy as misconceived and self-defeating, while calling on the west to act on Kyiv's pleas for weapons to mount a counteroffensive.

"Brutality will never grind down the will of the free and Ukraine will never be a victory for Russia," Biden said. "Never."

But Ukraine and its allies needed to be "clear eyed" about the "hard and bitter" days of fighting that lie ahead, he added. "The defence of freedom is not the work of a day or a year."

While Russia's sputtering military campaign has failed to meet its goals and Moscow has suffered heavy losses, Putin's forces remain in control of some 20 per cent of Ukraine's territory.

Since Russia invaded Ukraine last year the US has given nearly $30bn in military aid to Kyiv, as well as $13bn in direct budget support and $2bn in humanitarian aid.

Biden yesterday celebrated his visit to Kyiv on Monday, saying: "I can report that Kyiv stands strong, it stands proud, it stands tall and most importantly it stands free."

He vowed to support Ukraine as long as it took, defying those who question whether he would be able to maintain public support for a long war.

In comments before Biden made his speech, but after Putin's address, Jake Sullivan, US national security adviser, played down the choreography of the clash between the leaders.

"We did not set the speech up as some kind of head-to-head," Sullivan said. "This is not a rhetorical contest with anyone else. This is an affirmative statement of values, a vision for what the world we're trying to build and defend should look like."

The event had the feel of a campaign rally, with US, Polish and Ukrainian flags on display and songs by Bruce Springsteen and Beyoncé blaring as the crowd assembled to hear a speech translated, simultaneously, into Ukrainian, Russian and Polish.

"President Biden needs to push back against the . . . notion that Ukraine's cause is lost," said Daniel Fried, a former US ambassador to Poland and a distinguished fellow at the Atlantic Council think-tank. "That their resistance is noble but in the end futile; that Putin will simply grind them into dust. That view is widely held and persistent."

Russia. Mercenary group

Wagner chief's cash rolls in despite sanctions

Revenues from Prigozhin's businesses help Putin ally become powerful warlord

MILES JOHNSON — LONDON

Russian mercenary leader Yevgeny Prigozhin generated revenues of more than a quarter of a billion dollars from his global natural resources empire in the four years before Moscow's invasion of Ukraine, according to corporate records.

A Financial Times investigation has found that years of western sanctions against the Wagner mercenary group's founder failed to stop hundreds of millions flowing to Prigozhin from oil, gas, diamond and gold extraction.

Wagner has been accused of human rights abuses including murder, torture and rape in almost every country in which it has operated.

Revenues from Prigozhin's businesses in countries such as Sudan and Syria since 2018 have helped the Kremlin-backed catering magnate emerge as a powerful warlord in President Vladimir Putin's invasion of Ukraine.

The FT analysed the accounts of Wagner-backed companies already under sanction by the US, EU and UK for being controlled by Prigozhin, as well as companies not under sanction revealed in leaked legal documents.

The results for the first time show the financial scale of what has been described by Washington as a "transnational criminal organisation".

The analysis excludes Prigozhin's domestic Russian catering and property businesses, which have received large state contracts and account for a significant part of his fortune. The US Treasury last month said that Wagner, which has recruited tens of thousands of Russian convicts to fight in Ukraine, had engaged in "serious criminal activity, including mass executions, rape, child abductions and physical abuse in the Central African Republic and Mali".

The overseas mercenary and propaganda operations of the Wagner Group in support of dictators and military strongmen have provided the Kremlin with a deniable foreign policy tool while at the same time helping enrich its founder.

Prigozhin for years denied any connection to the Wagner Group and its international mercenary operations until last year, when he admitted founding it in 2014 and appeared in a video recruiting fighters in a Russian penal colony.

Yevgeny Prigozhin: analysis excludes his domestic Russian catering and property businesses, which have received large state contracts and account for a big part of his fortune
FT montage; AFP/Getty/Dreamstime

Yet while Prigozhin, who was first placed under sanction by the US in December 2016 and put on the FBI's most wanted list in 2021, came under growing scrutiny from western governments, a barrage of sanctions did little to halt Wagner's natural resources businesses in Africa and the Middle East.

In 2018 the US government placed under sanction Evro Polis, a Prigozhin-controlled company that was awarded energy concessions by Syrian president Bashar al-Assad in return for Wagner mercenaries liberating oilfields from Isis during the country's civil war.

Evro Polis's accounts show that the sanctions had limited effect on its operations, with the company going on in 2020 to generate sales of $134mn, and net profits of $90mn.

That represented a return on equity of 180 per cent, which was repatriated to Russia. In December 2021, two months before the invasion, the company reported a contract-related collapse in revenues to just over $400,000 but still boasted $92mn of cash on its balance sheet.

Other Prigozhin mercenary operations are far smaller but have continued to trade in spite of being under sanction. M Invest, a company operating in gold mining in Sudan, which was placed under sanctions by the US in July 2020, still generated sales of $2.6mn the following year.

Two companies that export records show have shipped large quantities of industrial equipment to Wagner-backed companies in Sudan and Central African Republic generated more than $6mn in revenues up to the end of 2021.

The accounts also show how some Prigozhin-controlled companies appeared to switch their operations into other entities before western moves to shut them down. Mercury LLC, a company operating in the Syrian oil sector and placed under EU sanctions in 2021, generated sales of $67mn in the three years before the designation but declared zero revenues afterwards.

'I consider any sanctions against me to be absolutely illegal. I spit and I will spit on any sanctions'

The analysis of Wagner-backed natural resources companies is based on their most recently available accounts up to December 2021. The revenues and profits declared by these companies in Russia have been converted back to dollars from the rouble at current exchange rates.

Prigozhin, in response to a recent FT article about his business activities and sanctions evasion, wrote on his Concord catering group's Telegram channel: "I consider any sanctions against me, PMC Wagner, as well as any legal entities and individuals of the Russian Federation, to be absolutely illegal . . . I spit and I will spit on any sanctions."

In response to another FT article about Wagner activities in Africa, including killings and propaganda, he said the article was correct but claimed he was not making large profits. "The Financial Times, if you don't know, this is a British publication, published an article about the Wagner PMC, where much seems to be true," he wrote. "Except for the last part, where they talk about my financial enrichment."

International support

Kyiv yet to receive more than half of west's €64bn pledged aid

DARIA MOSOLOVA — LONDON
ROMAN OLEARCHYK — KYIV

Less than half of the financial aid pledged to Ukraine by the west has actually reached Kyiv since Russia's invasion last year, according to analysis of international support.

Ukraine's finance ministry received €31bn by December 2022 of the €64bn promised by western countries after Russia launched its full-scale attack last February, research by the Kiel Institute for the World Economy has found.

"There is a problem with disbursements in that they are volatile, delayed and not stable," said Tymofiy Mylovanov, founder of the Kyiv School of Economics and an adviser in Ukrainian president Volodymyr Zelenskyy's administration.

The EU and the European Investment Bank have together pledged about €30bn in total since the invasion began, the biggest share of the west's budgetary support to Ukraine. However, €17.5bn of this sum has yet to reach Kyiv.

"The situation was worst last summer when a lot was promised but not much delivered," said Mylovanov, adding that the trend was set to improve this year.

The EU overhauled the payout structure for its package last November, promising "regular and predictable financial assistance" of up to €18bn for 2023, at a rate of about €1.5bn each month.

The Ukrainian finance ministry said its budget deficit last year amounted to $5bn a month. "Even with the help of international partners, it was not possible to fully finance this gap," the ministry said. There were "delays in providing Ukraine with the already announced financing" in 2022, the ministry said, a gap that Kyiv sought to fill by printing more money, "which in turn had a negative consequence".

The ministry said it projected a deficit of $38bn for this year, lower than in 2022, and that its priority was to attract funds from donor countries and international financial institutions. "We expect to receive timely, rhythmic and predictable funding from international partners," the ministry said, adding that it had reached a preliminary agreement with the IMF last week that could pave the way for a fully-fledged financial assistance programme.

Christoph Trebesch, an academic at the Kiel Institute, noted that it took the EU up to six months to secure legal and political sign-off for some of its financial support in the wake of the invasion.

Such time lags are "certainly a problem when you are in the midst of a war, and need to finance large infrastructure expenses [and] an army, while your revenue has collapsed", he said.

When accounting for military and humanitarian aid, EU member states and institutions have together committed €55bn, lagging behind the US.

EU aid transfers were also dwarfed by the public funds that member states released to deal with internal economic problems caused by the invasion.

According to the Bruegel think-tank, Germany, the bloc's largest bilateral donor to Kyiv, committed 7.21 per cent of its gross domestic product to fund energy subsidies last year, 20 times the sum it has pledged to Ukraine.

FT FINANCIAL TIMES
MAKE A WISE INVESTMENT
Subscribe today at ft.com/subscribetoday

FINANCIAL TIMES
6th Floor, Nan Fung Tower
Central, Hong Kong

Subscriptions and Customer Service
Tel: (852) 5803 3388, subseasia@ft.com

Advertising
Tel: (852) 2868 2863 asiaads@ft.com, www.ftasia.net

Letters to the editor
letters.editor@ft.com

Published by
The Financial Times (HK) Limited,
6th Floor, Nan Fung Tower, 88 Connaught Road
Central, Hong Kong
Asia Editor: Robin Harding

Printed by
Australia: Spotpress Pty Ltd, 24-26 Lillian Fowler Place, Marrickville, NSW 2204
Hong Kong: Kin Ming Printing Co Ltd, 15/F BLK A, 18 Ka Yip Street, Ming Pao Industrial Centre, Chai Wan; Representative; Angela Mackay; ISSN 1025-918X
Japan: Nikkei Tokyo Newspaper Printing Center, Inc., 1-10-5, Shinonome, Koto-Ku, Tokyo 135-0062
Representative; Hiroko Hoshino; ISSN 0915-9460
South Korea: Maeil Business Newspaper, 30-1, 1-Ga, Pil-Dong, Jung-Ku, Seoul, 100-728
Singapore: SPH Media Limited, 2 Jurong Port Road, 619088
Representative, Anjali Mahindroo

© Copyright The Financial Times Limited 2023. All rights reserved.
Reproduction of the contents of this newspaper in any manner is not permitted without the publisher's prior consent. 'Financial Times' and 'FT' are registered trade marks of The Financial Times Limited.

The Financial Times and its journalism are subject to a self-regulation regime under the FT Editorial Code of Practice: www.ft.com/editorialcode

Reprints are available of any FT article with your company logo or contact details inserted if required (minimum order 100 copies). One-off copyright licences for reproduction of FT articles are also available.
For both services phone +44 20 7873 4816, or alternatively, email syndication@ft.com

Defence contracts

EU weighs using budget to speed up arms supplies for ally

HENRY FOY — BRUSSELS

Brussels is drawing up a proposal to use the EU budget to pre-finance purchases of weapons and ammunition, in what would be an unprecedented foray into the defence industry designed to speed up arms supplies to Ukraine.

The European Commission is exploring how it could leverage the bloc's budget to provide downpayments to arms manufacturers in order to spur increased production, people briefed on the plans told the Financial Times.

The plans come in response to concerns over whether Europe can produce armaments as fast as Kyiv is consuming them in its defence against Russian aggression. A final commission proposal is set to be circulated among the EU's 27 members before a meeting of defence ministers on March 7.

"We need a new injection to get the defence industry moving," said one of the officials, all of whom declined to be identified, as the plans are not public. "The reality has moved beyond the current systems."

The plans are being drawn up with the assistance of commission lawyers given that the EU's governing treaties forbid the use of bloc funds for military purposes. They could be adjusted before they are made public given the legal complexities, the people said.

The proposal would echo the commission's initiative to secure Covid-19 vaccines during the pandemic. Then, Brussels provided advance payments to pharmaceutical companies to ensure that member states — which covered the final cost of the jabs — would have sufficient supplies.

Ursula von der Leyen, commission president, said last weekend that advance purchase agreements would "give the defence industry the possibility to invest in production lines now to be faster and to increase the amount they can deliver".

When asked about the draft proposal, the commission said the bloc was "considering options to jointly procure standardised defence products, such as ammunition".

Securing sufficient supplies of ammunition for Ukraine has become an acute issue in recent weeks, as senior officials, including Nato secretary-general Jens Stoltenberg, have warned that Europe's defence industry is "under strain" trying to keep up with demand.

Russia is firing more than 20,000 artillery shells in Ukraine each day — as many as European factories manufacture in a month. Ukraine is firing about a quarter of that.

In response, EU capitals have backed plans for joint procurement contracts to streamline defence orders and encourage manufacturers to expand production, such as an Estonian proposal for countries to combine on a $4bn contract to buy 1mn artillery shells.

The commission's proposal, which was sketched out to EU foreign ministers on Monday, would significantly advance that effort by using the bloc's €1tn seven-year budget to guarantee those orders.

Josep Borrell, centre, warns that Ukraine is short of ammunition

"The EU has multiple ways to proceed with such a project," said a second official. "Some kind of long-term compensation mechanism will need to be found out . . . and the [EU] budget is the big game. It's the biggest game."

Work on the commission's prepayment proposal comes after almost a year of the EU's so-called European Peace Facility fund, of €5.5bn, which has been used to reimburse member states for weapons they supplied to Kyiv.

But officials say that the urgent need to encourage the defence industry to expand its production means money is required up front, rather than retrospectively.

"[Ukraine] has cannons but they lack ammunition," Josep Borrell, the EU's foreign and security chief, said on Monday. "So, we do everything we can," he added, in reference to the existing reimbursement scheme and new ways involving the commission to "do common purchase".

2023/2/22 19:18 Financial Times Asia

Russian war machine bogged down one year after Putin expected victory within days

Kremlin grapples with military setbacks, financial woes and wavering public support in conflict against Kyiv's forces

FT REPORTERS

When he ordered the invasion of Ukraine, Vladimir Putin envisioned Russian forces capturing Kyiv in as little as three days. A year on, Russia's army is no closer to winning the war — and has even lost part of the territory that Putin attempted to annex last September.

Russia's battlefield losses are so huge that western officials doubt it has the capacity to mount an offensive on the same scale again. Sanctions, meanwhile, have hurt the economy and cut Russia off from supply chains crucial to sustaining Putin's war machine.

Despite the dire state of his forces and the years-long quagmire the economy faces, Putin has shown no indication that he intends to seek a way out of the war, insisting Russia's victory is "inevitable" and its "goals will be met in full".

The FT has examined four key areas Putin must draw on: Russia's stock of munitions; the Kremlin's economic war chest; the forces on the battlefield; and ordinary Russians' feelings about the war. The bottom line is that his war machine is under enormous pressure and could struggle to mount the decisive offensives he has promised. But Russia will have the resources to keep fighting in Ukraine for some time to come.

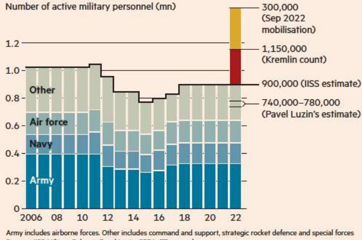
Russia to spend a third of its budget on defence and security

2023 = projected in budget law Sources: Russian Ministry of Finance, FT calculations

Russia's trade with China, India and Turkey has grown since the war in Ukraine

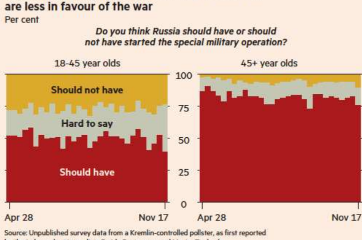
Data to Dec 2022 Source: Bruegel

Russia's armed forces



Army includes airborne forces. Other includes command and support, strategic rocket defence and special forces
Sources: IISS Military Balance; Pavel Luzin, CEPA; FT research

According to Kremlin polling, younger Russians are less in favour of the war



Source: Unpublished survey data from a Kremlin-controlled pollster, as first reported by the independent journalists Farida Rustamova and Maxim Tovkaylo

Munitions

On a visit to an arms factory in Siberia in February, Dmitry Medvedev, Putin's former stand-in president, said Russia needed to build and modernise "thousands of tanks" to defeat Ukraine.

"Our enemy was begging for planes, missiles and tanks when he was out of the country," Medvedev said, referring to Ukrainian president Volodymyr Zelenskyy's visits to the US and Europe. "What must we do in response? Increase production of all kinds of arms and military equipment."

But even as factories work around the clock in three shifts, the defence industry faces an uphill battle to make up for Russia's astonishing losses. UK defence secretary Ben Wallace said in December that since the invasion began, Russia had lost at least 4,500 armoured vehicles, 63 fixed-wing aircraft, 70 helicopters, 150 unmanned aerial vehicles, 12 naval vessels and more than 600 artillery systems.

Of the 2,300 tanks lost in Ukraine, about half were its most modern battle tanks, according to a report last week by the International Institute for Strategic Studies. Although Russia is deploying about 1,800 tanks and has a further 5,000 in reserve, many are Soviet-era vehicles in poor condition.

Russia has also used most of its prewar stock of 3,000-3,500 missiles with a range greater than 300km, according to Pavel Luzin, a visiting scholar at the Fletcher School of Law and Diplomacy at Tufts University.

On the front lines, the situation is equally difficult. The US said in December that Russia could sustain its current rate of artillery and rocket fire only until early 2023 as stocks of fully serviceable ammunition dwindled, leaving Moscow's forces to switch to degraded arms.

Defence spending will soar this year but the increased funding is unlikely to compensate for deeper problems in Russia's production cycle, according to Luzin. Like many industries, Russia's defence factories rely on advanced foreign-manufactured semiconductors, which the country is now barred from importing under western sanctions.

Inspecting downed Russian weapons and equipment, Ukraine's armed forces have found components from household appliances such as washing machines, an indication that Moscow is scouring consumer items to compensate for the shortfall.

"Russia's defence industry won't survive in its current state," Luzin said. "They have reserves of components up to 2025 but not for everything. Production overhead has gone up significantly already. It's not clear how long the foreign equipment will keep working. It's a zombie industry."

Finances

Last month, Putin proudly told his cabinet that predictions of economic collapse had proved unfounded. "The real dynamics turned out to be better than many expert forecasts," he said. "Remember, some of our experts here in the country — I'm not even talking about western experts — thought [gross domestic product] would fall by 10, 15, even 20 per cent."

GDP has fallen just 2.1 per cent as record oil and gas profits of Rbs11.6tn ($168bn) helped the Kremlin compensate for efforts to shut Russia out of global markets and supply chains.

But recent figures indicate that this feat may be a one-off: in January, energy revenues fell 46 per cent year on year while military spending ballooned, sending the deficit soaring.

Russia expects income from energy, which accounts for about 40 per cent of revenue, to drop 23 per cent this year as the west attempts to place an embargo and price cap on its oil exports. It has lost more than half its gas exports after Europe moved to lessen its dependence on Russian energy and lacks the infrastructure to reroute supplies to Asia.

To compensate for the increase in defence spending, the Kremlin has been preparing to plug the holes by dramatically cutting its expenditure and reliance on international capital markets.

The assets controlled by Russia's National Wealth Fund grew from 1.9 per cent of GDP in 2008 to 10.2 per cent by the beginning of the invasion. A year later, it is down to 7.2 per cent — owing to currency revaluation and the state using its assets to cover the deficit. In 2023, the budget law projects a deficit of Rbs2.9tn, equivalent to 1.9 per cent of GDP, much of which the state plans to cover with NWF money.

Russia is also likely to turn to debt markets rather than spend the fund completely. The war has forced Russian policymakers, previously obsessed with keeping state debt low, to increase borrowing, mainly from state-owned banks. But the country's debt still accounts for only 16 per cent of GDP and may at worst grow to 18 per cent by the end of the year, a far from critical level, estimates Natalia Lavrova, chief economist at BCS Global Markets.

In addition to the NWF and borrowing, Russia can pinch a share of companies' profits as it did through a $20bn windfall tax on Gazprom in 2022. The cabinet was discussing a "voluntary contribution" from big Russian companies, the first deputy prime minister, Andrei Belousov, said this month.

Another option is to cut non-military spending. Maxim Mironov, a professor at IE Business School, said Moscow could decide to "not invest in infrastructure, not repair roads, like in the '90s, given that Russians are very tolerant to changes in their quality of life".

Arms dump: fragments of Russian rockets are piled high in the Ukrainian city of Kharkiv. Below, Russia's central bank. Moscow is likely to turn to debt markets to plug the economic holes caused by rising defence spending
Libkos/AP; Andrey Rudakov/Bloomberg

Mobilisation

In September last year, as he was announcing the start of a draft for the armed forces, defence minister Sergei Shoigu said Russia had a "mobilisation resource" of almost 25mn men with military experience that it could deploy.

This number, according to analysts, is misleading. But working out what the real figure might be — the manpower Moscow could mobilise and what constraints are in play — can give some insight into how long it is able to maintain its assault on Ukraine.

Before the start of the war, Russia's army totalled between 740,000 and 780,000 personnel, according to Luzin, far fewer than the official figure of 1.15mn. Moreover, only up to 168,000 troops were combat ready, while 100,000 or so were in units that served as their reserves, according to Luzin. The rest were support personnel. The Russian forces deployed in Ukraine suffered heavy losses in the first weeks of the invasion and by July, US officials were estimating that up to half — more than 50,000 troops — had been either killed or injured.

The effect was stark in elite units. By late summer, up to 50 per cent of Russia's airborne force had been taken out of combat, according to a pro-war Russian military commentator, former defence ministry press officer Mikhail Zvinchuk, speaking on state television.

On September 21, Putin announced a draft to call up 300,000 men for the front line. Since the start of the year, rumours of a second mobilisation have been rife, but analysts say a draft of the same scale is not likely yet.

Half of all recently mobilised men are likely to still be in training, according to Michael Kofman, director in the Russian studies programme at CNA, a think-tank. "Russia may not need another large mobilisation wave," he said. Instead, it "could keep mobilisation quietly rolling at a sustainable rate".

The question of how many more could be called up is not straightforward. There are indeed about 30mn men of fighting age, 18-50, in Russia, but in that group only 9mn-10mn have military experience, primarily because of conscription, according to researcher and demographics specialist Igor Efremov.

But that figure includes those who might be sick or disabled, or who have exemptions, for example because of their profession. Russian demographers agree that about 500,000 Russians, mostly men of fighting age, have fled the country since the start of the invasion.

Nevertheless, "there is still a pool of several million people from among whom Russia can continue to recruit participants", Efremov said. "From a demographic point of view, Russia can continue to rake in people for the fighting for quite a lot longer."

But there are other substantial constraints, from the capacity of the army to house, equip, train and pay new troops, to the Kremlin's willingness to take men out of economic life and trigger new waves of panic and mass migration.

> 'Russia's defence industry won't survive in its current state. It's a zombie industry'

> 'Who will command all these mobilised men? Who will feed and clothe them? What will they be armed with?'

"Who will command all these mobilised men, in the context of a deficit of lower-level commanders, lieutenants and sergeants?" Luzin, said. "Who will feed and clothe them? What will they be armed with? Who will do their civilian jobs in their place?"

Demographer Dmitry Zakotyansky estimates that the army could theoretically recruit up to 1mn more men, although that "would require a lot of financial and also political strain, and would come at the cost of another shift in public opinion".

Russia's defence ministry announced plans at the end of last year to increase the size of the army to 1.5mn, of whom 695,000 would be contract soldiers who volunteered rather than conscripts. Luzin said these plans were unrealistic, adding: "The real aim is to secure a huge military budget."

Public support

After annexing parts of four Ukrainian provinces under Russia's control last September, a crowd of 180,000 people gathered in Red Square for a rally led by Putin and an array of pop stars.

But when the music stopped, the crowd meekly lined up to board dozens of buses waiting to take them home, a sign that the rally had been a *massovka*, a stage-managed event in which the Kremlin pays ordinary people to simulate spontaneous enthusiasm.

The lack of euphoria over one of the most significant developments in the war suggests that Russian society is on edge. Although any domestic challenge to Putin and the war has been crushed, the difficulty of manufacturing displays of support is taxing for the Kremlin.

Putin has claimed the invasion enjoys overwhelming support. In polls taken in September, the state-run Vtsiom claimed up to 73 per cent of Russians backed the war, while the Levada Center, Russia's only independent pollster, found a similar result — 72 per cent.

But analysts say Russia's crackdown on dissent — in which Putin signed a new law introducing prison sentences of up to 15 years for "discrediting the armed forces" by so much as calling the conflict a "war" — has made judging the true extent of public support difficult.

The censorship has destroyed Russia's independent media and all but wiped out antiwar activism, but police have used it equally against ordinary Russians for making antiwar comments at a bus stop, in a restaurant, or online.

That means the support for the war shown in the polls does not tell the full story. In a study that sociologist Philipp Chapkovsky and political scientist Max Schaub conducted in the war's early weeks, when Levada found 81 per cent of Russians supported the war, about 15 per cent of respondents changed their answers depending on how the question was presented.

Asked if they supported "the actions of the Russian armed forces in Ukraine", the same wording used by Levada, 68 per cent replied in the affirmative. But when presented with a list of questions on varying topics and told only to name the number of statements they agreed with, only 53 per cent backed the war.

Some scholars have begun to look for broader trends indicated in responses. Fewer than half the Levada Center's respondents said they "definitely support" the invasion, with almost as many expressing tepid support and opposition slowly increasing.

Those trends increased after Putin's decision to mobilise 300,000 people in September. Levada found that 47 per cent of respondents felt anxiety, fear or dread, while 13 per cent felt anger — against 23 per cent who felt pride.

Moscow is also tracking those trends. In a secret poll conducted by a Kremlin-controlled polling agency in November, 60 per cent of Russians said Putin had done the right thing by starting the war — a 10 per cent drop since the spring.

The poll, reported by independent journalists Farida Rustamova and Maxim Tovkaylo, also pointed to a growing generation gap: only 40 per cent of Russians aged 18 to 45 thought Russia was right to start the war against 76 per cent over 45.

These trends appear to capture big changes in public behaviour. "The main goal of pressure [to support the war] is to change people's behaviour so they don't want to criticise the government or protest," said Levada director Denis Volkov. "You can hardly argue that's been successful."

Reporting by Max Seddon and Anastasia Stognei in Riga, Polina Ivanova in Berlin, and Chris Campbell, Dan Clark, Sam Joiner and Caroline Nevitt in London

https://ft.pressreader.com/v99f/20230222

Single currency area

Eurozone business activity bounces back

Data expected to keep pressure on ECB to maintain tightening cycle

MARTIN ARNOLD — FRANKFURT

Business activity in the eurozone grew faster than expected this month, strengthening the rebound from last year's energy crisis and reinforcing calls for the European Central Bank to keep raising interest rates to tackle high inflation.

S&P Global's flash eurozone composite purchasing managers' index, a measure of activity in manufacturing and services, rose to 52.3 from 50.3 in January, according to figures released yesterday. The result was significantly higher than the 50.6 expected by economists polled by Reuters. It was also above the 50 mark for the second consecutive month, meaning a majority of businesses in the 20-country bloc reported increased activity.

"Business activity across the eurozone grew much faster than expected in February, with growth hitting a nine-month high thanks to resurgent service sector activity and a recovering manufacturing economy," said Chris Williamson, chief business economist at S&P Global Market Intelligence.

The eurozone economy has proved more resilient than initially feared to the fallout from Russia's invasion of Ukraine, with a mild winter helping to reduce natural gas consumption, lower fuel prices and allay fears of energy shortages. The improving European outlook was mirrored in the monthly survey of investors by the ZEW Institute, which said its economic sentiment indicator for Germany outstripped expectations by rising 11.2 points to a 12-month high of 28.1 in February.

Signs that the region's economy has weathered the worst of last year's energy crisis without suffering a deep recession are likely to bolster expectations that price pressures will remain high for longer.

"With the labour market still very tight and price pressures strong, the surveys will reinforce ECB policymakers' conviction that their tightening cycle still has some way to go," said Jack Allen-Reynolds, economist at research group Capital Economics.

Since inflation soared last year, the central bank has raised rates by an unprecedented 3 percentage points and committed itself to a further half percentage point rise next month.

Several policymakers have said recently that further monetary tightening is likely beyond that.

"With inflation so high, further rate hikes beyond March seem likely, logical and appropriate," Olli Rehn, head of Finland's central bank and a member of the ECB rate-setting governing council, told Börsen-Zeitung. "I assume that we will reach the terminal rate in the course of the summer."

The PMI survey, based on responses collected between February 10 and 17, showed an increase in average selling prices, as companies passed on more of their higher costs to customers. S&P Global said this was "in part linked to the impact of higher wage costs", although the rate slowed slightly from January. Employment growth slowed even as businesses grew more confident about their prospects and supply bottlenecks eased further to reduce delivery times from suppliers.

See Markets Insight and Opinion

Global warming

IEA calls for energy profits to be spent on reducing methane leaks

ATTRACTA MOONEY — LONDON

Fossil fuel industry methane emissions hit a near record in 2022, prompting the International Energy Agency to demand that companies use their "windfall" profits to stem leaks of the potent global warming gas.

The latest report from the IEA estimated that the industry was responsible for 135mn tonnes of methane released into the atmosphere last year, only slightly below the record high in 2019.

Methane has accounted for about 30 per cent of the global temperature rise since the industrial revolution, with the energy sector making up about a third of human-induced methane, second only to agriculture.

Cutting methane emissions is regarded by climate change experts as among the cheapest and quickest opportunities for tackling global warming, as it is more potent than carbon dioxide but shorter-lived.

Fatih Birol, IEA executive director, urged policymakers to augment pressure for the energy sector to clean up its methane pollution, mainly from leakage and distribution. "From our point of view there is no excuse for oil and gas industry not to move quickly. And no excuse for the governments not to step in and make this happen," he said.

'Tackling methane is one of the most important things that can be done in tackling global warming'

Oil and gas companies reported a bumper year in 2022 after Russia's war on Ukraine created an energy crisis that forced Europe to turn to fossil fuels.

Birol said the oil and gas industry's income jumped to about $4tn last year, compared with $1.4tn-$1.5tn in previous years.

"I make the IEA point very clearly: we would like to see a significant chunk of this $4tn go into investments into clean energy transitions, including tackling methane emissions."

By investing 3 per cent of oil and gas companies' 2022 "windfall income" in existing technologies, such as leak detection and repair, methane emissions from the sector could be cut 75 per cent, he said.

"Tackling methane is one of the most important, if not the most important things, that can be done in tackling near-term global warming," he added.

The report calculated that, based on average gas prices from 2017 to 2021, about 40 per cent of methane leakage could be stopped at zero net cost because the price of preventing emissions was below the market value of the captured gas.

The IEA said about 75 per cent of the methane wasted each year from oil and gas operations could be "retained and brought to market using tried and tested policies and technologies" — a volume greater than EU natural gas imports from Russia before the war on Ukraine. More than 150 countries have endorsed a pledge to cut methane emissions by 30 per cent by 2030, including the US and the United Arab Emirates. However, China and Russia, among the biggest emitters, are not signatories to the agreement struck at the UN COP26 climate summit.

Each day oil and gas operations around the world released the same amount of methane as last September's Nord Stream explosion, referring to the damaged pipeline taking gas from Russia to Europe, the IEA said. The report also found emissions from very large leaks detected by satellite fell almost 10 per cent in 2022 compared with 2021.

See Lex

Rate increase

Israel finance minister fends off criticism of central bank

JAMES SHOTTER — JERUSALEM

Israel's finance minister has vowed to maintain the independence of the central bank after a cabinet colleague criticised it for raising interest rates.

Bezalel Smotrich, an ultranationalist who called himself a "proud homophobe" and heads the Religious Zionist party, said the independence of the Bank of Israel was "fundamental" for the development of the economy and warned against "populist statements" that threatened it.

The shekel was down 1.7 per cent against the dollar yesterday in the wake of the spat, which coincided with a bitter clash over a judicial overhaul being advanced by Benjamin Netanyahu's hardline government that has sparked weeks of mass protests and concern from Israel's allies.

Smotrich's comments came after Eli Cohen, foreign minister, said there was "no justification" for the bank's decision to raise its benchmark rate to 4.25 per cent on Monday, the eighth time it has increased rates since April. Israeli inflation hit a 15-year-high of 5.4 per cent last month, above the central bank's target of between 1 per cent and 3 per cent.

However, Cohen said inflation was moderating and that the bank's latest rate rise "continues the mistreatment of mortgage holders". He also called on the finance minister to "formulate a framework with the Bank of Israel governor to end the interest rate hikes".

Smotrich acknowledged that rate rises were making life difficult for many households. But he said the government would fight the rising cost of living through fiscal policy and, "with God's help", the coalition would draw up a budget that would combine infrastructure investment with a relief package.

Cohen's intervention was also criticised by Amir Yaron, the head of Israel's central bank. "It is desirable of course, certainly as foreign minister, that he understands the importance of an independent central bank," said Yaron. "In every country in which there was damage to the central bank, we know what the end result was."

The squabble over the bank came as Israel's parliament voted on the first batch of judicial changes being pushed by Netanyahu's coalition. Critics have warned that the plan to curb the judiciary would undermine democracy, damage minority protections, foster corruption and weaken the economy.

But Moshe Gafni, head of the ultra-Orthodox United Torah Judaism party, said on Monday that "any attempt" to link the dispute over the judicial overhaul to an economic hit was "politicised".

Martin Wolf see Opinion

South-east Asia. Attracting talent

Leafy: the Tanglin area of Singapore. The government has been reluctant to help a mostly affluent minority Lauryn Ishak/Bloomberg

Singapore's soaring rents undermine bid to oust Hong Kong as finance hub

Overseas professionals look to relocate because of rising housing costs for non-locals

MERCEDES RUEHL — SINGAPORE

Two years ago, Lauren arrived in Singapore from Hong Kong wanting more living space for her growing family.

Now, they intend to move back. The reason: a 61 per cent increase in the rent on their four-bedroom flat and the high and rising cost of living.

A British mother of three whose husband works in finance, Lauren, who did not want to use her full name, said her experience of Asia's two rival financial centres had been an eye opener. "Everyone thinks Hong Kong is the most expensive city," she said.

Her situation is not unusual in the cosmopolitan city state of 5.6mn people in which a quarter of the workforce is foreign. A lack of housing supply due to construction delays during the pandemic, and a wave of new arrivals from places including Hong Kong, China, Europe and Japan last year, pushed residential rents to the highest on record, according to the government's private residential property rental index.

Rent per square foot in some central areas has overtaken Hong Kong for the first time, data shows. Analysts warn prices could rise up to 20 per cent again this year as real estate agents report bidding frenzies for desirable properties.

The situation underscores the cost of Singapore's campaign to replace Hong Kong as the Asian destination for money and investment. Tough Covid-19 restrictions in the Chinese territory encouraged many to relocate, and the number of Employment Pass and S Pass holders — the main visas used by foreign professionals in Singapore — increased 4.5 per cent to 338,000 in the 18 months until the end of June last year.

But higher rental prices could undermine the city state's attempts to become Asia's dominant financial hub and attract the best talent, experts said.

Singapore's government has been reluctant to help a mostly affluent minority. In November, in response to questions from members of parliament, it said rent was only one factor for those considering a move to the city state. Others "include Singapore's standing as a global business hub, our strong external connectivity, our good trade links, our education and healthcare standards and the quality of life", said Desmond Lee, minister for national development.

Still, the high cost of living, even with low taxes, was creating a "real crunch", said Woo Jun Jie, a senior research fellow at Singapore's Institute of Policy Studies. "It is something foreigners face more of the brunt of because most locals live in public housing and go to public schools." About 80 per cent of Singaporeans live in lower-cost public housing.

"Singapore had a huge influx of people and business since Covid — we were seen as a safe haven during the pandemic. But [high rents] will affect Singapore as a business hub and I think some of it [business] will inevitably flow back into other markets, especially smaller players."

Nicholas Mak, head of research and consultancy at the ERA Realty Network, said rents could grow another 10 to 20 per cent this year. "Singapore's small size means when you apply temperature, things boil fast. There is not a lot of spare capacity," he said.

Emma, a marketing professional, moved with her family to Singapore from Hong Kong five years ago and was living in a three-bedroom flat in the island resort of Sentosa. The landlord told her in November the rent would rise from S$7,000 ($5,230) a month to S$14,000. When they tried to negotiate, they were told to look in other suburbs.

"Our salaries have not gone up by 100 per cent or even 50 per cent — that is all our savings," she added. She did not want her real name to be used for fear of jeopardising negotiations over their deposit. The family has since decided to return to Australia.

Shantanu Upadhuay from India works at a popular restaurant as front-of-house staff in the city's Chinatown district. The 29-year-old is also moving to Australia with his fiancée after his S$500 rent more than doubled. "I can't see myself getting ahead here, I have no savings now. In Australia, you can afford a car and have a life," he said.

Real estate agents agree there is a problem. "I witnessed a crazy incident last year with tenants outbidding each other. It lost control. People are very upset," said Edna Liong, who liaises with tenants for Huttons Asia. "What some landlords ask for is not reasonable."

Another agent, Ina Sultan of ERA, this month made headlines for asking 11 Chinese tenants to vacate their overcrowded flat in a public housing unit. Sultan said: "The problem of overcrowding is not new here, but I expect to see more of this because of prices."

The bigger picture, say agents, is that rents are still catching up after years of decline. "Landlords suffered with low rents for many years and nobody brought this issue up," Sultan added.

For all its attractions, high costs in Singapore were becoming a deterrent, said Jon Goldstein, managing partner of Page Executive Singapore, an executive recruiter. "The question at the mid-level of 'should we stay or should we go' — you are hearing that discussion a bit more."

Residential rent in Singapore has been surging since 2020

Private flat rent indexed to Q1 2009

Outside central region
Rest of central region
Core central region

160
140
120
100
80
60

2005 10 15 20 22

Source: Urban Redevelopment Authority

Tech platforms

US Supreme Court hesitant on reforming legal protections for online content

STEFANIA PALMA — WASHINGTON

The Supreme Court appeared reluctant yesterday to make sweeping changes to legal protections for internet publishers as it began considering the first of a pair of cases that could fundamentally alter business governing online platforms such as Google and Twitter.

The cases mark the first time the court has weighed in on Section 230 of the Communications Decency Act, which protects online platforms from legal liability over content posted by users, and is widely seen as central to the development of online communications.

Both cases stem from fatal terrorist attacks. In the case before the court yesterday, Gonzalez vs Google, the relatives of a US student killed in a 2015 Isis attack in Paris accuse Google of breaking US anti-terror laws and helping the group spread its message by hosting Isis videos and content recommended by its algorithms. They argue that Section 230 was enacted before such algorithms changed, fundamentally, how content is consumed online.

During oral arguments, the Supreme Court justices seemed sceptical about interpreting the law in a way that would expose platforms to liability for recommended content. Justice Elena Kagan said there was "a lot of uncertainty" in adopting the argument "just because of the difficulty of drawing lines in this area".

Kagan added: "Once we go with [the petitioner], all of a sudden we're finding that Google isn't protected, and maybe Congress should want that system. But isn't that something for Congress to do?"

Some justices raised the risk that eliminating immunity under Section 230 could trigger a wave of legal challenges. "Hundreds of millions, billions of responses to inquiries on the internet are made every day . . . every one of those would be a possibility of a lawsuit," said chief justice John Roberts.

Google argues there is no connection between the recommended videos and alleged violations of the Anti-Terrorism Act. It also warned that losing immunity under Section 230 would have significant knock-on effects. Google's lawyer, Lisa Blatt, said "all publishing requires organisation" and these "[algorithms are] inherent in all publishing".

A brief filed by the US Department of Justice warned against an "overly broad reading of Section 230", which it said "would undermine the enforcement of other important federal statutes by both private plaintiffs and federal agencies".

A string of tech companies, including Microsoft, Meta and Reddit, have filed briefs defending Google's position. Facebook parent Meta argued that algorithms were a "critical component" of its anti-terrorism policies and that a broad Supreme Court decision "would encourage websites to remove all but the most benign views, turning a marketplace of diverse perspectives into a platform for orthodox perspectives".

The second case, Twitter vs Taamneh, arises from a deadly Isis attack at a nightclub in Istanbul, Turkey, in 2017. The relatives of a victim allege Twitter, Facebook and Google knowingly assisted the terrorist organisation by failing to stop its supporters from using their sites to disseminate content. The court will hear arguments in that case today.

CODEL Digital Certainty
www.codelmark.com

20 Feb 2023
E8D91D1005A2D87AC57D4314F58E01D2
9A683F5483AF67B71A32B3A6B03F90EC

19 Feb 2023
290CBDCBA7F96E6AF475F731608FBCE6
938FFBEEAF31A9C5526ECED9A7C1AE9A

Legal Notices

Notice of appointment of Restructuring Officers
ROCKLEY PHOTONICS HOLDINGS LIMITED
(Restructuring Officers Appointed) (the "Company")

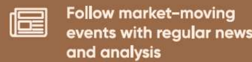
TAKE NOTICE that by order of the Grand Court of the Cayman Islands made on 14 February 2023, restructuring officers were appointed in respect of Rockley Photonics Holdings Limited, with registration number 372789, whose registered office is situated at c/o International Corporation Services Ltd, PO Box 472, Harbour Place, 2nd Floor, 103 South Church Street, George Town, Grand Cayman KY1-1106, Cayman Islands, pursuant to Section 91(B) of the Companies Act (2023 Revision). AND FURTHER TAKE NOTICE that Alexander Lawson and Christopher Kennedy of Alvarez & Marsal Cayman Islands Limited, Flagship Building, 2nd Floor, 142 Seafarers Way, George Town, Grand Cayman, KY1-1104, Cayman Islands have been appointed as the restructuring officers of the Company.
Dated this 16 day of February 2023.
Christopher Kennedy, Joint Restructuring Officer
Contact for Enquiries: rockley@alvarezandmarsal.com

capital·com

Contango: not a new dance move

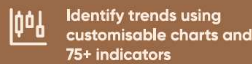
Since you're reading the Financial Times, you probably already knew that. But the markets have a way of keeping you on your toes.

Luckily, there's a broker with a wealth of free resources to help you get ahead. Swing by Capital.com to:


Follow market-moving events with regular news and analysis

Become a better trader with engaging courses and videos

Practise your strategies risk-free in a demo account


Identify trends using customisable charts and 75+ indicators

GET THE APP

Capital.com.
For when you know about trading, but you want to know more.

Celebration of Investment Awards – Best Platform for 'New Investors'

Most Innovative Tech

Spread bets and CFDs are complex instruments and come with a high risk of losing money rapidly due to leverage. **84% of retail investor accounts lose money when trading spread bets and CFDs with this provider.** You should consider whether you understand how spread bets and CFDs work and whether you can afford to take the high risk of losing your money.

Capital Com (UK) Limited ("CCUK") is registered in England and Wales with company registration number 10506220. Authorised and regulated by the Financial Conduct Authority, under register number 793714. Capital.com services are not available for customers from all regions.

BlackRock bonanza Money manager's fixed-income ETFs draw more investor cash than all competitors combined ➔ MARKETS

Companies & Markets

HSBC raises dividend to resist Ping An break-up calls

- Bank's payout soars to four-year high
- Shares decline after cautious outlook

STEPHEN MORRIS — LONDON
KAYE WIGGINS AND HUDSON LOCKETT — HONG KONG

HSBC raised its dividend to the highest level in four years and said that it might make a special payout next year, as it seeks to fend off break-up calls from its largest shareholder Ping An.

The UK and Hong Kong-listed bank also said that it would consider share buybacks sooner than expected. The moves came as it reported yesterday that fourth-quarter pre-tax profits almost doubled to $5.2bn, surpassing expectations, as higher global interest rates boosted revenues.

However, investors were disappointed by conservative forecasts for earnings and profitability, taken as an indication rates may have peaked.

> 'Customers are demanding more international banking services, not less'
>
> Noel Quinn, HSBC chief executive

The bank's shares initially fell 1.4 per cent in London before recovering to trade slightly up.

For the past 10 months, HSBC has been contending with pressure from Chinese insurer Ping An, which owns just over 8 per cent of the stock and is lobbying for a split of its Asian and western units. Its push was motivated by UK regulators banning HSBC from paying a dividend in the early days of the Covid-19 pandemic in 2020, which infuriated its Asia-based investors.

It has since been restored, but at a much lower level.

Ping An also argues that HSBC's global structure is not tenable in an era of heightened US-China tensions, which worsened this month when the US shot down a suspected Chinese spy balloon.

The lender's management has said that a break-up would be complicated, costly and counterproductive.

"My primary focus is improving the performance of the bank," chief executive Noel Quinn said, adding that he would meet Ping An in the next few weeks. "Alternative structural options . . . would have a material negative impact."

Quinn pointed to a "radical shift" in the distribution of the bank's profits since 2019, with the Middle East, Europe and the US contributing a greater proportion of earnings to complement its twin home markets of Hong Kong and the UK.

Nevertheless, Asia still made up 78 per cent of HSBC's reported pre-tax profits in 2022. When adjusted to remove a loss taken for the sale of its French consumer unit, Asia's contribution dropped to 60 per cent last year.

"The world is re-globalising . . . customers are demanding more international banking services, not less," Quinn added.

Keeping HSBC's network together provides a "stronger capacity for growth and distribution to shareholders via dividends and buybacks, that is our key message".

The bank set its dividend at 32 cents per share for 2022, up from 25 cents in 2021 and the highest level since 2018, and said that a planned 21 cent special dividend, worth $4bn, next year would be a "priority use of the proceeds" from the sale of its Canadian business.

In November, it agreed to sell the unit to Royal Bank of Canada for $10bn. It said that it expected to complete the sale of its Russian business — taking a $300mn loss — as well as of its consumer units in Greece and France, this year, further trimming its sprawling network.

Blemishing the earnings were $1.4bn in credit losses and impairment charges for the final three months of the year, up from $500mn a year earlier.

Wrong impression Estate of late US artist tells Louis Vuitton to pull campaign for £5,000 bag

Joan Mitchell died in 1992. Her work may be reproduced only for educational purposes — Joan Mitchell Foundation

ADRIENNE KLASA — PARIS
JOE MILLER — NEW YORK

The estate of Joan Mitchell has demanded Louis Vuitton pull an ad campaign after the luxury brand allegedly used images from the US artist's work without permission.

The Mitchell Foundation said yesterday it had sent a cease and desist notice to the flagship brand of LVMH, the conglomerate controlled by Bernard Arnault, the French billionaire.

Mitchell, best known for large-format abstract impressionist paintings and who spent the final part of her life in France, is the subject of an exhibition alongside the works of Claude Monet at the Louis Vuitton Foundation. The museum in Paris is the brainchild of Arnault, an art collector, and is supported by LVMH.

In accordance with its policy that Mitchell's work can be reproduced only for educational purposes, the estate said that late last year it had repeatedly denied Louis Vuitton permission to use her work in its promotional campaigns. The ads in question have appeared in print and online in France and the US in recent months.

"It is a grave disappointment . . . that Louis Vuitton has such disregard for the rights of an artist and would exploit her work for financial gain," the estate said, adding that it would pursue legal action if the campaign was not halted.

It had "never licensed the artist's works for use in commercial campaigns or for the promotion of other goods or services. Louis Vuitton subsequently reiterated the request which was denied several times."

The estate alleges the works were cropped and used in an ad campaign that features Lea Seydoux, the French actress, holding a Louis Vuitton Capucines bag that retails from about £5,000 and above.

The estate alleges the Louis Vuitton Foundation violated the terms of their agreement in allowing "La Grande Vallée XIV" (1983); "Quatuor II for Betsy Jolas" (1976); and "Edrita Fried" (1981) to be photographed and reproduced.

Born in Chicago in 1925, Mitchell studied in France before returning to the US to burnish her career. She eventually settled in Vétheuil, north of Paris, and died in 1992. Her work is owned by establishments including the Centre Pompidou and New York's Museum of Modern Art.

LVMH, whose brands also include Dior, Tiffany & Co and Givenchy, last month revealed that sales at Louis Vuitton last year surpassed the €20bn mark for the first time.

A cease and desist letter is usually a warning of legal action and can be drawn to the attention of a court in any ensuing litigation.

LVMH declined to comment.

Credit Suisse falls to record low on news of outflow probe

OWEN WALKER
EUROPEAN BANKING CORRESPONDENT

Credit Suisse shares dropped to a record low yesterday after a report that Switzerland's financial regulator was examining comments made by the bank's chair over how much clients had withdrawn from the bank.

Shares in the lender fell as much as 8.4 per cent to SFr2.54, breaking below a low of SFr2.70 set three months ago.

The renewed weakness in the stock followed a report by Reuters that Finma was investigating the accuracy of comments made by Axel Lehmann to the Financial Times on December 1, and to Bloomberg a day later, in which he claimed outflows had steadied and in some cases reversed.

The comments by Lehmann came at a critical time for the bank as it sought to raise SFr4bn ($4.3bn) of fresh capital from shareholders.

Lehmann told the FT on December 1 that outflows had "completely flattened out and . . . partially reversed" following a wave of customer redemptions in October. A day later, in an interview on Bloomberg TV, Lehmann said outflows had "basically stopped".

The bank revealed in its full-year results this month that outflows continued throughout December and into January across the group, though there were areas of the business that had net inflows, such as Switzerland and the Asia-Pacific region.

At the time of its results, Credit Suisse said parts of the business had experienced inflows in January but did not say whether the group as a whole was seeing outflows reverse.

Customers withdrew SFr111bn from the group in the final three months of 2022, with two-thirds of the outflows coming in October when the bank was the subject of rumours on social media about its financial health. The wealth management business accounted for SFr92.7bn of the outflows in the quarter, surpassing the SFr61.9bn expected by analysts.

Credit Suisse declined to comment. Finma also declined to comment.

The bank is embarking on a restructuring, axing 9,000 of its 52,000-strong workforce, in an effort to return to profit and restore investors' confidence.

However, its forecast earlier this month that it would make a "substantial loss" this year as it absorbed the cost of the revamp spooked investors.

Contracts & Tenders

INVITATION FOR BIDS
600MWp SOLAR PV PROJECT IN PAKISTAN

Alternative Energy Development Board **(AEDB)** of the Government of Pakistan **(GOP)** hereby invites bids/proposals from the private sector for development of 600MWp capacity solar PV project to be located at District Kot Addu/Muzaffargarh, Punjab, Pakistan, on Build, Own, Operate and Transfer **(BOOT)** basis for a term of 25 years. The Project details and Framework Guidelines are available at AEDB's website **www.aedb.org**.
The Request for Proposal (RFP) can be obtained either from AEDB office or through online upon payment of US$ 200 as registration fee and US$ 2500 for RFP document, on or before **10th March 2023**. Payments can be made in US$ or equivalent Pak Rupees directly in AEDB Bank accounts (Details at AEDB's website) or by way of a demand draft/pay order in the name of Alternative Energy Fund.
Only the Bidders who have been issued RFP by AEDB shall be entitled to submit bid/proposal. AEDB reserves the right to reject any or all the bids/proposals at any time without assigning any reason.

Last date for receiving of bids/proposals at AEDB's office is 17th April 2023, 1200 hrs PST.

AEDB
Chief Executive Officer
Alternative Energy Development Board (AEDB)
2nd Floor, OPF Building, Shahrah-E-Jamhuriat,
Sector G-5/2, Islamabad, Pakistan
Tel: +92 (51) 9222365, Fax: +92 (51) 9222364
E-mail: solarbidding@aedb.org

Businesses For Sale

Business for Sale, Business Opportunities, Business Services,
Business Wanted, Franchises
Runs Daily

Classified Business Advertising
UK: +44 20 7873 4000 | Email: advertising@ft.com

Notice to Advertisers

Calls to the Financial Times Advertising Department may be monitored.

Acceptance of any advertisement for publication will be subject to the then current terms and conditions of insertion of advertisements in FT publications.

A copy of the terms and conditions of insertion of advertisements in FT publications can be obtained from +44 (0)20 7873 3000, or viewed at www.FT.com/advertising

Carmakers seeking shift to hydrogen fuel face green challenges

INSIDE BUSINESS
ASIA
June Yoon

The battle over cars running on alternative fuel will shift up a gear this year. A record number of new models powered by electric batteries is due to be released as manufacturers place their bets on greener solutions to petrol engines.

But two of the biggest carmakers, Toyota and Hyundai, are still driven by the belief that hydrogen will become the key source of clean energy for the future. That obsession with hydrogen fuel-cell vehicles looks more justified now than it has sometimes appeared in the past.

Extreme volatility in natural gas prices in recent months and the need to find alternatives for Russian resources have renewed interest in the potential for hydrogen fuel.

Large vehicles, such as trucks, need an alternative to battery electric power. The distances they travel mean electric alternatives require heavy batteries.

On the hydrogen-powered passenger-car side, which is led by Toyota's Mirai and Hyundai's Nexo models, sales numbers are small, making up less than 0.1 per cent of global passenger-car sales last year. Vehicles running on electric batteries accounted for 10 per cent.

But for hydrogen-powered commercial vehicles — buses and trucks — growth has been much stronger than expected. Hyundai's Xcient trucks have expanded market share rapidly since last year, on the roads in Germany, Switzerland, New Zealand and South Korea.

Deliveries arrive in the US and Israel this year. In China, hydrogen fuel-cell vehicle sales, led by buses, nearly tripled last year.

The increase in sales in China draws parallels with trends in early electric-car sales in the late 2000s. As China's share of global electric-car sales soared — from 26 per cent of global market share in 2015 to 57 per cent last year — costs of charging infrastructure, batteries and car prices have fallen steadily.

There is good reason for the take-up in hydrogen-powered vehicles. The latest Xcient trucks and the Mirai, for example, can travel more than 800km on a single charge. They can be charged in minutes. Prices are going down.

> While the vehicles appear to be an environmental dream come true, emitting just water vapour, there is still much work to be done

The biggest change is that the cars can now be mass produced. Early models were hand-assembled and the higher production is cutting costs. Like the batteries in electric cars, the hydrogen-fuel stack, the heart of a fuel-cell power system that generates electricity, is the most expensive component of the vehicles that use them — costing more than $11,000 per car in earlier models. That expense has since been slashed with higher volumes.

But while the vehicles appear to be an environmental dream come true, emitting just water vapour as a byproduct, there is still much work to be done to make the production of hydrogen fuel greener and less costly.

About 95 per cent of hydrogen fuel is generated from fossil fuels, mostly natural gas. In the production process, this produces carbon monoxide and carbon dioxide, which offsets the reduction in exhaust-pipe emissions from hydrogen cars.

In Asia, the proportion of fossil fuels in total energy consumption is high — 83 per cent in China, and 85 per cent in Japan and South Korea. That means even battery electric cars in these countries are not as green as planned.

That creates an incentive for governments to invest in hydrogen production from cleaner sources. Government subsidies that foot the bill for developing new technologies would help clear current hurdles to wider adoption. That could also speed up the shift to hydrogen in other industries such as shipping, air travel and gas networks.

Meanwhile, subsidies for hydrogen-car purchases and infrastructure will help grow the market. Beijing, for example, has launched an aggressive drive for hydrogen-powered rental cars and public buses. Locally made hydrogen-powered buses and commercial vehicles are already on the road. The country has a sales target of 1mn units by 2030.

Toyota and Hyundai have been developing fuel-cell vehicles since the 1990s and have decades' worth of investment that must be recouped. The duo's operating margins and net profit per car sold lag behind that of electric-only peers.

The rare coincidence of corporate needs and government policy this year means the opportunity to turbocharge investments in hydrogen-fuel vehicles.

Creating a market for hydrogen-fuel cars will be a good start. But in order to make them a viable — and sustainable — alternative to gasoline vehicles, the focus must now shift to finding greener ways to produce hydrogen fuel.

june.yoon@ft.com

FT NON-EXECUTIVE DIRECTOR DIPLOMA

Available 100% online

Financial Times Non-Executive Director Diploma

Cohort 20: **14th March 2023 | Asia**

Develop the skills and knowledge to secure non-executive positions and succeed in them.

The Financial Times Non-Executive Director Diploma is a fully-accredited postgraduate qualification that will improve your board effectiveness and contribution.

Available in Hong Kong, London and 100% online, the 6-month course covers the whole range of skills and knowledge needed for any non-executive role and is delivered through a combination of face-to-face and online learning.

bdp.ft.com
ftnedasiainfo@ft.com
+852 5969 1565

FT BOARD DIRECTOR PROGRAMME

Mining

Teck poised for $11.5bn coal spin-off

Canadian group plans to shift out of fossil fuel and focus on metals operation

MYLES MCCORMICK AND
JAMES FONTANELLA-KHAN — NEW YORK
HARRY DEMPSEY — LONDON

Canadian mining group Teck Resources is set to spin off its coal business to focus on metals that are vital for lower-carbon energy, completing a shift out of fossil fuels amid criticism of the sector.

Teck said yesterday it planned to hive off its metallurgical coal operations, used in steelmaking, into a new company, Elk Valley Resources, which would have an enterprise value of $11.5bn. By splitting the company in two, Teck said both entities could attract fresh capital in an era when investors with distinctive mandates were more particular about where they put their money.

"The intent here is twofold: one to enhance the strategic and financial focus of the two companies," said Jonathan Price, Teck chief executive. "[And two,] it's about providing investors choice, in terms of how they build their own portfolio."

Teck, which has a market capitalisation of about $22bn, has been moving to strip out fossil fuels from its portfolio and focus on copper, a metal vital for the shift to more renewable forms of power. Last year, it sold its 21.3 per cent stake in a Canadian oil sands project to Suncor Energy for about C$1bn (US$743mn) in cash.

The coal spin-off will be carried out through a distribution of stock in Elk Valley to existing shareholders of Teck Resources, which will be renamed Teck Metals. The company's four metallurgical coal mines produced 24.6mn tonnes in 2021, making it the biggest North American producer.

Other mining companies have spun off or divested coal assets. Rio Tinto has exited coal and Anglo American ditched its exposure to thermal coal, used for electricity production, when it spun out South Africa-based Thungela Resources in 2021. But BHP and Anglo maintain large steelmaking coal operations and London-listed Glencore has benefited from sticking with thermal coal after prices rocketed when Europe rushed to secure energy supplies following Russia's full-scale invasion of Ukraine.

"For a long time, mining companies have been very focused on diversification, and they've done that by bringing together a whole series of different commodities to simply scale their portfolio and make it bigger," said Price.

The split will leave Teck Metals with a portfolio of copper and zinc mines in the Americas, including the massive Quebrada Blanca 2 mine in Chile, which will begin production later this year.

Nippon Steel and Posco, two of the world's biggest steelmakers, will own stakes of 10 per cent and 2.5 per cent respectively in Elk Valley Resources, in exchange for giving up minority interests in Teck's mines. Nippon will also pay $1bn in cash. The transaction will be put to a shareholder vote on April 26.

Teck also announced yesterday that in six years it proposes to end the dual-class share structure that gives the Keevil family, which has been involved with the group since the 1960s, effective control of the business.

These moves "will leave Teck Metals as a potential M&A target", said analysts at Citi. "Adding Teck Metals would position any major miner as the dominant global player in base metals."

Mining

BHP looks to China and India growth after $1bn hit from inflation

LESLIE HOOK — LONDON
NIC FILDES — SYDNEY

BHP has forecast that "strengthening activity" in China will bolster demand for raw materials after weaker commodity prices and a $1bn hit from soaring inflation dented half-year profits at the biggest mining group.

The Australian business said that revenue had fallen 16 per cent to $25.7bn while pre-tax profit had slid 30 per cent to $10.2bn in the second half of 2022 compared with the same period a year earlier.

The company cut its dividend to 90 cents a share from a record $1.50 in the comparable period, when commodity prices were driving record profits. The $4.6bn payout was nonetheless the fifth-highest half-yearly dividend in its 138-year history.

Inflation and higher labour costs have started to bite in the mining industry, forcing groups to consider consolidation and shedding underperforming assets.

"Commodity prices are down. This is a cyclical industry, after all," said Mike Henry, chief executive. But "the underlying performance of the business is really strong". He pointed to increased copper production.

Demand from China and India has increased BHP's confidence in its outlook, and the company maintained its forecasts for the full year.

> The markets were dubbed by the CEO 'stabilising counterweights' to the US and European slowdown

Henry described the markets as "stabilising counterweights" to the slowdown in the US and Europe, and he had greater conviction that demand for commodities in China would improve. "This will be another year of a billion tonnes plus, for Chinese steel production, possibly an increase on last year."

Inflation has hit the mining sector hard, particularly in countries such as Australia where it has combined with a labour shortage to drive up costs. BHP said inflation had added about $1bn to its costs through factors such as higher prices for diesel and materials including explosives, though it pointed to signs that those effects were easing.

Prices for iron ore were about 25 per cent lower during the second half of 2022 compared with a year before but have risen sharply since November as activity in China picks up following the easing of Covid curbs.

Henry welcomed news that China had relaxed an unofficial ban on Australian coal imports.

Tyler Broda, an analyst at RBC, said the results had been "surprisingly poor" as inflation and higher costs proved a key factor for miners in the period.

BHP has reacted to the increased royalty rates in Queensland by putting two mines jointly owned with Mitsubishi up for sale. Henry said the move to raise royalties had triggered the decision. "It's super-clear. There are options for us to invest elsewhere."

He sounded a warning to the government that heavy-handed intervention and higher tax could scupper ambitions to capitalise on investment in critical minerals. "The world is really at Australia's feet but it does require the right policy settings," he added.

See Lex

Technology. Innovation

China plays chatbot catch-up as AI hype builds

Baidu and Alibaba tout their progress but struggle with chip curbs and lack of data

RYAN MCMORROW AND
NIAN LIU — BEIJING
ELEANOR OLCOTT — HONG KONG
MADHUMITA MURGIA — LONDON

China's tech giants including Baidu, Alibaba and NetEase are racing to match the west's recent developments in artificial intelligence, touting projects that they hope will achieve the same buzz created by the release of ChatGPT.

After months of cost and headcount cuts, big groups are now optimistically presenting investment plans to rival OpenAI's chatbot, while trademark trolls are lining up to claim words related to ChatGPT's achievements.

Zhou Hongyi, head of internet security company Qihoo 360, characterised ChatGPT, a program that produces realistic text answers to questions posed by humans, as the start of the AI revolution.

"It has shortcomings but also unlimited potential," he said in a talk-show discussion last week.

The race to match ChatGPT comes as the Chinese tech groups have spent the better part of two years reeling from regulatory attacks and fighting for growth amid a Covid-induced slowdown.

Baidu is taking the most concrete early steps, with plans to launch a chatbot named Ernie in its search engine in the next few months, similar to Microsoft and OpenAI's Bing Chat.

The AI model underlying the bot has been in development since 2019 with its newest generation trained on 260bn parameters — comparable to GPT3, the technology underpinning ChatGPT, in terms of size, although trained on a much smaller data set.

Baidu plans to reveal new details this week on how the chatbot will be integrated into its products, including search, electric vehicles and smart assistants, according to a person close to the company.

"Baidu has focused talent and money on this, so they are the most likely to build one of China's leading GPT platforms," said Boris Van, an analyst at Bernstein tracking China's AI efforts. "They have a lot riding on the launch."

News of the Ernie's potential rollout from March sent Baidu's shares more than 15 per cent higher, while Alibaba and NetEase were boosted by developments in their generative AI research.

Tech race: Baidu is taking the most concrete early steps in the attempt to match ChatGPT, with plans to launch a chatbot named Ernie Jade Gao/AFP/Getty Images

The stocks of smaller AI groups such as Hanwang Technology and CloudWalk Technology have roughly doubled so far this year. State media this month issued a warning about the speculative frenzy.

Since December, more than a dozen companies have rushed to trademark "ChatGPT" or other words containing "GPT" for use in anything from scientific instruments to clothing and advertising sales, according to Tianyancha, the data provider.

The Beijing city government said this month that it would support companies building their own models to match ChatGPT, while Shanghai's top university Fudan brought together more than a dozen AI company executives and academics to analyse ChatGPT's development, security risks and potential use cases.

But analysts and experts say the fanfare and surge in stock prices around each new pronouncement do not reflect how difficult it will be for Chinese groups to quickly replicate the software being built by the likes of OpenAI and Google.

"Everyone wants to create ChatGPT now, but it's very hard especially for Chinese companies which can't get the latest Nvidia chips and have limited data sets for training AI models," said Huan Li, creator of WeChaty, one of China's most popular chatbot programs. "It takes lots of money to train a model, and if one part is not right, it will not work," he said.

While China is known for its plethora of data for algorithm training, efforts have been focused mainly on surveillance tasks such as recognition and detection of objects, actions or faces, according to a review of Chinese AI papers in the State of AI Report 2022 published by investors in the sector.

Baidu struggled with its previous attempt at a chatbot, known as Plato, which analysts said could not even answer a simple question such as: "When is Alibaba co-founder Jack Ma's birthday?"

Analysts point to the lack of high-quality Chinese language text on the internet and in other data sets as a barrier for training AI software.

GPT, the program underlying ChatGPT, sucked in hundreds of thousands of English academic papers, news articles, books and social media posts to learn the patterns that form language. Meanwhile, Baidu's Ernie has been trained primarily on Chinese-language data as well as English-language data from Wikipedia and Reddit.

The computing costs of training and running large language models are also very high. Estimates put the cost of running ChatGPT, assuming 10mn monthly users, at $1mn a day. An executive at a leading Chinese AI company, who asked not to be named, noted that it planned to focus its efforts on specific industry verticals such as customer service, rather than gambling on a broader conversational chatbot.

> 'It's hard especially for Chinese companies which can't get the latest Nvidia chips and have limited data sets for training AI models'

Washington's export ban on advanced semiconductors is likely to compound the problem of building enough computing power for AI programs. New US rules prevent processors such as Nvidia's A100 from being imported to China, making training AI models more expensive and time-consuming.

Bernstein analysts estimate that Chinese groups are likely to have stockpiled enough of the chips they need for the near term, but note that Washington's ceiling on the speed of processors being allowed for export to the country means Chinese AI companies will be left behind as the hardware advances.

"It will be hard for Chinese companies to be globally competitive," said Bernstein's Van.

"So many companies are making announcements now about ChatGPT rivals, but that doesn't mean they have a product," he added. "It's hard to judge until we can try them."

Retail & consumer

Walmart cautious as Fed's rate rises sink in

ALEXANDRA WHITE — NEW YORK
STEFF CHÁVEZ — CHICAGO

Walmart said yesterday that it expected sales growth to moderate in the second half of this year, prompting the world's largest retailer to issue a cautious outlook for 2024 as it observes the impact of the Federal Reserve's aggressive campaign to raise interest rates.

The company set sales and earnings forecasts below analysts' expectations, even as it reported a strong fourth quarter in which bargain-hunting shoppers underpinned spending in December that was the biggest month in sales on record for Walmart's US operations.

"There's just a lot that we don't know," said Doug McMillon, chief executive.

"We could tilt into a recession. We don't know what happens to consumer spending. We don't know what happens to lay-offs [and] household income.

"And so given that we're so early into the year and there's a lot of unknowns right now, we're simply taking a cautious outlook," he told analysts.

Walmart executives said the strong December sales in the US were led by food, but that was partially offset by declines for general merchandise sales.

John Rainey, chief financial officer, said that Walmart expected sales growth to be "strongest" in the first six months of this year, and then moderate in the back half.

"We've not been in a position where we've seen the Fed tighten this shortly. We see issues where delinquencies are up and things like auto loans, you've got savings rates that are coming down. And there's a lot of unknowns in the back half of the year."

Walmart's soft outlook was echoed by Home Depot, which warned that its full-year earnings could decline for the first time since the financial crisis, against a backdrop of elevated inflation and mortgage rates that is blunting consumer demand for home improvement.

Richard McPhail, Home Depot chief financial officer, said that the do-it-yourself retailer was, like many economists, assuming flat economic growth and consumer spending in 2023.

"Over the last seven quarters, we have seen our transactions gradually normalise as consumer spending has shifted from goods to services," he said.

"If this shift continues at its current pace, the home-improvement market would be down low single digits."

With more than three-quarters of a trillion dollars in annual sales between them, Walmart and Home Depot are often regarded as barometers of the US consumer, with the latter more sensitive to the American property market.

Walmart shares recovered early declines to be 0.3 per cent higher in lunchtime trading on Wall Street yesterday, while Home Depot sank more than 6 per cent.

See Lex

Retail & consumer

Zalando cuts jobs as 'pandemic tailwinds' fade

OLAF STORBECK — BERLIN

Zalando will axe up to 5 per cent of its workforce as the economic slowdown forces Europe's largest online fashion retailer to abandon a promise to avoid significant job cuts.

Yesterday, the Berlin-based company told staff that it would "remove several hundred overhead roles" over the coming months, saying that "the pandemic tailwinds have faded since 2022 and the macroeconomic environment has become more challenging".

In a note to staff seen by the Financial Times, Zalando did not disclose how many of its 17,000-strong workforce would leave, and said that discussions with the workers' council had only just begun. The cuts will extend to the "senior leadership level", but exclude the retailer's logistics centres, customer care and its handful of physical stores.

Zalando thrived when pandemic lockdowns forced more consumers online, but the end of that boom has damaged its sales growth and hammered its share price.

The planned job cuts come just two weeks before the release of the group's full-year results, which analysts expect to show that sales were flat at €10.4bn and operating profit more than halved to just €187mn.

The group alarmed investors last June with a profit warning that sent shares briefly below the 2014 initial public offering price. They have since staged a recovery, but remain well below the peak of €104.65 reached in 2021.

The Berlin-based online fashion group thrived during lockdowns

Robert Gentz and David Schneider, Zalando's co-founders and co-chief executives, told employees yesterday that "we are not where we need to be and as a result, we must take even more decisive action".

"Instead of a big company with a big company structure and mindset, we need to be a big company with a small company structure and mindset," they wrote, admitting that the group had become too bloated. "We have added a degree of complexity to our organisation that impacted our ability to act fast."

Zalando's decision to retrench further, having already scaled back its marketing budget and investment plans, follows a period of stellar growth in recent years. Since early 2019, its workforce has ballooned by a quarter while sales surged 60 per cent.

2023/2/22 19:18 Financial Times Asia

Blast-hit US gas site reopens but doubts persist

Operational questions and public anger dog Freeport plant that supplied 10% of Europe's LNG intake before June explosion

JUSTIN JACOBS — HOUSTON

Before dawn on June 8 last year, workers at the sprawling Freeport liquefied natural gas export plant on the Texas coast heard "strange" noises emanating from some of its pipes. They notified their bosses but a follow-up inspection found nothing amiss. Then came a fireball.

The explosion at Freeport LNG knocked out a centrepiece of the US gas-export industry just as the world was looking for more fuel as the war in Ukraine squeezed supplies from Russia.

The terminal supplied about 10 per cent of European LNG imports at the time of the explosion.

Eight months on, there are signs that the plant is stirring back to life, taking in gas to condense and load on to oceangoing tankers. Yet doubts persist about the operations of the nation's second-largest such facility.

"There are a lot of things that Freeport LNG weren't doing that similar facilities do," Bryan Lethcoe, director of the south-west region at the Pipeline and Hazardous Materials Safety Administration, a federal regulator, said at a public hearing held this month at a local high school. "Up to now they've had some systemic issues. Part of what we're working on with them . . . is to try to stamp out some of those systemic issues to make them a better operator."

Consultants retained by Freeport LNG revealed slipshod controls before the accident. They put primary blame on a pressure-safety valve improperly left closed for several weeks after routine testing.

The oversight led to a pressure build-up and excessive heat that ultimately burst the line and ignited, investigators concluded in a report released in highly redacted form by the PHMSA.

The problem went unnoticed because the company lacked formal procedures and training to ensure the valves were returned to normal service after testing, the report concluded. The plant's control room systems did not "alarm audibly or visibly" when temperatures reached dangerous levels.

In another missed opportunity, a staff member told bosses that a section of pipe had "noticeably moved" two days before the blast, according to the investigation. But "none of these more experienced personnel went out to the tank farm to evaluate the issue for themselves", consultants wrote.

Elsewhere some plant staff reported "alarm fatigue", with "alarms constantly indicating on equipment that had been placed out of service years ago", the consultants reported.

Smoke billows from the key Freeport LNG facility. The blast in June knocked out a centrepiece of the US gas export industry Maribel Hill/Reuters

Investigators also cited "clear patterns of concern" in the company's staffing policy, saying employees were regularly called on to work 12-plus hour shifts and on scheduled days off, concluding "operator fatigue" was probably a contributing factor to the accident.

"The problems were serious," said Clark Williams-Derry, an LNG specialist at the Institute for Energy Economics and Financial Analysis. "It was overworked operators, it was poor training and maintenance and a whole slew of problems that were only uncovered when the thing blew up."

President Joe Biden has urged exporters such as Freeport LNG to help European countries offset the loss of Russian gas supplies as part of his strategy to defend against Moscow's aggression. When running fully, the plant takes in about 2 per cent of total US natural gas production and accounts for roughly 20 per cent of LNG export capacity as the second-largest plant in the country.

But some of its neighbours on the Texas coast worry that not enough has been done by the company and federal and local regulators to safeguard the facility.

"We don't feel like they're ready to reopen at all. You know, there's still so many unanswered questions," said Melanie Oldham, a resident of the city of Freeport.

Oldham said that the company has not done any outreach to local residents since the blast, which did not result in any deaths but shocked the small nearby community.

No company officials attended the public hearing where regulators showed photos of gnarled pipes and support beams and a piece of kit hurled hundreds of feet from the blast site.

"They didn't even show up for the meeting where we could ask them some questions and make comments directly. How can we trust this company when they're not open and transparent and they don't even bother to talk with the community?" Oldham asked.

> 'There are a lot of things that Freeport LNG weren't doing that similar facilities do'

Freeport LNG is majority owned by Michael Smith, a billionaire who first made a fortune selling oil and gas producer Basin Exploration for $410mn in 2001. Japan-based Osaka Gas owns about 10 per cent of the company, while Jera, a joint venture of Japan's Chubu Electric Power and Tokyo Electric Power, has 26 per cent.

Smith, a native of Bronx, New York, moved into seaborne gas markets when he snapped up land on Quintana Island in Texas in 2002 to eventually build Freeport LNG.

The facility was first constructed to handle LNG imports in 2008, a wrong-way bet just as the shale revolution received US output. But by 2019 the plant had been revamped and started exporting the supercooled fuel.

Freeport LNG initially said it would take only a few weeks to restart the plant after the June fire. It has offered only sporadic updates in the months since, and its latest in December said that it planned to start up by the end of January, leaving locals, traders and others guessing about its status.

In recent regulatory filings, the group has said that it has "completed repairs" to the plant and "performed safety reviews, revised various procedures, implemented new safety systems and performed necessary training in order to safely begin" operations.

Asked for an update on operations for this story, the company said that it had no comment and referred the Financial Times to its regulatory filings.

Three tankers over the past week have loaded fuel that had been sitting in storage tanks since the blast, one of which is steaming towards Germany.

Large amounts of gas are once again starting to flow into the plant, according to pipeline data from Refinitiv.

And Freeport LNG is now asking regulators to allow it to resume processing and exporting gas again, a crucial step back to normalisation.

However, Ruth Liao, an LNG specialist at ICIS, said that even if it restarts soon, it could take until May to complete repairs and get back to full capacity.

"Michael was a pioneer in the industry, but Freeport has had some real growing pains," said an executive at another American LNG group.

US LNG export surge to Europe

US liquefied natural gas monthly exports by region (bn cubic feet per month)

Source: Refinitiv

IN MEMORIAM

David Wells

1972–2023

Our firms would like to honor our dear friend and colleague, David Wells, who passed away Saturday, February 11, 2023.

He was a talented communicator, gifted writer and storyteller, confidant, counselor and most of all a mentor to many of us.

His legacy will live on through the countless number of people he impacted and through his lovely family. He was always willing to help anyone who asked for advice on their career and life.

He had a big heart, easy smile and a brilliant mind – it was a beautiful combination.

We extend our thoughts and condolences to his family and community of colleagues and friends.

David, we will miss you.

BlackRock. prosek

Technology

Sci-fi magazine zaps army of robot writers

MADHUMITA MURGIA — LONDON

A well-known science fiction magazine has stopped accepting submissions for new stories, after being overwhelmed by a technology its authors often base their futuristic narratives on: artificial intelligence.

US-based Clarkesworld, which has published several award-winning sci-fi writers over the past 17 years, has been inundated by hundreds of submissions written or improved by generative AI since December, when OpenAI's chatbot ChatGPT was first released to the public.

On Monday, Neil Clarke, founder and editor of Clarkesworld, tweeted that it had decided to suspend submissions following the surge in AI-enhanced entries.

Clarke said the magazine had received more than 500 AI-enhanced submissions so far in February, more than four times the total for January, and that it was impossible to filter the volume of content manually in real time.

"Five days ago, the chart we shared showed nearly 350 of these submissions. Today, it crossed 500. Fifty of them just today, before we closed submissions so we can focus on the legit stories," he said on Monday.

In a blog posted this month, Clarke pointed out: "To make matters worse, the technology is only going to get better, so detection will become more challenging."

Companies such as OpenAI, which owns ChatGPT, and others building similar technologies, have already become embroiled in controversy with news organisations, artists and software engineers who claim that AI reproduces and builds on their original work without recognition or compensation.

This is not the first time AI-facilitated spam has caused services to buckle: in December, coding Q&A website Stack Overflow was forced to ban ChatGPT-generated responses, claiming these answers were flooding its forum with misinformation.

Clarke said he had contacted other editors publishing original content, and that his situation was "by no means unique." He did not disclose how he had identified the stories generated by AI, adding that there are "some very obvious patterns and I have no intention of helping those people become less likely to be caught".

Clarkesworld is flooded with stories written using tools such as ChatGPT

The motivations behind the AI-enhanced submissions are unclear. Some suggest it is a way for people to make money quickly, since Clarkesworld pays writers around 10 cents per word, for entries as long as 22,000 words.

It would be easy for a single person to fake their location and submit multiple stories, said Eran Shimony, a researcher at cyber security lab CyberArk.

Others suggest it could be a way for novice writers to increase their chances of being published in the prestigious magazine.

But some writers warn that AI spam will choke creativity, forcing publishers to limit submission windows, take more time to respond, and potentially reduce their payment rates.

"The only people getting work out will be the already established and known . . . it'll be deathly for new writers," said Shiv Ramdas, a speculative fiction writer, on Twitter.

Earlier this month, OpenAI released an experimental tool to detect AI-generated content. However, its researchers said the tool only identified such content 26 per cent of the time.

https://ft.pressreader.com/v99f/20230222

Fixed income. Revenue driver

Billions pouring into bond ETFs are bright spot for BlackRock

World's largest asset manager dominates flows into products that lure professional investors

BROOKE MASTERS — NEW YORK

Enthusiasm for bonds is proving to be a bonanza for BlackRock's fixed income exchange traded funds, which have attracted more investor cash since US interest rates started rising than all their competitors combined.

BlackRock, the world's largest money manager, is capitalising on growing interest among wealth managers and other asset managers in using ETFs instead of — or in addition to — buying bonds directly.

From March last year to the end of January, there were $146bn net flows into BlackRock's fixed income ETFs while competitors took in $134bn.

Bond ETFs have been a bright spot for BlackRock after a year when its overall assets under management shrank by nearly 15 per cent to $8.6tn.

Chief executive Larry Fink considers them a main driver of revenue growth. BlackRock predicts that bond ETF assets industry-wide will more than double from $1.8tn now to $5tn in 2030.

The increases are being driven by regulatory changes, investors' growing comfort with the way they perform in volatile markets and creative uses of them by wealth managers and even other bond funds.

"There have been significant changes about the way people think about fixed income ETFs in the past year," said Deborah Fuhr, founder of the ETFGI consultancy. "We have seen large funds and asset managers put their portfolios in ETFs . . . rather than buying bonds and trying to manage them themselves. It's a continuing trend. Once [people] have used an ETF, then they use them more and in different ways."

BlackRock got into fixed income ETFs early and has long been the largest player — it has more than 40 per cent of global assets under management for the category. But as competition for broad-based and retail-focused ETFs grew, it expanded into new areas.

The number of fixed income ETFs that it offers nearly doubled from 243 to 462 in the past five years.

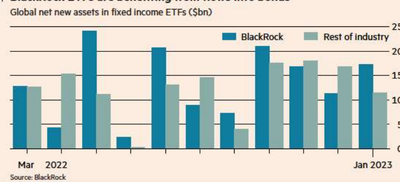
"We're finding and expanding into all parts of the bond market in multiple different slices . . . Any part of the bond market that can be accessed through an ETF, we're capturing that," said Salim Ramji, BlackRock's global head of ETF and index investments.

The narrow slices include ETFs such as IBTG, which only holds US Treasury bonds maturing in 2026, or LQDB, which purely contains BBB-rated corporate bonds.

That allows active fund managers to use them in a variety of ways. Some use a specific slice to tilt their portfolio either to longer or shorter duration bonds, depending on their view of the economy.

Others use BlackRock's AGG broad index fund as a holding tank when they receive large inflows so they can put money to work immediately while also giving their active managers time to pick up the right bonds.

Pointed: chief executive Larry Fink considers fixed income ETFs to be a key area of growth for BlackRock, which predicts such assets will more than double industry-wide by 2030 — Hollie Adams/Bloomberg



"We use ETFs because it is operationally quick and easy to do," said Wylie Tollette, chief investment officer of Franklin Templeton Solutions. "It's a quick way to gain exposure to a whole series of bonds. [If] you are out buying and selling the bonds directly, you are paying an embedded commission. If you added up the round-trip commission on the bonds, the ETF fee is very reasonable."

Professional investor interest in bond ETFs really started to rise after many oil and gas companies failed in 2015.

At that time, short selling BlackRock's high-yield bond ETF turned out to be a better hedge against junk bond defaults than buying an index of credit default swaps because the ETF tracked the high-yield bond market more closely.

"We started to get a lot of inquiries from actual bond traders," said Samara Cohen, chief investment officer for BlackRock's ETFs. "Until that point, ETFs were probably more utilised by bond market tourists."

Regulatory change has also driven take-up. In December 2021, New York state regulators started letting insurers treat passive fixed income ETFs just like bonds for the purpose of calculating capital requirements.

> 'Until that point, ETFs were probably more utilised by bond market tourists'

That made the products more attractive to a swath of the industry and other states have been following suit.

Ramji said that BlackRock ETF users include nine of the 10 biggest active managers and eight of the 10 biggest US insurance companies.

Some money managers are sceptical of the trend, arguing that, as active investors, they find it difficult to justify putting money in another company's passive funds.

"The layering of fees on fees is a real concern internally," said one portfolio manager at a large fund house who did not want to criticise peers publicly. "At this point, we've decided the 'costs' don't outweigh the benefits."

BlackRock's nearest competitor, Vanguard, has opted for an entirely different strategy. It has 48 fixed income ETFs with $389bn in assets, up from 38 with $150bn in 2017.

The Pennsylvania-based group caters mostly to retail clients and said it had opted to tailor its selection to reflect "investor preference for low-cost, broadly diversified fixed income ETFs".

But many fixed income investors said the growth of bond ETFs had fundamentally changed the market for the better because of their structure.

ETF shares trade throughout the day on exchanges and more than 80 per cent of bond ETF trades take place without requiring the purchase or sale of the underlying securities, which adds liquidity.

In addition, the market makers who buy and sell the actual bonds that back ETFs have grown more comfortable with pricing large chunks of securities.

"Five years ago, when we would want to sell $20mn, $25mn of corporate exposure, we would have to do it line by line," said John Gentry, head of the corporate fixed income group at Federated Hermes. "Now dealers are able to price it as a block. This has helped us find bonds that we could not find before."

Manuel Hayes, senior credit portfolio manager at Insight Investment, said using ETFs can help shrink the cost of buying high-yield corporate bonds from roughly 60-80 basis points to 15bp or 20bp. "ETFs are here to stay and they are evolving. If you overlook it you are missing half the market."

FT
Our global team gives you market-moving news and views, 24 hours a day
ft.com/markets

Commodities

EU carbon price tops €100 a tonne for first time

BY CAMILLA HODGSON AND DAVID SHEPPARD

The EU's carbon price has climbed above €100 a tonne for the first time in a landmark moment for one of the bloc's key tools to fight pollution.

Allowances traded under the EU's flagship emissions trading system (EU ETS) rose 2 per cent yesterday to hit an all-time high of €101 a tonne.

The threshold has been seen as psychologically important and a price at which companies may start looking more seriously at investing in expensive emerging technologies such as carbon capture and storage.

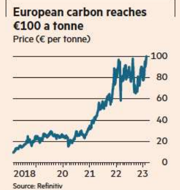
The price of carbon credits in the system — a core part of the bloc's net zero strategy which aims to put a price on pollution — has risen fivefold in the past three years, and gains have accelerated in recent weeks as the EU has tightened rules to make the system more onerous for polluters.

"The fundamental point about this market is the EU has cleared the way for higher prices as that is what is ultimately needed to meet their aims of cutting emissions," said Mark Lewis, head of climate research at hedge fund Andurand Capital Management.

New rules agreed in December and in the process of being ratified that will effectively see emissions allowed under the scheme falling to zero by 2039 are the "long-term structural bullish driver of this market", Lewis added.

Companies operating in the EU in certain sectors — including gas, coal power generation or industrial manufacturing — are obliged to buy carbon credits. Each one allows the emission of one tonne of carbon.

After languishing for much of the past decade, when a surplus of allowances built up following the financial crisis, the EU's carbon price has marched higher in the wake of the bloc's newly agreed carbon pricing rules as well as rising societal pressure for governments and businesses to curb pollution and limit warming.



Increased coal use during the energy crisis has also spurred buying as coal emits roughly twice as much carbon as gas when burnt.

EU lawmakers gave initial approval this year to new rules that would make the system tougher. The total number of allowances in the system will fall over time, and the number given out to polluters for free will also fall.

Vertis Environmental Finance said the recent rise in prices had been driven in part by utilities hedging their exposure and that demand for credits from industrial polluters had been "relatively muted".

Hedging activity could tick up since temperatures in northern Europe were forecast to drop below the average for this time of year next week, it said.

Redshaw Advisors also said last week that recent gains had come "despite" a slowdown in buying from polluters regulated under the system.

Some analysts said the €100 threshold would incentivise investments in emerging clean technologies such as carbon capture and hydrogen but major polluters warned of the impact that higher carbon prices might have on their businesses and on their ability to make investments.

Jori Ringman, director-general of the Confederation of European Paper Industries, said the price jump "came as a surprise to many and will affect the competitiveness of the EU's manufacturing sector", while the European Steel Association said high prices were "worrying in the current EU context of economic uncertainty and fragility".

EU lawmakers have designed the system to ensure that a portion of the money raised from credits goes towards the development of clean technologies and the decarbonisation of industry.

An academic study in the journal *Proceedings of the National Academy of Sciences* in 2020 found that the EU ETS drove a 4 per cent reduction in European emissions between 2008 and 2016.

But progress has mainly been made in the power sector as generators have switched from fossil fuels to renewables.

Solutions for "hard to abate" sectors, such as cement and steel, are more expensive and remain in their infancy.

See Lex

Financials

UK regulator calls for change of culture among e-money groups

LAURA NOONAN — LONDON

UK regulators have criticised e-money businesses for "poor" financial crime and fraud controls that can leave customers unable to access accounts.

The Financial Conduct Authority said a "significant shift in culture and behaviour" was needed ahead of new consumer protection rules this year.

The UK hosts more than 250 non-bank e-money businesses, including well-known names like Revolut and Wise that offer payments services, and smaller groups that serve more niche markets, such as New York's Payoneer, which was granted an operating licence last week.

They are not covered by the UK's Financial Services Compensation Scheme, which offers some protection to customers if they lose their money, and are not as tightly regulated as banks.

But from June, e-money groups will have to comply with a new "consumer duty" that puts the onus on them, and about 60,000 other financial services companies, to prove that good customer outcomes are central to their business.

"For many (e-money) firms, meeting the duty will require a significant shift in culture and behaviour," Matthew Long, the financial regulator's director of payment and digital assets, wrote in a letter to chief executives of e-money companies yesterday.

The sector has had recorded breakneck growth in recent years, winning millions of customers and challenging the dominance of high street banks, particularly in foreign exchange. But it has also faced criticism for treating customers badly and for weak controls.

"We continue to see poor financial crime controls in some payments and e-money firms," Long said in the letter, adding that some businesses "freeze a disproportionate number of accounts, for too long, and without adequate explanation" in response to potential fraud.

He urged companies to take better care of their customers by freezing accounts less frequently, investigating suspected fraud faster, communicating better with affected customers and supporting those "put in acute financial difficulty" by having their accounts frozen.

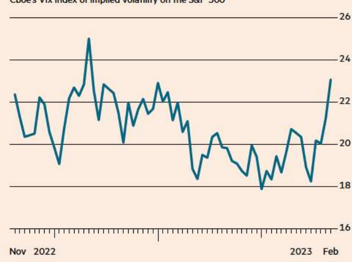
Additional reporting by Siddharth Venkataramakrishnan in London

The day in the markets

What you need to know

- Wall Street stocks tumble as investors fret over interest rate rises
- US Treasury yields jump after robust private sector activity surveys
- China equities consolidate strong start to trading week

US stock market volatility rises on interest rate fears
Cboe's Vix index of implied volatility on the S&P 500



Source: Refinitiv

Stocks fell and government bond yields rose in the US and Europe yesterday after further evidence that some of the biggest economies were more robust than expected, raising concerns that central banks would further increase interest rates to tame inflation.

In New York, the blue-chip S&P 500 fell 1.7 per cent while the Nasdaq Composite slid 2 per cent after a closely watched survey of US business activity surpassed market forecasts.

The Vix index, a measure of expected swings in US stocks, rose 8 percentage points to 23, its highest point of the year.

The US S&P Global composite purchasing managers' index reading of 50.2 was an eight-month high and ahead of market expectations of 47.5.

That was mirrored by other bullish readings in the eurozone earlier in the day. A level above 50 indicates industry growth.

The US survey provided further indications of the health of the economy following bumper payrolls and retail sales data in recent weeks.

Investors have been repricing global stocks lower and bond yields higher in expectations that central banks will keep rates higher for longer to curb inflation.

"Expectations of rate cuts later in the year were never very realistic," said Michael Metcalfe, head of macro strategy at State Street Global Markets. "There was an assumption that tightening would start to limit growth and now people seem to have flipped from expecting a recession to a boom in a short period of time, based on a few releases which, granted, all say the same thing."

The yield on the two-year Treasury note, which is most sensitive to interest rate changes, rose 9 basis points to 4.7 per cent, its highest level of the year and at levels last seen in 2007.

The yield on benchmark 10-year Treasuries rose 9bp to 3.9 per cent, its highest level since early November.

Across the Atlantic, the pan-regional Stoxx Europe 600 fell 0.2 per cent and Frankfurt's Xetra Dax shed 0.5 per cent after the S&P surveys for the eurozone also indicated private sector activity in the bloc was better than expected.

Brent crude oil fell 1.4 per cent to $82.89 a barrel while US equivalent WTI lost 0.1 per cent to $76.25 a barrel.

In Asia, the Hong Kong's Hang Seng fell 1.7 per cent but China's CSI 300 index of Shanghai and Shenzhen stocks gained 0.3 per cent after rising 2.5 per cent on Monday, its best one-day performance since late November. **Martha Muir**

Markets update

	US	Eurozone	Japan	UK	China	Brazil
Stocks	**S&P 500**	**Eurofirst 300**	**Nikkei 225**	**FTSE100**	**Shanghai Comp**	**Bovespa**
Level	4011.78	1831.43	27473.10	7977.75	3306.52	109176.92
% change on day	-1.65	-0.20	-0.21	-0.46	0.49	-0.70
Currency	**$ Index (DXY)**	**$ per €**	**Yen per $**	**$ per £**	**Rmb per $**	**Real per $**
Level	103.994	1.068	134.715	1.214	6.873	5.162
% change on day	0.127	-0.094	0.489	0.914	0.256	0.000
Govt. bonds	**10-year Treasury**	**10-year Bund**	**10-year JGB**	**10-year Gilt**	**10-year bond**	**10-year bond**
Yield	3.919	2.527	0.498	3.610	2.919	12.817
Basis point change on day	9.980	7.000	-0.180	14.200	0.300	0.000
World Index, Commods	**FTSE All-World**	**Oil - Brent**	**Oil - WTI**	**Gold**	**Silver**	**Metals (LMEX)**
Level	420.83	82.81	76.34	1845.80	21.71	4171.40
% change on day	-1.31	-1.50	-1.47	0.65	2.33	2.48

Yesterday's close apart from: Currencies = 16:00 GMT; S&P, Bovespa, All World, Oil = 17:00 GMT; Gold, Silver = London pm fix. Bond data supplied by Tullett Prebon.

Main equity markets

Biggest movers

%	US		Eurozone		UK	
Ups	General Mills	5.02	Rwe	2.30	Hsbc Holdings	4.32
	Molson Coors Beverage	3.09	Thales	2.21	Smith & Nephew	4.22
	Freeport-mcmoran	2.90	Edp	1.89	Bae Systems	1.96
	Organon & Co	2.73	Commerzbank	1.68	Burberry	1.81
	Campbell Soup	2.38	Novo Nordisk	1.68	Frasers	1.26
Downs	Nordson	-12.26	Raiffeisen Bank Internat	-3.67	Anglo American	-5.50
	Generac Holdings	-7.94	Jeronimo Martins	-3.23	Persimmon	-3.54
	Lumen	-7.47	Aegon	-2.44	Glencore	-3.16
	Carmax	-6.56	Galp Energia	-2.39	Prudential	-3.12
	Dish Network	-6.22	Casino Guichard	-2.39	Rightmove	-2.98

Prices taken at 17:00 GMT. Based on the constituents of the FTSE Eurofirst 300 Eurozone. All data provided by Morningstar unless otherwise noted.

Wall Street

Heading the S&P 500 index was consumer foods group **General Mills**, which raised its fiscal 2023 guidance, forecasting growth in net sales of about 10 per cent, up from the 8 to 9 per cent range stated in December.

The company said the upgrade reflected "continued strong in-market performance" for its portfolio that includes brands such as Cheerios cereal and Häagen-Dazs ice cream.

Do-it-yourself chain **Home Depot** sank despite its chief executive announcing "another record year" in 2022 and raising its quarterly dividend by 10 per cent.

But Home Depot's 2023 outlook disappointed analysts, with the retailer forecasting a decline in earnings per share in the "mid-single digits" — well short of the 0.4 per cent rise Wall Street had expected.

The US-listed shares of **Sigma Lithium** surged following a report that Tesla was considering making a takeover offer for the Canadian miner.

Bloomberg said Elon Musk's electric vehicle group had been in talks with potential advisers about a bid for the battery metals company.

Another major climber was movie theatre chain **AMC Entertainment**.

The so-called "meme stock" was among the top trending tickers on retail trading platform StockTwits. *Ray Douglas*

Europe

Lender **Credit Suisse** touched an all-time low following a report that the Swiss financial regulator was looking into comments made by the bank's chair.

Reuters said watchdog Finma was reviewing the accuracy of remarks made in December by Axel Lehmann, who said outflows at the lender had steadied.

Citi last week downgraded Credit Suisse to "neutral", citing "even heavier wealth management outflows than expected" in fourth-quarter results.

Spanish pharma group **Laboratorios Farmacéuticos Rovi** rose sharply after full-year results that were ahead of consensus estimates, driven by a 9 per cent beat in revenues from its contract manufacturing business, noted Jefferies.

Vague rumours of a potential takeover bid helped lift Sweden's **Electrolux**.

Italian newspaper *Il Foglio* ran an article about trade unionists seeking clarification on whether the home appliances group was about to be bought by Midea, a Chinese electrical appliance manufacturer.

The speculation, which was thought to have originated in another Italian outlet *Friulisera*, was reportedly labelled "unfounded" by Electrolux.

French utility **Engie** rallied after proposing a dividend at €1.40 per share for 2022, topping the €1.36 that Citi had forecast. *Ray Douglas*

London

Rallying to the top of the FTSE 100 index was Asia-focused lender **HSBC**, which reported a 41 per cent year-on-year jump in net interest income to $9.6bn in the fourth quarter — 6 per cent ahead of the consensus estimate, said Jefferies.

Providing a further fillip was a dividend at 32 cents per share for 2022 — up from 25 cents a year earlier — and a planned 21 cents special dividend for next year.

Joining HSBC at the top of the blue-chip benchmark was **Smith & Nephew**, buoyed by a forecast of 5 to 6 per cent revenue growth for this year, higher than the company-compiled consensus of 4.7 per cent.

Citi said S&N was among the best stocks to play the post-pandemic "recovery in surgical procedure volumes in the US and in China".

GB Group, a digital identity specialist, retreated after forecasting revenue of about £279mn for its financial year, missing the £292mn estimate that Numis had anticipated.

Chris Clark, chief executive, blamed this on "the difficult macroeconomic environment", highlighting the challenging conditions for GB's cryptocurrency and internet economy customers.

GB added that it had seen some "incremental lengthening of sales cycles" in North America. *Ray Douglas*

Neglected tool of central banks shows its worth

John Plender

Markets Insight

Money supply numbers have long been an orphan in the tool kit of the big central banks. This is unfortunate because the numbers have been sending important signals before and during the pandemic.

Economists at the Bank for International Settlements have found a statistically and economically significant correlation across a range of countries between excess money growth in 2020 and average inflation in 2021 and 2020.

You do not have to be a devotee of the quantity theory of money to see that the buoyancy of US house prices and equities last year was mostly about too much money chasing too few assets.

There is a reason for this central bankerly neglect of money. In the heyday of monetary targeting in the 1980s central bankers — most notably, Paul Volcker at the US Federal Reserve — were remarkably successful in bringing down inflation from record postwar levels after successive oil price shocks but this came at the cost of savage recessions. Subsequently the link between money supply and inflation weakened.

This was down to velocity, the measure of how often money changes hands. When this happened at a predictable pace, money and output grew together.

At the same time, there was a clear relationship between inflation and excess money growth — the difference between money growth and growth in real gross domestic product.

But as inflation came down in the 1980s and 1990s velocity became highly unstable, in part because of financial innovation and changes in regulation.

So the link between money supply and nominal GDP broke down and the information content of money supply numbers became a less helpful guide for policy. As trying to fathom the numbers became more complicated, monetarism went out of fashion. The exception was when central bankers confronted financial crises — where they reserved the right to turn on the monetary hosepipe.

Interpreting money numbers was once again conspicuously difficult after the financial crisis of 2007-09.

Monetarists warned that the stimulus from the Fed's asset buying would lead to rapid inflation. Yet velocity dropped sharply and the outcome was a strange combination of asset price inflation and the threat of deflation in prices of goods and services. Why, then, are the figures now telling a clearer story?

> As trying to fathom the numbers became more complicated, monetarism went out of fashion

In the recent BIS study, Claudio Borio, Boris Hofmann and Egon Zakrajšek found that the strength of the link between money growth and inflation across a large sample of advanced and emerging market countries depended on whether there was a high inflation regime or a low one. In a high inflation regime, the link was one to one; in a low regime it was virtually non-existent.

The BIS authors pointed out that the recent flare-up in inflation was preceded by an upsurge in money growth. Countries with stronger money growth saw markedly higher inflation.

Yet they cautioned against assuming causality, arguing that the debate on this had not been fully settled. But, they added, money growth data can still have useful information content for inflation.

There are many other reasons why central banks failed to foresee the inflation flare-up. Their economic models often relied heavily on extrapolations of the recent past and assumptions about the economic cycle.

Clearly the pandemic and the war in Ukraine were exceptional events that had nothing to do with any cycle.

At the same time, the central banks' asset purchasing programmes have distorted market expectations. Otmar Issing, former chief economist and board member of the European Central Bank, now at Goethe University in Frankfurt, argued that investors with higher inflation expectations have tended to sell their bonds to central banks at prices they regarded as high.

As a result, these inflation pessimists have been absent from financial markets, causing the thermometer of inflation expectations to read lower than the actual temperature.

A more obvious point is that central bankers badly underestimated the second-round effects of oil and food price rises in labour and other markets.

The risk of not looking at money now lies in the other direction. The Fed has been tightening, as have others.

Steve Hanke and Caleb Hofmann of Johns Hopkins University said that, by December last year, the three-month annualised growth rate of broad money (M2) in the US had sunk to a stunning minus 5.4 per cent, pushing the year-on-year growth rate into negative territory.

One conclusion: the equity market is too sanguine about avoiding recession. Another: time for a rethink about money.

john.plender@ft.com

MARCH 21ST & 22ND IN HAMBURG, GERMANY
THE FUTURE OF DIGITAL ADVERTISING
d3con is the largest conference tackling the future of digital advertising. Programmatic Advertising is the operating system that enables today's modern digital marketing strategies and unifies management and measurement for all marketing channels. Marketing automation and marketing AI are the trends that will allow us to control the complexities of the new marketing world in the future and open up new opportunities for successful advertisers.
Free live interpretation available for German language presentations
At d3con, you will have the chance to meet leading experts in Programmatic Advertising from all relevant backgrounds: advertisers, agencies, publishers and innovative technology and platform providers.
d3con
GET YOUR TICKETS AT D3CON.COM
Enter discount code: D3CONHH23
THE FUTURE OF DIGITAL ADVERTISING
Participating companies
SEAT, Burger King, DB, Douglas, T, Hapag-Lloyd, McDonald's, Melitta, AIDA, Beiersdorf, eventim, HUGO BOSS, Johnson & Johnson, OTTO, TikTok, Unilever, LG Electronics, zalando, L'ORÉAL, reckitt

MARKET DATA

WORLD MARKETS AT A GLANCE

FT.COM/MARKETSDATA

Change during previous day's trading (%)

S&P 500	Nasdaq Composite	Dow Jones Ind	FTSE 100	FTSE Eurofirst 300	Nikkei	Hang Seng	FTSE All World $	$ per €	$ per £	¥ per $	£ per €	Oil Brent $ Sep	Gold $
-1.65%	-2.06%	-1.62%	-0.46%	-0.20%	-0.21%	-1.71%	-1.31%	-0.094%	0.914%	0.489%	-0.901%	0.71%	0.65%

Stock Market movements over last 30 days, with the FTSE All-World in the same currency as a comparison

AMERICAS

S&P 500 (New York), Jan 22 - -: 3,972.61 → 4,011.78. Day -1.65% Month 0.74% Year -7.73%

Nasdaq Composite (New York): 11,140.43 → 11,544.99. Day -2.06% Month 5.65% Year -14.75%

Dow Jones Industrial (New York): 33,375.49 → 33,279.01. Day -1.62% Month -2.68% Year -2.36%

S&P/TSX COMP (Toronto), Jan 22 - Feb 21: 20,503.21 → 20,439.34. Day -1.10% Month 0.38% Year -3.42%

IPC (Mexico City): 53,947.04 → 53,845.25. Day -1.12% Month 0.11% Year 2.39%

Bovespa (São Paulo): 112,040.84 → 109,176.92. Day -0.70% Month -2.97% Year -3.83%

EUROPE

FTSE 100 (London), Jan 22 - Feb 21: 7,784.67 → 7,977.75. Day -0.46% Month 2.36% Year 6.60%

FTSE Eurofirst 300 (Europe): 1,794.14 → 1,831.43. Day -0.20% Month 3.04% Year 2.89%

CAC 40 (Paris): 7,032.02 → 7,308.65. Day -0.37% Month 4.77% Year 5.47%

Xetra Dax (Frankfurt), Jan 22 - Feb 21: 15,102.95 → 15,410.53. Day -0.52% Month 0.00% Year NaN%

Ibex 35 (Madrid): 8,944.10 → 9,252.10. Day -0.31% Month 6.03% Year 7.71%

FTSE MIB (Milan): 25,821.45 → 27,409.34. Day -0.68% Month 6.55% Year 3.44%

ASIA

Nikkei 225 (Tokyo), Jan 22 - Feb 21: 26,906.04 → 27,473.10. Day -0.21% Month 3.87% Year 1.30%

Hang Seng (Hong Kong): 22,044.65 → 20,529.49. Day -1.71% Month -4.56% Year -15.59%

Shanghai Composite (Shanghai): 3,227.59 → 3,306.52. Day 0.49% Month 4.52% Year -5.28%

Kospi (Seoul), Jan 22 - -: Day NaN% Month NaN% Year NaN%

FTSE Straits Times (Singapore): 3,276.18 → 3,306.86. Day -0.06% Month 1.11% Year -3.64%

BSE Sensex (Mumbai): 60,621.77 → 60,672.72. Day -0.03% Month 1.24% Year 4.96%

Country	Index	Latest	Previous
Argentina	Merval	248979.37	257866.49
Australia	All Ordinaries	7544.60	7552.50
	S&P/ASX 200	7336.30	7351.50
	S&P/ASX 200 Res	6213.20	6174.60
Austria	ATX	3487.92	3490.41
Belgium	BEL 20	3901.11	3927.08
	BEL Mid	9980.79	10046.31
Brazil	IBovespa	109176.92	109941.46
Canada	S&P/TSX 60	1223.61	1235.92
	S&P/TSX Comp	20288.92	20515.24
	S&P/TSX Div Met & Min	1794.76	1709.66
Chile	S&P/CLX IGPA Gen	27724.92	28016.43
China	FTSE A200	10900.21	10882.72
	FTSE B35	9000.71	8988.96
	Shanghai A	3465.92	3448.95
	Shanghai B	299.31	298.52
	Shanghai Comp	3306.52	3290.34
	Shenzhen A	2265.70	2261.40
	Shenzhen B	1234.90	1234.54
Colombia	COLCAP	1261.61	1260.21
Croatia	CROBEX	2013.05	2011.29
Cyprus	CSE M&P Gen	68.46	68.68
Czech Republic	PX	1388.72	1379.34
Denmark	OMXC Copenhagen 20	1943.12	1928.79
Egypt	EGX 30	17039.45	16814.00
Estonia	OMX Tallinn	1868.77	1879.04
Finland	OMX Helsinki General	11274.29	11302.52
France	CAC 40	7308.65	7335.61
	SBF 120	5595.69	5615.87
Germany	M-DAX	28710.28	28804.22
	TecDAX	3241.63	3266.20
	XETRA Dax	15397.62	15477.55
Greece	Athens Gen	1121.00	1123.23
	FTSE/ASE 20	2734.26	2734.82
Hong Kong	Hang Seng	20529.49	20886.96
	HS China Enterprise	6925.07	7063.94
	HSCC Red Chip	4040.85	4024.38
Hungary	Bux	45092.89	45225.86
India	BSE Sensex	60672.72	60691.54
	Nifty 500	14913.95	14936.65
Indonesia	Jakarta Comp	6873.41	6894.72
Ireland	ISEQ Overall	8232.39	8247.50
Israel	Tel Aviv 125	1810.63	1822.67
Italy	FTSE Italia All-Share	29653.97	29834.58
	FTSE Italia Mid Cap	44418.06	44558.66
	FTSE MIB	27409.34	27597.01
Japan	2nd Section	7228.27	7239.06
	Nikkei 225	27473.10	27531.94
	S&P Topix 150	1714.11	1717.77
	Topix	1997.46	1999.71
Jordan	Amman SE	2658.60	2652.59
Kenya	NSE 20	1671.20	1680.50
Kuwait	KSX Market Index	6633.44	6603.51
Latvia	OMX Riga	1198.68	1196.52
Lithuania	OMX Vilnius	996.57	998.58
Luxembourg	LuxX	1608.45	1617.04
Malaysia	FTSE Bursa KLCI	1474.01	1473.46
Mexico	IPC	53302.45	53908.55
Morocco	MASI	10691.34	10684.60
Netherlands	AEX	757.66	762.63
	AEX All Share	1037.59	1047.23
New Zealand	NZX 50	11801.49	11896.05
Nigeria	SE All Share	54224.35	53804.46
Norway	Oslo All Share	1017.37	1006.88
Pakistan	KSE 100	40949.64	40673.64
Philippines	Manila Comp	6800.96	6744.12
Poland	Wig	59564.48	60242.74
Portugal	PSI 20	6014.28	6020.17
	PSI General	4462.86	4464.51
Romania	BET Index	12346.82	12354.51
Russia	Micex Index	2436.57	2445.30
	RTX	1245.71	1212.57
Saudi-Arabia	TADAWUL All Share Index	10269.73	10370.97
Singapore	FTSE Straits Times	3306.86	3308.75
Slovakia	SAX	333.90	336.68
Slovenia	SBI TOP	-	-
South Africa	FTSE/JSE All Share	78811.05	79829.39
	FTSE/JSE Res 20	70542.89	72699.83
	FTSE/JSE Top 40	72785.85	73766.51
South Korea	Kospi	2458.96	2455.12
	Kospi 200	321.56	321.79
Spain	IBEX 35	9252.10	9281.30
Sri Lanka	CSE All Share	9146.35	9082.33
Sweden	OMX Stockholm 30	2223.49	2238.45
	OMX Stockholm AS	851.74	860.72
Switzerland	SMI Index	11282.16	11266.68
Taiwan	Weighted Pr	15563.00	15551.23
Thailand	Bangkok SET	1668.63	1657.69
Turkey	BIST 100	5149.39	5149.39
UAE	Abu Dhabi General Index	9222.93	9251.11
UK	FT 30	2743.00	2759.40
	FTSE 100	7977.75	8014.31
	FTSE 4Good UK	7224.21	7249.66
	FTSE All Share	4349.62	4375.01
	FTSE techMARK 100	6653.23	6645.26
USA	DJ Composite	11228.89	11443.16
	DJ Industrial	33279.01	33826.69
	DJ Transport	14703.31	15135.87
	DJ Utilities	944.63	953.61
	Nasdaq 100	12118.85	12358.19
	Nasdaq Cmp	11544.99	11787.27
	NYSE Comp	15619.62	15840.16
	S&P 500	4011.78	4079.09
	Wilshire 5000	40097.55	40819.56
Venezuela	IBC	27860.01	27872.43
Vietnam	VNI	1082.23	1086.69
Cross-Border	DJ Global Titans ($)	431.80	438.38
	Euro Stoxx 50 (Eur)	4248.89	4271.18
	Euronext 100 ID	1358.19	1365.30
	FTSE 4Good Global ($)	9856.47	9992.86
	FTSE All World ($)	420.83	426.41
	FTSE E300	1831.43	1835.09
	FTSE Eurotop 100	3608.17	3612.73
	FTSE Global 100 ($)	2579.20	2613.00
	FTSE Gold Min ($)	1711.47	1704.77
	FTSE Latibex Top (Eur)	4440.00	4432.20
	FTSE Multinationals ($)	2802.42	2799.46
	FTSE World ($)	763.83	773.90
	FTSEurofirst 100 (Eur)	4926.03	4935.28
	FTSEurofirst 80 (Eur)	5805.07	5837.86
	MSCI ACWI Fr ($)	646.14	645.03
	MSCI All World ($)	2783.26	2779.88
	MSCI Europe (Eur)	1887.00	1887.71
	MSCI Pacific ($)	2740.25	2724.38
	S&P Euro (Eur)	1910.16	1920.87
	S&P Europe 350 (Eur)	1879.70	1883.28
	S&P Global 1200 ($)	3037.99	3079.49
	Stoxx 50 (Eur)	3940.47	3937.85

(c) Closed. (u) Unavaliable. † Correction. ♥ Subject to official recalculation. For more index coverage please see www.ft.com/worldindices. A fuller version of this table is available on the ft.com research data archive.

STOCK MARKET: BIGGEST MOVERS

AMERICA

ACTIVE STOCKS	stock traded m's	close price	Day's change
Tesla	187.3	200.91	-7.40
Nvidia	40.7	208.88	-5.00
Apple	32.7	149.79	-2.76
Meta Platforms	31.0	173.54	0.66
Microsoft	26.4	251.85	-6.21
Amazon.com	21.5	94.42	-2.78
Walmart	16.4	147.27	0.83
Advanced Micro Devices	15.7	76.81	-1.89
Home Depot	14.1	299.39	-18.56
Alphabet	12.1	92.15	-2.20

LONDON

ACTIVE STOCKS	stock traded m's	close price	Day's change
Hsbc Holdings	289.3	647.50	26.80
Gsk	229.9	1481.80	6.80
Astrazeneca	214.9	11570.00	30.00
Barclays	196.3	171.42	-4.46
Prudential	184.3	1256.50	-40.50
Shell	156.9	2485.50	-36.50
Glencore	153.6	503.30	-16.40
Bp	145.8	550.30	-7.90
Rio Tinto	132.1	6204.00	-73.00
Relx	127.5	2491.00	6.00

EURO MARKETS

ACTIVE STOCKS	stock traded m's	close price	Day's change
Unicredit	385.2	18.60	-0.40
Roche Gs	351.9	285.01	1.87
Novartis N	332.2	81.62	0.88
Nestle N	323.9	110.83	0.08
Intesa Sanpaolo	308.1	2.55	0.00
Richemont N	240.5	146.04	0.81
Asml Holding	219.7	597.40	-6.20
Eni	168.4	14.27	-0.08
Novo Nordisk B A/s	150.3	134.35	2.22
Cs N	142.6	2.69	-0.12

TOKYO

ACTIVE STOCKS	stock traded m's	close price	Day's change
Mitsubishi Ufj Fin,.	692.4	983.20	-15.10
Nippon Steel & Sumitomo Metal	471.8	3076.00	-19.00
Sumitomo Mitsui Fin,.	465.1	5929.00	-71.00
Softbank .	326.7	5700.00	-29.00
Tokyo Electron	322.5	45360.00	-120.00
Toyota Motor	320.1	1890.00	-12.50
Fast Retailing Co.,	302.4	81540.00	-1130.00
Nippon Yusen Kabushiki Kaisha	275.8	3358.00	29.00
Mitsubishi	260.0	4756.00	81.00
Sony	243.5	11350.00	-90.00

BIGGEST MOVERS — Close price / Day's change / Day's chng%

UK MARKET WINNERS AND LOSERS

FTSE 100 Winners	Feb 21 price(p)	%Chg week	%Chg ytd
Flutter Entertainment	13840.00	8.4	22.6
Burberry	2582.00	7.8	27.0
Standard Chartered	771.80	7.0	24.8
Hsbc Holdings	647.50	6.3	25.7
Centrica	103.50	5.9	7.3
Frasers	804.00	5.8	13.2
Smith & Nephew	1210.50	5.1	8.8
Bae Systems	906.80	4.8	5.8
Vodafone	101.66	4.6	20.6
Entain	1377.00	4.3	4.2
Beazley	685.00	3.9	0.8
Coca-cola Hbc Ag	2108.00	3.4	7.0

FTSE 250 Winners	Feb 21 price(p)	%Chg week	%Chg ytd
Currys	78.95	10.2	46.0
Baltic Classifieds	155.20	9.3	10.2
Ferrexpo	144.90	8.2	-7.8
Wood (john)	151.00	7.0	11.7
888 Holdings	72.20	6.4	-
Watches Of Switzerland	875.00	6.3	6.6
Senior	157.00	5.9	25.4
Babcock Int	321.00	5.6	13.9
Darktrace	270.40	5.4	4.9
Wetherspoon (J.d.)	540.00	5.3	21.0
Drax	670.00	5.3	-4.3
Tbc Bank	2520.00	5.0	10.4

FTSE SmallCap Winners	Feb 21 price(p)	%Chg week	%Chg ytd
Hyve	100.00	21.2	34.6
Stv	307.50	9.8	9.6
Georgia Capital	820.00	8.6	12.3
Wanton	314.00	7.7	-6.8
Devro	328.00	6.8	6.5
Oxford Biomedica	527.00	6.4	19.1
Pod Point Holdings	65.85	6.2	8.0
Hollywood Bowl	250.50	4.6	0.6
Capital	108.00	3.8	12.8
Jpmorgan Us Smaller Co. Inv Tst	431.50	3.5	11.0
Civitas Social Housing	63.00	3.3	-0.2
Sthree	442.50	3.0	9.9

Industry Sectors Winners	Feb 21 price(p)	%Chg week	%Chg ytd
Personal Goods	36724.73	7.6	19.9
Aerospace & Defense	5543.57	3.8	8.1
Mobile Telecommunications	2541.67	3.0	19.1
Electricity	10898.80	2.8	2.4
Travel & Leisure	7395.59	2.3	19.0
Media	9970.99	2.2	9.7
Food Producers	6582.03	1.8	16.1
Beverages	27420.43	1.7	-1.5
Gas Water & Multiutilities Index	6046.73	1.7	6.8
Banks	3902.07	1.5	18.8
Tobacco	34470.44	1.3	-3.4
General Retailers	3376.08	1.2	0.1

CURRENCIES

FTSE ACTUARIES SHARE INDICES

FT 30 INDEX

FTSE SECTORS: LEADERS & LAGGARDS

FTSE 100 SUMMARY

FT WILSHIRE 5000 INDEX SERIES

FTSE GLOBAL EQUITY INDEX SERIES

UK STOCK MARKET TRADING DATA

Data provided by Morningstar | www.morningstar.co.uk

UK RIGHTS OFFERS

There are currently no rights offers by any companies listed on the LSE.

UK COMPANY RESULTS

UK RECENT EQUITY ISSUES

MARKET DATA

FT500: THE WORLD'S LARGEST COMPANIES

Stock	Price	Day Chg	52 Week High	52 Week Low	Yld	P/E	MCap m
Australia (A$)							
ANZ Bank	24.62	-0.12	27.96	20.78	5.79	10.91	50957.85
BHP Group	48.30	-0.16	53.72	35.83	8.05	11.99	168620.95
CmwBkAu	101.52	-0.71	111.38	86.98	3.26	20.18	118125.93
CSL	298.44	0.04	314.21	248.97	0.96	45.17	99177.57
NatAusBk	30.10	-0.20	33.75	25.43	2.82	16.95	65139.32
Telstra	4.16	-0.05	4.24	3.62	2.27	35.77	33125.04
Wesfarmers	49.77	-0.58	51.66	40.03	3.38	27.05	38894.87
Westpac Bank	22.84	-0.17	24.67	18.80	3.68	17.56	55233.64
Woolworths	36.72	-0.08	39.63	31.67	2.76	44.27	30783.72
Belgium (€)							
AnBshInBv	55.56	-0.01	58.72	45.56	0.92	29.05	103115.81
KBC Grp	70.90	0.30	75.26	45.53	4.63	12.08	31599.01
Brazil (R$)							
Ambev	13.20	0.12	16.88	12.60	4.24	20.07	40271.73
Bradesco	12.21	-0.01	17.72	11.43	6.75	5.69	11519.55
Cielo	5.20	-0.14	6.22	2.26	2.78	17.71	2736.54
ItauHldFin	22.90	0.07	26.04	18.86	3.36	9.12	21994.18
Petrobras	29.69	-0.46	42.08	23.61	16.05	4.26	42802.22
Vale	88.03	-1.16	107.11	61.90	14.65	3.96	81488.76
Canada (C$)							
Bausch Hlth	12.21	-0.59	31.28	5.10	-	-3.82	3273.99
BCE	60.98	-0.80	74.09	55.66	5.50	21.30	41208.34
BkMontrl	132.84	-2.34	154.47	113.73	3.26	10.66	69853.11
BkNvaS	71.90	-1.06	94.33	63.19	4.94	9.38	63486.55
Brookfield	58.88	11.29	63.88	41.26	1.09	19.91	69948.82
CanadPcR	103.94	-0.64	111.43	86.12	0.70	25.97	71665.19
CanImp	61.52	-1.00	82.83	53.58	9.35	4.45	41327.5
CanNatRs	75.30	0.25	88.18	58.75	2.54	12.17	61501.34
CanNatRy	157.70	0.48	175.39	137.26	1.49	23.90	78313.42
Enbridge	51.71	-0.67	59.69	48.88	6.19	18.82	77567.35
GtWestLif	36.27	-0.25	39.36	27.99	5.10	10.63	25045.98
ImpOil	68.62	1.05	79.83	52.28	1.44	20.59	29702.17
Manulife	26.80	-0.27	27.40	20.81	4.16	7.91	36901.3
Nutrien	101.74	1.04	147.93	93.43	2.19	15.24	37785.72
RylBkC	137.98	-0.81	144.15	116.75	3.09	12.79	141685.16
SHOP	55.69	-3.01	94.73	33.00	-	2.01	55189.96
Suncor En	45.82	1.23	53.62	36.23	2.19	17.27	45412.87
ThmReut	166.16	0.13	167.88	119.23	1.18	11.95	58613.6
TntoDom	91.54	-1.34	106.20	77.27	3.42	11.96	123574.12
TrnCan	55.30	-1.54	74.44	52.70	6.03	31.05	41712.62
China (HK$)							
AgricBkCh	2.79	-0.01	3.07	2.22	7.64	3.65	10931.96
Bk China	2.95	-	3.17	2.51	7.54	3.64	31445.32
BkofComm	4.78	-	5.74	3.84	7.31	3.94	21333.08
BOE Tech	0.68	0.07	0.86	0.55	-	10.93	17.25
Ch Coms Cons	4.12	-0.04	4.94	3.09	4.94	3.41	2320.5
Ch Evrbrght	2.33	-	3.01	2.04	10.28	3.14	3765.71
Ch Rail Cons	5.06	-0.02	5.61	3.75	5.18	2.68	1339.21
Ch Rail Gp	4.34	-0.04	5.88	3.48	4.74	3.48	2327.61
ChConstBk	4.99	0.01	6.00	4.12	7.44	3.62	152924.65
China Vanke	14.64	-0.08	21.50	9.96	9.72	6.58	3557.88
ChinaCitic	3.75	-0.02	4.08	2.92	7.48	3.47	7113.82
ChinaLife	14.02	-0.08	15.14	8.53	4.87	6.11	13298.42
ChinaMBank	45.50	-0.25	68.55	25.40	3.14	8.37	26626.81
ChinaMob	58.90	-0.20	59.45	46.85	5.47	9.06	153616.85
ChinaPcIns	22.95	-	23.70	12.10	5.72	7.46	8119
ChMinsheng	2.83	-0.02	3.16	2.19	8.69	3.65	3001.46
ChMrchSecs	14.22	-	16.49	12.06	3.07	12.71	15355.24
Chna Utd Coms	5.47	0.18	5.60	3.30	2.04	27.48	24640.82
ChShenEgy	23.90	0.35	27.65	18.20	8.57	7.23	10289.67
ChShpbldng	3.68	0.01	4.17	3.36	-	-273.94	11823.89
ChStConEng	5.77	0.08	6.40	4.67	3.72	4.48	34687.64
ChUncHK	6.16	0.15	6.22	3.27	2.55	13.53	24026.26
CNNC Intl	6.05	0.05	8.40	5.78	2.06	15.84	16582.5
CSR	3.62	-0.05	3.70	2.37	5.71	9.92	2016.98
Daqin	6.80	0.07	7.08	5.95	7.05	10.31	14708.46
GuosenSec	9.63	0.10	10.65	8.43	2.39	11.08	12367.41
HaitongSecs	5.28	-0.07	7.08	3.77	5.45	5.72	2294.78
Hngzh HikVDT	38.76	0.06	49.25	28.10	2.06	21.33	51366.25
Hunng Pwr	3.88	-0.10	4.80	2.62	5.09	-4.34	2324.76
IM Baotou Stl	2.10	0.06	2.75	1.75	-	35.80	9678.34
In&CmBkCh	4.03	-	4.87	3.37	7.54	3.68	44586.97
IndstrlBk	17.21	0.07	23.22	15.01	4.50	4.72	52016.46
Kweichow	1867	-8.00	2077	1359	1.03	42.11	341222.07
Midea	0.42	0.01	0.51	0.32	-	-4.55	16.12
New Ch Life Ins	20.60	-0.05	23.60	12.04	7.44	3.90	2715.45
PetroChina	4.19	0.02	4.49	3.01	5.70	8.43	11268.92
PingAnIns	57.35	-0.70	65.90	31.30	4.37	9.09	54445.06
PngAnBnk	14.10	-0.05	16.66	10.39	1.23	8.43	39808.93
Pwr Cons Corp	7.03	-	8.82	6.65	1.26	14.63	11242.01
SaicMtr	15.21	0.21	19.29	13.77	3.90	7.62	25854.45
ShenwanHong	0.10	0.00	0.18	0.06	-	2.95	112.31
ShgPdgBk	7.29	0.03	8.59	6.64	6.31	4.67	31131.8
Sinopec Corp	4.23	0.04	4.32	3.06	3.30	5.08	13361.88
Sinopec Oil	2.18	0.06	2.37	1.70	-	725.75	4303.8
Denmark (Kr)							
DanskeBk	156.85	1.90	156.95	91.28	1.22	11.25	19406.7
MollerMrsk	15970	-115.00	23940	13185	2.03	2.73	19188.4
NovoB	1000.2	16.50	1001.4	620.70	0.89	50.50	250116.61
Finland (€)							
Nokia	4.41	-0.02	5.20	4.12	-	15.95	26548.23
SampoA	45.96	0.26	49.97	35.85	3.55	10.25	25355.01
France (€)							
Airbus Grpe	122.82	-0.02	126.04	86.52	-	23.59	103424.43
AirLiquide	150.92	-1.16	153.40	114.48	1.74	29.19	84400.71
AXA	28.11	-0.18	28.96	20.34	4.85	9.92	70627
BNP Parib	65.40	-0.10	65.93	40.67	3.91	9.87	86243.12
ChristianDior	801.50	-3.00	819.50	513.00	0.83	30.66	154565.9
Cred Agr	11.62	-0.07	13.19	8.09	6.57	6.65	37771.14
Danone	52.31	0.05	58.14	46.48	3.54	18.65	37769.58
EDF	11.89	0.01	12.07	6.64	3.91	9.58	49363.84
Engie SA	14.25	0.66	14.68	9.79	3.55	10.52	37074.85
EssilorLuxottica	175.75	0.40	184.70	132.70	0.59	56.16	84051.64
Hermes Intl	1704	-10.00	1762	957.60	0.25	76.66	192186.36
LOreal	385.85	4.90	393.60	300.45	0.99	49.26	220616.8
LVMH	808.90	-4.70	830.00	535.00	0.83	35.49	433865.68
Orange	10.79	-0.04	11.94	9.08	5.31	3752.63	30658.19
PernodRic	199.30	1.25	203.50	166.60	1.49	31.53	54922.87
Renault	40.83	-0.73	43.96	20.47	-	-31.95	12899.66
Safran	134.36	-0.42	137.58	87.85	0.31	1408.36	61328.57
Sanofi	89.45	0.34	106.08	76.45	3.41	18.95	120490.76
Sant Gbn	53.10	-1.22	62.98	35.20	2.44	13.31	29260.08
Schneider	153.04	-3.52	159.62	110.02	1.62	28.29	93374.14
SocGen	27.28	-0.45	33.20	18.34	1.94	4.83	23554.99
Total	58.64	-0.29	60.93	43.60	4.39	11.81	156010.51
UnibailR	58.42	-0.68	73.09	39.68	-	-8.72	8660.43
Vinci	108.90	-0.18	109.92	80.74	2.36	25.31	66703.38
Vivendi	9.83	0.01	12.16	7.59	5.82	-18.40	11582.29
Germany (€)							
Allianz	217.40	-0.95	224.55	156.22	4.21	14.40	93673.7
BASF	52.49	-0.62	68.02	37.90	6.00	9.11	50125.47
Bayer	59.25	0.31	67.99	47.01	3.22	60.89	62187.38
BMW	98.70	-0.97	100.52	67.56	1.84	5.51	63478.26
Continental	68.78	-0.90	89.32	44.44	-	11.11	14696.71
Deut Bank	11.60	-0.04	13.91	7.46	-	11.96	25604.47
Deut Tlkm	20.91	0.11	20.97	14.47	2.74	25.19	111393.84
DeutsPost	40.23	-0.68	49.69	29.68	3.28	10.67	53247.97
E.ON	10.24	0.03	12.29	7.28	4.38	5.96	28895.87
Fresenius Med	37.16	-0.66	63.66	26.19	3.44	11.77	11632.28
Fresenius SE	28.85	-0.23	37.62	19.76	2.98	9.56	17214.15
HenkelKgaA	64.85	0.35	72.40	56.55	2.69	18.08	17999.36
Linde	306.00	2.90	334.70	244.00	1.16	49.83	161026.03
Mercedes-Benz	74.59	-0.28	77.07	50.19	1.73	7.82	85253.71
MuenchRkv	326.20	-4.30	334.10	205.15	2.87	16.34	48824.03
SAP	107.76	-1.52	112.28	81.35	1.64	25.33	141432.47
Siemens	143.74	-0.92	152.20	93.67	2.32	22.66	130530.33
Volkswgn	165.45	-2.35	255.60	144.35	2.77	5.86	52159.79
Hong Kong (HK$)							
AIA	82.50	-0.75	93.65	57.25	1.46	21.00	122916.24
BOC Hold	26.90	0.15	31.85	23.55	4.16	13.73	36253.64
Ch OSLnd&Inv	20.60	0.20	27.35	14.58	5.26	5.09	28740.06
ChngKng	50.25	0.25	57.00	42.90	3.18	11.44	23022.52
Citic Ltd	9.14	0.09	9.40	7.01	5.31	4.21	33892.48
Citic Secs	17.26	-0.06	19.60	11.82	2.50	8.84	5764.54
CK Hutchison	48.15	-0.10	58.45	38.80	4.27	6.07	23507.71
CNOOC	11.62	0.24	12.54	8.54	3.51	10.08	66027.55
HangSeng	128.20	4.10	165.20	110.00	4.29	20.51	31242.8
HK Exc&Clr	329.40	-3.40	427.40	208.20	2.51	36.93	53234.95
MTR	40.20	0.15	43.70	33.45	2.76	28.94	31781.35
SandsCh	27.65	-0.15	30.70	12.50	-	-30.37	28525.19
SHK Props	111.00	-0.30	115.90	83.10	4.02	12.61	41001.36
Tencent	361.80	-15.20	428.88	188.69	0.40	14.16	440818.03
India (Rs)							
Bhartiartl	779.05	-0.10	860.55	628.75	-	166.83	56132.87
HDFC Bk	1646.5	6.15	1722.1	1271.6	-	28.00	110925.8
Hind Unilevr	2516.15	4.70	2741.6	1927	1.27	67.61	71401.09
HsngDevFin	2666.4	10.50	2933.6	2026	0.86	22.76	58906.47
ICICI Bk	854.20	2.10	958.20	642.15	0.23	27.18	72014.87
Infosys	1579.5	-12.95	1923.3	1360	1.92	31.30	79122.15
ITC	382.25	-1.80	388.20	207.00	2.81	31.86	57310.67
L&T	2229.45	3.95	2273.3	1456.35	0.81	37.09	37840.27
OilNatGas	154.10	-0.75	189.80	119.85	5.90	4.38	23413.66
Reliancein	2434.1	19.70	2856.15	2222	0.29	27.94	198905.14
SBI NewA	523.45	-1.70	629.55	430.70	0.76	14.64	56420.95
SunPhrminds	971.60	-12.80	1072.15	789.90	0.77	36.32	28154.94
Tata Cons	3451	-36.30	3835.6	2950.1	1.05	33.06	152506.88
Israel (ILS)							
TevaPha	35.70	-0.58	38.52	23.83	-	29.60	11098.59
Italy (€)							
Enel	5.32	-0.04	6.66	3.96	6.58	25.91	57729.46
ENI	14.27	-0.08	14.98	10.43	4.51	6.30	54961.02
Generali	18.35	-0.02	21.55	13.67	7.64	10.80	30987.28
IntSPaolo	2.55	0.00	2.75	1.58	1.37	82.94	52996.78
Unicred	18.60	-0.40	19.77	7.75	0.62	28.95	44457.46
Japan (¥)							
AstellasPh	1904.5	18.50	2205	1782	2.53	28.01	25953.89
Bridgestne	5204	-18.00	5509	4042	3.34	11.56	27569.95
Canon	2966.5	6.00	3516	2538.5	3.45	14.02	29370.22
CntJpRwy	15145	-155.00	17920	14730	0.90	-27.74	23159.04
Denso	7423	37.00	8330	6389	1.98	19.87	43416.96
EastJpRwy	6821	-84.00	8290	6373	1.54	-6.69	19135.78
Fanuc	22450	-250.00	24930	18740	2.11	26.09	33647.82
FastRetail	81540	-1130.00	88230	54310	0.67	37.39	64204.03
Fuji Hvy Ind	2212	14.00	2684	1664.5	2.65	24.83	12629.75
Hitachi	7003	-47.00	7463	4750	1.72	10.03	48765.14
HondaMtr	3533	73.00	3755	3001	3.83	7.30	47506.05
JapanTob	2782	-6.50	2871.5	2000	5.15	13.84	41302
KDDI	4009	-30.00	4636	3671	3.14	13.12	68526.69
Keyence	57850	-400.00	62100	44880	0.36	47.23	104439.48
MitsbCp	4756	81.00	4845	3740	3.04	10.37	52043.46
MitsubEst	1007.78	-9.07	1023.46	876.51	-	-	-
MitsubishiEle	1545.5	-4.00	1551	1225.5	2.71	13.49	24633.49
MitsuiFud	919.32	-16.63	1007.12	684.38	-	-	-
MitUFJFin	983.20	-15.10	999.50	632.60	2.77	9.74	93879.44
Mizuho Fin	2128.5	-16.50	2154	1436.5	3.85	9.94	40120.2
Murata Mfg	7433	30.00	8811	6438	1.69	14.58	37287.26
Nippon TT	3965	-7.00	4128	3256	2.78	12.19	106604.92
Nissan Mt	537.80	13.60	589.60	408.10	-	16.88	16649.64
Nomura	572.00	6.20	573.90	460.30	4.22	-37.57	13729.71
Nppn Stl	3078	-19.00	3120	1838	2.73	4.64	21713.17
Panasonic	1181.5	1.00	1325	1006.5	2.22	11.41	21522.98
Seven & I	6069	-65.00	6187	5041	1.78	22.06	39934.8
ShnEtsuCh	19170	-40.00	19705	14185	1.59	17.54	57606.71
Softbank	5700	-29.00	7180	4210	0.81	4.68	72900.84
Sony	11350	-90.00	13105	9213	0.55	13.84	106248.59
SumitomoF	5929	-71.00	6017	3672	3.54	11.02	60502.13
Takeda Ph	4305	42.00	4319	3250	4.38	14.75	50564.39
TokioMarine	2900	33.50	2970.5	2037	7.95	4.50	43914.94
Toyota	1890	-12.50	2282.5	1787.5	2.83	8.14	228893.07
Mexico (Mex$)							
AmerMvl	18.95	-0.44	21.45	15.67	1.66	15.89	43519.56
FEMSA UBD	169.53	-2.67	177.41	120.63	1.15	143.73	19929.54
WalMrtMex	70.38	-0.02	82.93	64.81	0.69	36.37	66848.01
Netherlands (€)							
ASML Hld	596.90	-6.70	642.00	376.10	0.54	48.30	257081.27
Heineken	96.92	0.34	99.00	77.50	0.96	17.61	59642.08
ING	13.15	-0.02	13.42	7.90	4.35	11.20	52345.62
Unilever	48.14	0.70	49.09	39.36	2.98	24.71	147792.86
Norway (Kr)							
DNB	199.95	0.65	209.50	168.05	9.07	12.26	30398.14
Equinor	315.05	-4.75	410.95	265.25	1.63	13.03	97536.98
Telenor	116.30	0.15	136.50	87.60	8.07	18.64	15667.96
Qatar (QR)							
QatarNtBk	16.74	0.14	27.00	15.54	3.03	13.45	42457
Saudi Arabia (SR)							
AlRajhiBnk	74.20	-0.30	7317	0.00	2.90	14.05	79128.72
Natnlcombnk	47.60	-0.40	2070	0.00	2.73	17.64	56827.88
SaudiBasic	92.70	-1.50	2115	0.00	3.14	13.46	74143.2
SaudiTelec	35.00	-0.35	8490	0.00	10.23	6.91	46656.1
Singapore (S$)							
DBS	34.86	-0.06	36.63	29.45	3.14	15.17	67060.35
JardnMt US$	50.54	-0.31	60.90	42.60	3.05	9.38	14638.88
OCBC	13.04	-0.01	13.30	11.20	2.86	13.80	43807.04
SingTel	2.43	-0.01	2.88	2.36	2.74	43.55	29982.86
UOB	30.65	-0.02	32.62	25.91	2.87	14.48	38365.11
South Africa (R)							
Firstrand	65.05	0.12	79.34	59.16	4.14	11.33	20000.52
MTN Grp	144.51	0.71	211.49	115.46	-	18.96	14924.91
Naspers N	3232.63	-124.40	3510	1392.5	0.19	16.73	77165.93
South Korea (KRW)							
HyundMobis	215000	1500	231500	189500	1.82	8.58	15641.43
KoreaElePwr	18360	-160.00	25100	16500	6.53	-10.97	9094.49
SK Hynix	91200	-1300.00	130500	73100	1.65	6.67	51229.8
SmsungEl	62100	-600.00	73800	51800	2.27	11.00	286052.1
Spain (€)							
BBVA	6.97	-0.01	7.02	3.97	5.08	9.94	44889.94
BcoSantdr	3.52	0.01	3.57	2.32	2.07	7.40	63210.94
CaixaBnk	4.02	-0.05	4.14	2.45	0.64	27.68	32195.92
Iberdrola	10.96	0.05	11.49	8.47	3.67	19.71	75481.44
Inditex	28.44	-0.15	29.20	18.55	0.74	31.44	94696.26
Repsol	14.75	-0.23	16.23	10.98	3.88	9.42	21697.94
Telefonica	3.77	-0.02	5.06	3.22	8.76	2.88	23236.21
Sweden (SKr)							
AtlasCpcoB	108.84	-1.44	123.16	22.08	6.84	7.18	16481.76
Ericsson	59.15	-0.67	95.79	56.61	3.88	8.62	17631.07
H & M	127.34	-1.44	177.24	98.25	5.04	17.35	18045.3
Investor	200.75	-2.10	212.90	158.22	1.78	8.53	35484.24
Nordea Bk	129.52	1.52	129.86	85.25	11.51	14.94	45918.27
SEB	129.30	1.60	130.50	91.64	7.97	10.68	27027.48
SvnskaHn	108.10	0.05	112.90	80.88	4.72	10.49	20395.87
Swedbank	212.50	2.50	214.00	124.50	6.99	11.22	23337.5
Telia Co	26.14	-0.42	41.70	25.78	7.81	9.12	10371.39
Volvo	205.45	-2.00	213.85	148.24	3.23	13.23	31661.41
Switzerland (SFr)							
ABB	31.19	-0.26	32.22	23.84	2.43	15.62	66191.83
CredSuisse	2.66	-0.11	7.87	2.52	3.43	-4.35	11485.99
Nestle	109.62	0.08	127.00	103.42	2.28	19.86	325615.68
Novartis	80.73	0.87	88.42	73.32	3.40	9.15	209605.12
Richemont	144.45	0.80	147.60	90.28	1.23	35.95	81446.21
Roche	281.90	1.85	404.20	275.00	2.84	19.71	213925.71
Swiss Re	96.50	-0.98	98.76	66.18	5.58	24.33	33094.07
Swisscom	574.00	-1.20	587.40	443.40	3.49	17.82	32117.43
UBS	20.23	0.01	20.49	13.10	1.56	10.87	77018.12
Zurich Fin	440.80	1.10	461.70	376.20	4.14	15.33	71638.41
Taiwan (NT$)							
DunghwaTelecom	114.50	-0.50	132.50	105.50	3.68	25.32	29206.94
Formosa PetChem	85.60	1.00	103.50	75.20	0.68	16.75	26812.91
HonHaiPrc	102.50	-0.50	116.00	98.00	3.84	10.50	46724.38
MediaTek	725.00	-1.00	1120	533.00	5.03	10.48	38129.95
TaiwanSem	516.00	-1.00	630.00	370.00	2.04	20.87	439967.76
Thailand (THB)							
PTT Explor	33.25	0.25	40.25	30.75	5.64	9.46	27472.46
United Arab Emirates (Dhs)							
Emirtestele	24.30	0.70	38.98	11.60	2.75	27.17	57535.64
United Kingdom (p)							
Anglo American	3154	-183.50	4292.5	2487.5	5.65	6.25	51212.98
AscBrFd	1969	23.50	1974.5	1223	0.31	32.55	18747.1
AstraZen	11570	30.00	11816	8326	1.79	1958.02	217677.47
Aviva	441.80	-5.30	606.58	341.92	4.83	58.13	15063.19
Barclays	171.42	-4.46	202.35	132.06	1.75	4.16	33038.4
BP	550.30	-7.90	570.57	4.75	2.86	19.97	126897.09
BrAmTob	3155	-11.00	3645	2893	6.83	10.67	85634.77
BT	139.30	-3.05	199.25	110.55	-	13.52	16793.93
Compass	1924.5	15.50	1970.5	1494	0.73	46.82	40831.44
Diageo	3578.5	9.50	4067	3282.5	2.03	27.53	98291.72
GlaxoSmh	1481.8	6.80	2753.96	1280.92	5.40	17.11	73656.11
Glencore	503.30	-16.40	583.25	5.07	1.76	18.42	77338.2
HSBC	647.50	26.80	653.80	434.70	2.49	14.15	156957.1
Imperial Brands	2046	10.00	2185	1434.23	6.75	6.84	23069.13
Jardine Mathes	62.50	-	56.00	46.89	2.46	11.60	18103.08
LlydsBkg	50.97	-0.57	54.33	38.10	5.04	7.08	41707.95
LSE Group	7572	-16.00	8612	6230	1.01	77.42	46579.56
Natl Grid	1071	0.50	1271.45	844.29	4.59	24.97	47797.55
Natwest Group	279.60	-3.80	310.00	196.92	3.76	11.01	32836.87
Prudential	1256.5	-40.50	1357.5	782.40	0.94	20.41	41941.34
ReckittB	5720	22.00	6824	5400	3.05	-24.75	49701.68
RELX	2491	6.00	2551	2066	1.91	32.86	57719.63
RioTinto	6204	-73.00	6354	4436.95	8.10	6.49	94123.19
RollsRoyce	109.98	-1.82	122.10	64.44	-	74.82	11171.58
Shell PLC	2485.5	-38.50	2568.75	1833.4	2.44	13.10	209506.36
StandCh	771.80	3.20	797.40	431.30	1.15	17.31	27121.58
Tesco	249.80	-1.40	295.75	194.35	3.66	12.72	22192.43
Unilever	4238.5	29.00	4299.5	3267.5	3.42	21.76	130124.64
Vodafone	101.66	-1.10	136.00	83.24	7.61	-227.43	33470.41
WPP	1011	1.00	1202	713.00	2.62	19.26	13143.6
United States of America ($)							
21stC Fox A	36.60	-0.43	43.57	28.02	1.15	16.53	10867.17
3M	109.52	-3.47	154.66	107.07	4.84	12.07	60290.21
AbbottLb	104.59	-2.15	124.36	93.25	1.54	29.62	181770.23
Abbvie	151.60	0.29	175.91	134.09	3.07	26.22	268241.04
Accenture	289.42	-7.63	345.30	242.95	1.23	30.52	177383.03
Activision Bli.	76.41	-1.16	81.87	70.94	0.55	24.78	59800.4
Adobe	346.92	-9.93	479.21	274.73	-	36.08	158819.98
Advanced Micro	76.81	-1.69	125.67	54.57	-	33.34	123837.82
AEP	91.27	-1.14	105.60	80.30	2.95	20.53	46900.34
Aflac	68.36	-1.01	74.02	52.07	1.73	11.94	42505.47
AirProd	279.01	-0.71	328.56	216.24	1.93	32.70	61962.23
Allstate	133.48	-1.57	144.46	111.85	2.18	8.77	35149.25
Alphabet	92.15	-2.20	143.79	83.34	-	0.92	548845.4
Altria	47.41	-0.66	57.05	40.35	6.65	39.48	84966.9
Amazon	94.42	-2.78	170.83	81.43	-	1.63	967546.27
AmerAir	15.78	-0.59	21.42	11.65	-	-4.70	10252.19
AmerExpr	173.89	-3.41	197.75	130.65	0.96	18.84	129407.67
AmerIntGrp	59.80	-1.02	65.73	47.05	1.92	6.17	44087.39
AmerTower	204.66	-5.61	282.47	178.17	2.28	40.34	95288.51
Amgen	240.84	0.31	296.67	214.39	2.62	26.14	128602.84
Amphenol Corp	78.44	-2.59	82.86	61.67	0.89	34.87	46640.78
Analog Devices	187.89	-4.83	196.41	133.48	1.33	70.39	95221.52
Anthem	482.58	12.71	-	-	-	-	-
Aon Cp	304.99	-5.28	341.98	246.21	0.58	61.31	62566.37
Apple	149.79	-2.76	179.61	124.17	0.52	27.72	2369959.29
Applied Materl.	112.57	-2.88	142.01	71.12	0.76	17.33	94901.1
Aptiv	116.91	-2.73	144.72	77.96	-	67.24	31676.72
ArcherDan	81.47	-0.12	98.88	70.02	1.63	18.98	44646.27
AT&T	19.24	-0.21	22.84	14.46	9.69	7.78	137143.06
Autodesk	216.41	-3.57	235.01	163.20	-	106.78	46694.24
AutomData	224.59	-4.11	274.92	192.26	1.53	38.79	93058.51
AutoZone	2575.97	-29.65	2610.05	1703.32	-	25.97	48339.81
Avago Tech	584.71	-10.88	645.31	415.07	2.31	36.84	243779.44
BakerHu	30.01	-0.58	39.78	20.42	2.21	77.50	30346.64
Bank of NY	50.51	-0.99	57.46	36.22	2.31	13.61	40826.22
BankAm	34.48	-0.88	46.54	29.31	2.03	10.77	276573.35
Baxter	40.37	-0.63	86.96	38.58	2.41	17.80	20373.62
BectonDick	240.81	-3.71	277.29	215.90	1.25	46.48	68366.35
BerkshHat	459112.53	-8260.21	544389.26	393012.25	-	8.62	274010.29
Biogen	275.03	-3.35	311.88	187.16	-	29.51	39737.89
BlackRock	697.03	-19.13	788.65	503.12	2.12	20.35	104690.82
Boeing	206.67	-4.99	221.33	113.02	-	-32.25	123638.18

Stock	Price
Booking Holdings	2429.86
Bristol-Myers	71.08
Broadcom	584.71
Cadence Design	192.38
CapOne	108.07
CardinalHlth	78.49
Carnival	11.08
Caterpillar	243.10
Centene Corp	72.92
CharlesSch	79.85
Charter Comms	381.86
Chevron Corp	161.21
Chipotle Mexic.	1567.52
Chubb	208.77
Cigna	296.46
Cintas Corp	435.67
Cisco	49.82
Citigroup	49.68
CME Grp	187.49
Coca-Cola	60.09
Cognizant	63.94
ColgtPlm	74.60
Comcast	38.15
ConocPhil	104.57
Constellation	223.68
Corning	35.08
Corteva	60.56
Corteva	60.58
Costco	501.78
CrownCstl	137.17
CSX	30.79
CVS	88.03
Danaher	251.24
Deere	429.44
Delta	37.18
Devon Energy	53.40
Digital Realty	108.10
DiscFinServ	108.84
Disney	101.98
Dollar General	227.78
DominRes	58.45
DukeEner	98.71
DuPont	73.29
Eaton	170.86
eBay	48.40
Ecolab	158.92
Edwards Lifesc.	75.95
Eli Lilly	329.63
Emerson	82.20
EOG Res	118.24
Equinix	705.29
EquityResTP	64.52
Exelon	42.38
ExxonMb	110.98
Fedex	204.14
Fidelity NIS	66.98
Fiserv	114.68
FordMtr	12.36
Franklin	30.06
GenDyn	234.08
GenElectric	81.85
GenMills	80.63
GenMotors	41.78
GileadSci	85.26
GoldmSchs	361.62
Halliburton	36.28
HCA Hold	257.03
Hew-Pack	29.07
Hilton Worldwi.	144.79
HiltonWwde	144.79
HomeDep	299.39
Honywell	197.34
Humanalnc	508.56
IBM	132.35
IDEXX Laborato.	480.60
IllinoisTool	234.68
Illumina	206.07
IntcntlExch	104.05
Intel	26.43
Intuit	396.65
John&John	158.53
JohnsonCn	63.12
JPMrgnCh	139.49
Kimb-Clark	129.00
KinderM	17.46
KLA Corp	382.03
Kraft Heinz	39.86
Kroger	44.40
LasVegasSd	55.81
LibertyGbl	20.45
Lilly (E)	329.63

FT 500: TOP 20

	Close price	Prev price	Day change	Day change %	Week change	Week change %	Month change %
Bausch Hlth	12.78	12.80	-0.02	-0.16	3.22	33.4	29.70
BOE Tech	0.68	0.61	0.07	11.48	0.00	11.5	0.00
Nissan Mt	537.80	524.20	13.60	2.59	41.00	11.3	25.78
ChUncHK	6.16	6.01	0.15	2.50	0.42	10.2	16.89
FEMSA UBD	172.72	172.20	0.52	0.30	15.37	10.1	8.22
Chna Utd Coms	5.47	5.29	0.18	3.40	0.25	8.5	7.05
Nppn Stl	3076.00	3097.00	-19.00	-0.61	260.00	8.5	24.51
Orange	10.76	10.83	-0.07	-0.63	0.90	8.4	9.94
TokioMarine	2900.00	2866.50	33.50	1.17	182.50	8.0	4.62
Engie SA	14.26	13.59	0.67	4.93	0.35	7.7	7.23

FT 500: BOTTOM 20

	Close price	Prev price	Day change	Day change %	Week change	Week change %	Month change %
Devon Energy	53.40	53.33	0.07	0.13	-10.61	-16.5	-14.88
EOG Res	118.24	118.42	-0.19	-0.16	-14.71	-11.2	-6.75
SHOP	57.25	58.70	-1.45	-2.47	-5.74	-11.2	16.51
Advanced Micro	76.81	78.50	-1.69	-2.16	-7.45	-10.6	11.29
Occid Pet	58.71	60.73	-1.02	-1.68	-5.61	-10.0	-6.76
Barclays	171.42	175.88	-4.46	-2.54	-11.44	-6.5	-3.12
Natwest Group	279.60	283.40	-3.80	-1.34	-21.60	-8.3	-2.61
Adobe	346.92	356.85	-9.93	-2.78	-21.05	-8.2	1.18
ConocPhil	104.57	104.12	0.45	0.43	-9.43	-7.9	-11.47
Intel	26.43	27.61	-1.19	-4.29	-1.03	-7.7	-11.47

BONDS: HIGH YIELD & EMERGING MARKET

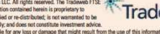
Feb 21	Red date	Coupon	S*	M*	F*	Bid price	Bid yield	Day's chge yield	Mth's chge yield
High Yield US$									
HCA Inc.	04/24	8.36	BB-	Ba2	BB	113.75	4.24	0.00	0.12
High Yield Euro									
Aldesa Financial Services S.A.	04/21	7.25	-	-	B	71.10	28.23	0.00	0.64
Emerging US$									
Peru	03/19	7.13	BBB+	A3	BBB+	104.40	2.60	-	-
Colombia	01/26	4.50	-	Baa2	BBB-	109.50	2.33	0.16	0.52
Brazil	04/26	6.00	-	Ba2	BB-	115.15	2.78	-0.01	0.65
Poland	04/26	3.25	-	A2	A-	111.22	0.98	0.03	0.16

Equity Research from Morningstar

Make confident investment decisions powered by our independent global insights and a consistent methodology across our qualitative and quantitative universes.

Get your next investing idea from one of the world's largest independent analyst teams at morningstar.com/products/research/institutional

M RNINGSTAR®



India's goddesses without power

Bengaluru's new Museum of Art and Photography opens with a show about the paradoxical status of women. By Rahul Jacob

It is rare for a museum director to cite economic development data while discussing their inaugural exhibition. But that is how Kamini Sawhney, head of the new Museum of Art and Photography in Bengaluru, decided on *Visible/Invisible: Representation of Women in Art Through the MAP Collection*. "In 2021, women dropped to 20 per cent of the workforce in India. That is lower than Bangladesh. There was a report from Statista that said that India was the most dangerous country for women across a range of parameters," Sawhney says. "I felt this is a narrative we need to pick up."

The resulting exhibition, curated by Sawhney, combines art, sculpture, quilts, movie posters and photography to tackle a monumental paradox in a land of paradoxes. Goddesses are ubiquitous and worshipped widely in the country's mythology; Indira Gandhi was one of the world's first women prime ministers in 1966, and many leading politicians are women. Yet most women have a de facto second-class status. MAP's debut exhibition tackles this weighty subject in both exhilarating and depressing fashion.

It begins with three magnificent sculptures of women deified as goddesses, one from 10th-century Karnataka, the province of which Bengaluru is the capital. The most recent work, meanwhile, such as a 1980s bronze by Meera Mukherjee entitled "Mother Earth", manages to project strength and compassion simultaneously.

In other work, the everyday undermining of the status of women is laid bare. Bollywood posters illustrate the sexual objectification of women in popular culture while the early 20th-century work of Bengali artist Jamini Roy exemplifies work that depicts women as Madonna-like mothers, always with a boy child, as in one piece featuring the god Krishna with his foster mother Yashoda. Ingeniously, these works are displayed near a photorealist charcoal work by Rajan Krishnan showing women in protest, holding up placards saying: "Why this overwhelming preference for a male child?"

Nearby are two photographs capturing another form of deification of women. The first, by Raghu Rai, shows Indira Gandhi surrounded by men seeking to photograph or garland her after she was elected prime minister again in 1980. The other, by Jyoti Bhatt, depicts a gigantic wall mural of Jayalalithaa, former chief minister of Tamil Nadu, whose male ministers were known to prostrate themselves before her.

> Bengaluru, despite its wealth, is especially poorly served by galleries and museums

These juxtapositions help provide validation for a new contemporary art museum that roams widely across tribal art and photography in a wide-angled thematic exhibition, typically not a strength of Indian museums. Bengaluru, despite its wealth and prominence as a back office to the world and home to start-ups, is especially poorly served by galleries and museums. Unlike MAP, the National Gallery of Modern Art is government-managed but haphazardly curated.

Yet the initial efforts by businessman and art collector Abhishek Poddar to open MAP in partnership with the local government sparked furious protests by local artists six years ago. This opposition centred around Poddar's background — his family business is in explosives used for mining — and the commerce-heavy board of MAP.

Poddar has one of the largest private collections of art in India. He has donated 7,000 works to MAP's total of 60,000 pieces, which range from poster art to textiles to tribal and folk masterpieces as well as contemporary art and photography. Poddar has a reputation for being a relentless fundraiser. "He just keeps at it. In India, you need that," says one keen observer of the art scene.

Poddar's family foundation paid for the land the museum stands on and its building was funded by private philanthropists and the foundations of Bengaluru's famous information technology companies. The five-storey museum is akin to a giant gift box, strikingly dressed in stainless steel panels with a cross pattern that helps reduce the weight of the panels while evoking a modern take on India's water tanks. Still, the site area for the museum is just 10,450 sq ft, the built area 33,900 sq ft. As a former art administrator says of MAP, "You could never have an Anish Kapoor exhibition here. The museum needed more space and height."

Yet architects Soumitro Ghosh and Nisha Mathew have succeeded in finding room for galleries, a conservation centre, library and auditorium — as well as a rooftop café with wonderful views of the surrounding greenery and, ironically, the government-run galleries. And Ghosh says MAP will function as "an anchor point that extends into other spaces into the city".

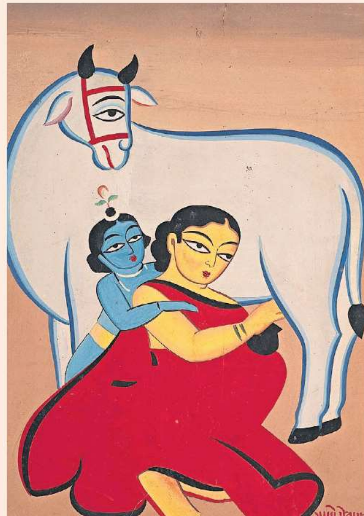
In a sense, it has already done so. Even before its opening on February 18, it had led workshops with some 9,000 schoolchildren from across the city. Because it was slated to open in December 2020 and was delayed by the pandemic, it built on a partnership with an established cultural venue, the Bangalore International Centre, to hold online talks that showcased different aspects of its collection. It also held online exhibitions. "Digital has been one of the gifts of Covid. MAP did a great job," says Suhanya Raffel, director of Hong Kong's M+, which has collaborated with the museum on workshops.

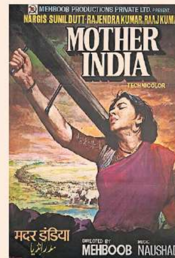
Yet for all that, the experience of art in a physical space is unparalleled, which is what makes the opening of MAP so exciting. Wandering through *Visible/Invisible*, it is possible to contemplate the female perception through a series of photographs of men taken by a woman photographer, Indu Antony, with their *mundus* (sarongs) folded above the knee in a manner few Indian women could imagine doing; the clustering of these bared male knees and calves makes them threatening and lewd and harks back to a childhood trauma.

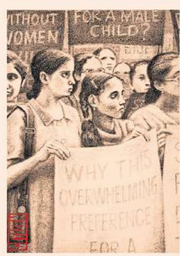
Another major exhibition features the photography of Jyoti Bhatt, better known as a painter. His black and white pictures of village women painting the walls of their huts with elaborate murals have some of the vibrancy of Satyajit Ray's early films, which found beauty amid the poverty of rural Bengal. In one photograph, a woman in Rajasthan, not content with a spectacular mural on the walls of her hut, is seen painting polka dots on the family cow.

One exits and enters MAP through a courtyard that currently features beautiful work by British sculptor Stephen Cox. The striking 1,200kg black statues made of Indian basalt, which have a life-like glow achieved by having oil poured over them, seem to meld Cox's love of Egypt with the temple icons of southern India (the artist has a studio in a temple town in Tamil Nadu). Intoxicated by the sight of these Indian-Egyptian yoginis, as regal as Isis, one steps back out on to the relentless honking of Bengaluru's streets, which leaves one doubly grateful for this elegant new space in which to appreciate art.

map-india.org







Clockwise, from below left: Rajan Krishnan's 'Citizens' (2003); Jamini Roy's 'Krishna Yashoda' (early 20th century); computer rendering of the Museum of Art and Photography; 'Mother India' film poster (1957)

'A woman from the Meena community decorating a bullock for the Govardhan festival' (Rajasthan) (1969) by Jyoti Bhatt

PUTIN'S WAR ON UKRAINE: ONE YEAR ON

How and when will it end?

23 February | 13:00-14:00 GMT | Webinar | Exclusive for FT subscribers

As Vladimir Putin's brutal war to subdue Ukraine enters its second year, join **Financial Times** correspondents and special guests for a subscriber-only webinar as they debate how and when the war might end.

Expert speakers include:

Andriy Zagorodnyuk, Former Ukraine Defence Minister & Distinguished Fellow, Eurasia Centre, Atlantic Council; Chairman Centre for Defence Strategies

Ekaterina Schulmann, Richard von Weizacker Fellow, Robert Bosch Academy, Berlin

Sergey Aleksashenko, Former Deputy Governor Central Bank of Russia; Independent Consultant Washington DC

Christopher Miller, Ukraine Correspondent, Financial Times

Ben Hall, Europe Editor, Financial Times

Scan to join for free

Register for free and put your question to our expert panel **ukraine.live.ft.com**

Young Dylan pursues a familiar path

POP

Dylan
Shepherd's Bush Empire, London
★★★★☆

Ludovic Hunter-Tilney

Any muddled Bobcats present at the Shepherd's Bush Empire to see Dylan were in for a surprise. The preponderance of teenage girls was the first sign that something might be amiss. Then there was the large lit-up heart sign at the back of the stage, glowing white, red and, when things got sad, blue.

Finally there was the identity of Dylan herself: aka Natasha Woods, a 23-year-old from Suffolk currently making a name for herself in the sharp-elbowed hustle of UK pop. "I really hope no one came here expecting a Bob Dylan gig," she announced from the stage. Cue quizzical looks from the teenagers. Who?

The new Dylan has a growing fan base with the kind of devotees who queue outside a venue for hours in order to get to the front. Last year she signed a major label deal, supported fellow Suffolkian Ed Sheeran at Wembley Stadium and released a debut mixtape that charted in the UK top 20. She gave a double fist pump as she told us about a BBC Radio 1 DJ's support for her latest single. For all the novelty of TikTok and so on, the music-biz treadmill of constant gigging, broadcast patronage and new releases isn't so different from the 1960s. The screaming sounds the same too.

Dylan takes her stage name from what she would have been called had she been a boy. Her father — present in the audience and serenaded with a "Happy Birthday" — plied his offspring's impressionable ears with AC/DC and Aerosmith when she was small. This dadrock gift was catalysed into songcraft by her discovery of Taylor Swift when she was 15. The result, on the first of two nights at the Empire, was a singer in hard-rock garb with an electric guitar performing Swift-style songs about love's entanglements. She was accompanied by two other musicians, Rosie Botterill on lead guitar and drummer Connor Hopkins. The live music was supplemented by pre-recorded backing tracks.

"Nineteen" was preceded by Dylan hushing the venue so a couple at the foot of the stage could conduct a successful marriage proposal. ("Oh my God!" a voice cried in high excitement behind me, "I've never seen a proposal before!") None of the songs' scenarios ended that way. Instead, they dramatised earlier stages of romance, a youthful procession of infatuations and heartbreak.

The heart-shaped light went blue for "Home Is Where the Heart Is", a lament about the loneliness of life on the pop treadmill. But mostly it flashed red or white as Dylan sang surging pop-rock anthems with confiding verses and singalong choruses. She was an engaging performer, one moment projecting the un-Dylanesque but very Swiftian quality of likeability, the next throwing flamboyant guitar-heroine poses.

A brief setlist of barely an hour dashed by, a stepping stone towards the next and no doubt bigger stage of a burgeoning career.

iamdylanofficial.com

Dylan — aka Natasha Woods — on stage at the Shepherd's Bush Empire
Wireimage

2023/2/22 19:18 Financial Times Asia

FT BIG READ. GLOBAL ECONOMY

Shareholders say the resignation of president David Malpass will push the multilateral development bank to put climate change at the centre of its operations. The scale of the task is formidable.

By Aime Williams and Camilla Hodgson

A greener mission for the World Bank

At a small rural farm about an hour's drive from the Zambian capital city of Lusaka in late January, US Treasury secretary Janet Yellen stood before a gathering of farmers and told them she understood the destruction that global warming was causing.

"We know that over the past decade, storms, floods and droughts in Africa have increased in severity and frequency," Yellen told her audience in Chongwe. "Climate change is not just a future threat; it is already here."

Her remarks stood in stark contrast with those made last year by another of America's most senior economists: David Malpass, president of the World Bank. The multilateral lender, created with the twin goals of alleviating poverty and pursuing shared global prosperity, was increasingly being asked to help tackle the impact of climate change too.

Yet, when asked at a September event if he believes in human-made global warming, the Trump appointee repeatedly dodged the question. "I'm not a scientist," he said.

The comment sparked a furore and sharpened criticism of the World Bank for not taking the scale of the climate crisis seriously. Although Malpass later walked back the remark, Al Gore, former vice-president of the US, the bank's largest shareholder, was among those calling on the Biden administration to fire him.

The pressure on the World Bank chief only grew more intense from there. In mid-October, 10 countries — the G7 plus Australia, the Netherlands and Switzerland — submitted a paper to the World Bank urging it to "refresh its vision" and align itself with the goals of the Paris Agreement to reduce global greenhouse gas emissions.

A plan outlined by the bank early in January for how it would incorporate climate change and other global issues such as pandemic preparedness, into its work was dismissed by major shareholders as being not ambitious enough.

Then on Tuesday, a few weeks after Yellen's return from Zambia, Malpass made a call to the US Treasury to say he would end his term in June, almost a year early.

Officials were caught on the back foot. Although frustrated with the slow pace of change at the bank, in closed-door meetings in Washington, Yellen had argued that removing an official appointed by Biden's predecessor would set a bad political precedent.

Yellen and many others view alleviating poverty and tackling climate change as a unified ambition, rather than distinct goals. Now, many of the World Bank's member countries want climate to be at the centre of its mission, and not at the periphery.

Less wealthy nations have been pushing for better lending terms and other support to help them adapt to rising sea levels and more extreme weather events, and pay for the transition to clean energy systems.

"For us, climate is development, climate is poverty — so the distinction is not that obvious," says Ali Mohamed, climate adviser to Kenyan president William Ruto. "Climate change has affected every sphere of human development and livelihoods."

Wealthier countries, meanwhile, are increasingly looking to the World Bank as a source of international climate finance on a scale they cannot provide, as they confront difficult questions about who should pay for the catastrophic impacts of hurricanes, floods and wildfires.

The scale of the task is formidable: $125tn of climate investment will be needed by 2050 if the world is to slash emissions and meet the Paris Agreement goals of limiting warming to well below 2C, according to research commissioned by the UN high-level climate action champions.

"If we really want this [climate] agenda to move, there is no other way other than to have the multilateral development banks [MDBs] expand considerably," says Homi Kharas, a senior fellow in the Center for Sustainable Development, housed in the global economy and development programme at Brookings. Given its size and influence, he adds, "it all starts with the World Bank."

The US traditionally appoints the World Bank president, and is now racing to draw up a shortlist of candidates with climate credentials who could refashion the bank while balancing the interests of its almost 200 member states.

Among many shareholders and climate-minded bank officials, a period of turbulence is receding in favour of optimism that Malpass's successor might mean the start of a new era.

"There's a great hope that whoever comes next can meet the moment on climate change," says one development official. Yet for others, there are fears that a new climate-oriented mission might distract from the bank's traditional development mandate.

Above: David Malpass, whose resignation raised hopes among critics that more will be done to address climate change. Below: Mia Mottley, prime minister of Barbados, is seeking a new economic compact that enables smaller nations to tackle the climate crisis without falling into unsustainable debt
FT montage; AFP/Getty Images/Dreamstime

The Bridgetown agenda

The seeds of the World Bank and its sister organisation the IMF were sown at the Bretton Woods conference in 1944, to help the world recover from the economic ravages of war and create a new monetary system.

Almost 80 years on, some say it's time for a new global economic compact designed to tackle the existential threat of climate change. One of the leading voices is Mia Mottley, the prime minister of Barbados, who has called for "a new internationalism", and argued that the Bretton Woods institutions "no longer serve the purpose in the 21st century that they served in the 20th century".

Mottley, whose campaign has been called "the Bridgetown agenda", has pushed for a greater use of concessional finance such as low-interest, long-term debt instruments to finance clean-energy development across the world, as well as climate-resilient infrastructure. Smaller nations must be able to tackle climate change without falling into unsustainable debt, she argues.

Other countries have called on MDBs to fund investments that benefit countries worldwide — and, in particular, to help rapidly growing middle-income countries shift their economies away from coal, the most polluting fossil fuel.

In response to these and other calls, the World Bank produced an "evolution road map" that explored what more it could do to tackle climate change and other globally important catastrophes.

The bank suggested that in order for it to continue financing the world's poorest countries, while also lending more to middle-income nations, it would need an injection of cash from shareholders.

But the plea for more cash was universally criticised by the bank's big donor shareholders, including the US, which have had budgets squeezed by the pandemic, inflation and an energy crisis.

Joe Thwaites, an international climate finance advocate at non-profit the Natural Resources Defense Council, said the road map was a "combination of navel gazing and finger pointing . . . Fundamentally, it doesn't strike me as grasping the scale of the problem."

A senior government official at the German ministry for economic co-operation and development agrees, saying: "I would not say that the bank hasn't progressed. But the bank is not where the bank should be."

The World Bank says discussions around the road map were "a shareholder-led process" and added that the bank would not comment on the views of its shareholders.

According to the bank, it increased its climate finance from $10.9bn to $31.7bn over the past seven years. Although the bank's climate finance measured as a proportion of its overall lending has steadily increased, according to independent analysis by climate group NRDC, it still lags behind three other large MDBs, including the European Investment Bank and the African Development Bank.

Spending better

Rather than give it more money, G7 countries are pushing for the World Bank to look at how it could free up more cash from its balance sheets to supercharge climate spending.

One person close to discussions about how to reform the bank says G7 representatives are "concentrating on the idea that the World Bank needs to spend better before it gets more money".

Historically, the World Bank has turned relatively modest sums into bigger numbers, according to an independent review of MDBs commissioned by the G20 and published last year.

Between 1944 and June 2021, shareholder countries contributed $19.2bn capital in total to its main lending facility, the International Bank for Reconstruction and Development. With that capital, IBRD has issued more than $750bn in loans and $23bn in grants to the world's poorest countries, as well as covering the costs of its global development data and research.

But the G20 report said that the MDBs could do more still if they took certain steps. With "very manageable changes to risk tolerance" they could boost their lending capacity by "several hundreds of billions of dollars over the medium term" while still maintaining their credit ratings.

The World Bank has for decades maintained that holding a triple A rating from all three major credit rating agencies is essential for its operations. Shareholders, too, benefit from the bank being able to access low-cost funding from bond markets, which is where the bulk of the bank's funding comes from, and developing countries have warned against losing the rating.

But the report said the MDBs were possibly being more conservative than they needed to be to maintain a top triple-A credit rating. Shareholders ought to reconsider how much risk they wanted the institutions to take, it said, and consider allowing the banks to make changes such as adjusting the amount of capital they held against loans and how they treated their "callable capital", or money they could summon from shareholders in the event of a financial emergency.

Avinash Persaud, climate adviser to Barbados leader Mottley, says the report highlighted that "if you need to get to a totally different type of scale of lending, you can't do it using the old fashioned approach of paid-in capital".

'For very modest sums, you could double the [World Bank's] lending. It could have an enormous effect'

If the World Bank takes up the G20 reforms and can convince countries to increase capital, then even a modest injection would have a huge impact, says Lord Nicholas Stern, one of the institution's former chief economists.

"What people don't understand is how much value for money is in a capital increase," says Stern, who is chair of the Grantham Research Institute at LSE. "For very modest sums, you could double the [World Bank's] lending. It could have an enormous effect."

Although the bank has publicly welcomed the G20's recommendations, multiple shareholders told the Financial Times that the institution had not yet started exploring its most ambitious proposals. Two shareholders say there were concerns that the bank was "slow walking" the recommendations.

The cost of change

Not all countries, particularly those that primarily borrow from the World Bank, are comfortable with the institution taking on a greener hue.

Some large fossil fuel-reliant shareholders — including the petrostate Saudi Arabia plus Russia and India, along with major African and Latin American countries — are pushing back against the bank morphing into a "green bank".

Others are worried that a focus on climate may come at the expense of money for development, or result in more money for middle-income nations and less for the very poorest.

Amar Bhattacharya, a senior fellow in the Center for Sustainable Development, says some developing countries feel that "the climate agenda is being imposed on them".

"They see an element of luxury in the climate agenda that we are trying to push," he says. "As one executive director said to me, 'I don't want the World Bank to stop doing what it's doing in health and education.'"

A recent note by the G11 group of developing nations about potential World Bank reforms, seen by the FT, said that "promoting development is at the very reason for each World Bank Group institution's existence". It was important that they remained "focused on the purpose for which they were established".

The note was signed by countries including Brazil, Pakistan, India, Indonesia, China, Saudi Arabia, Russia and more than two dozen African nations.

Faten Aggad, an adviser at the African Climate Foundation, says there were also concerns among some developing nations that rich countries were looking to "shift" their responsibilities for providing climate finance "to the multilateral development banks".

Supporters of reform insist this is not an either/or proposition. "There's no horse race between climate on the one hand and development and poverty on the other," says Stern. "Sometimes it's set up that way . . . I think that's a very serious mistake. If we fail on one we fail on the other."

Looking ahead

Malpass's departure has cleared the way for the US to propose a president with the financial markets literacy to study how far the bank can comfortably adjust its business model and formalise its commitment to tackling climate change.

The US Treasury is drawing up a shortlist of potential successors that is expected to include Samantha Power, head of the US Agency for International Development, Rockefeller Foundation president Rajiv Shah and World Trade Organization director-general Ngozi Okonjo-Iweala.

The next flashpoint is the bank's spring meetings, to be held in Washington DC in April, where it will be under intense pressure from the US and others to outline more concrete plans for improving its response to climate change.

"There are crunch discussions and decisions coming in the spring meetings," says Stern. The US has suggested that "easy wins" could be implementing some of the smaller points in the G20-commissioned report, such as slightly lowering the bank's equity-to-loan ratio and using hybrid capital instruments. Malpass said last week that the bank's shareholders were already considering proposals to lower the lender's equity-to-loan ratio by 1 percentage point, in a move that could free up about $4bn.

Yellen has also urged the World Bank to engage in "stronger" mobilisation of private finance, and some shareholders want reforms to include new targets for the institution linked to how much private capital the bank leverages.

Another G7 shareholder says more difficult conversations — around how the bank assessed risk, for example — could now be accelerated.

"Shareholders feel a sense of resolve," says Persaud, Mottley's climate adviser. "We want to raise back the ambition that somehow went into retreat."

https://ft.pressreader.com/v99f/20230222 15/18

The FT View

FINANCIAL TIMES
'Without fear and without favour'

ft.com/opinion

Generative AI should make haste slowly

With care, latest tech frenzy can be used for creative and productive ends

Tech companies are adopting three different approaches to releasing generative AI models: the cautious, the clever and the possibly crazy. Whichever approach prevails may well determine who makes the most money out of the artificial intelligence revolution, but it may also have far broader implications.

For years, tech companies have experimented with powerful generative AI models, which can almost magically conjure up text, images and code when prompted. But the Silicon Valley giants have been wary of opening up these models to the public for fear of embarrassing blowback. Google, which probably boasts the most AI expertise, has been notably cautious in giving access to its technology, although it has now released, somewhat clumsily, its own Bard model. Last November, Meta pulled its Galactica AI service three days after launch. Users were quick to ridicule Galactica — designed to summarise academic papers and generate articles — for spewing out nonsense. Shortly afterwards, OpenAI, the San Francisco-based research company, had a storming success with the launch of its ChatGPT model. Within two months, it had been tried by 100mn users, one of the fastest ever take-ups of a consumer internet service. The move triggered an explosion of investor interest. OpenAI has attracted a further $10bn of investment from Microsoft, at a $29bn valuation.

OpenAI was able to launch its model with relatively little embarrassment because it had built in some basic guardrails to prevent its model being maliciously exploited. Before release, OpenAI had fine-tuned its model by employing a technique known as Reinforcement Learning with Human Feedback. Humans helped train the model to reduce the chances it would generate toxic content. The millions of users who have since experimented with ChatGPT provided priceless real-world feedback, allowing OpenAI to pursue further iterative deployment.

Some researchers argue that the reluctance of big tech companies to release generative AI models stems from these dominant firms wanting to preserve competitive moats. They also claim that human guardrails on generative models, such as those instituted by OpenAI, amount to censorship. Far better for free market competition and free speech if these models are released unencumbered into the world. Scores of start-ups are now doing precisely that in a burst of creative, and somewhat crazy, deployment. The investment firm NFX has already identified 450 start-ups looking to commercialise the technology that has collectively raised about $12bn of funding.

Regulators are watching this latest frenzy with bewilderment. Generative AI models can be used for many creative end purposes. But they can also pump out industrial quantities of disinformation. Not to mention the disconcerting content Microsoft's Bing chatbot displayed in recent interactions with a New York Times columnist, professing to love him and admitting it harboured desires to hack computers and break free of its parent company's rules. But it is hard to know how regulators could intervene even if they so desired. Technology cannot simply be uninvented.

One sensible provision contained in the EU's directive is to outlaw companies that try to pass off bots as humans

One sensible provision contained in the EU's AI directive is to outlaw companies that try to pass off bots as humans. It should be made clear to users whenever they interact with an AI-enabled technology. Beyond that, it is important for users to recognise generative AI models for what they are: mindless, probabilistic bots that have no intelligence, sentience or contextual understanding. They should be viewed as technological tools but should never masquerade as humans.

Opinion Science

A cosmic death spiral may reveal the age of the universe

Andy Carter

Anjana Ahuja

In 2017, scientists detected an extraordinary cosmic event around 140mn light years from Earth. Two neutron stars in a binary system, each with a mass comparable to that of the Sun but compressed into the size of a city, had been rotating around each other uneventfully for 11bn years in ever decreasing circles. Then, in an instant, the superdense duo entered a ferocious death spiral, spinning around each other 100 times a second, before colliding and exploding.

This so-called kilonova event created a black hole and a fresh mystery. A new analysis published in Nature this month shows that the resulting blast was perfectly spherical, rather than pancake-shaped as expected. The clash with prediction hints at the possibility of unexplained physics occurring inside extreme cosmic environments. The geometry of the blast may also offer a promising new method of measuring the age of the universe.

Kilonovas can be thought of as the visually dimmer but more violent cousins of supernovas

Kilonovas can be thought of as the visually dimmer but more violent cousins of supernovas. Both phenomena involve temporary stellar brightening. Broadly, a supernova happens either when a massive star runs out of fuel and collapses; or when it accumulates material from a neighbour, sparking a runaway nuclear reaction.

In contrast, a kilonova happens when a neutron star, itself the collapsed core of a massive star, collides with either another neutron star or with a black hole. The brief, explosive union becomes a transient heavy metal factory, pumping out elements such as gold, platinum and uranium, and energetically scattering them across the universe. The precious metals mined on Earth today came, scientists think, from meteorites raining down from space.

Studying kilonovas can help to illuminate how some of the heavier elements in the periodic table were created, according to Albert Sneppen, a researcher at the Cosmic Dawn Center at the University of Copenhagen, who led this particular study with his colleague Darach Watson. But, Sneppen adds, the unexpectedly symmetrical explosion additionally hints at as-yet-unknown physics in the heart of the collision, which he describes as featuring "the highest densities in the universe, temperatures of billions of degrees, and magnetic fields strong enough to distort the shapes of atoms". One theory is that the core of the merger contains more energy than predicted, powerfully smoothing out irregularities as material is blown off.

While the ball-shaped blast is at odds with computer predictions of a flattened disk, says co-author Stuart Sim, an astrophysicist at Queen's University Belfast, the surprising symmetry could lead to an unanticipated spin-off: a cleaner measurement of the Hubble constant. This number, one of the most important in cosmology, allows researchers to variously calculate how rapidly the universe is expanding, the age of the cosmos, and phenomena such as dark matter and dark energy. While the universe is generally thought to be around 13.8bn years old, different methods yield answers that vary by as much as a billion years.

Estimating the Hubble constant partly relies on measuring the distance of faraway astrophysical objects, such as supernovas. But, Sim explains, "measuring distances to astrophysical sources is difficult. For nearby stars you can do it, but for most things you can't. If these kilonovas are as simple and symmetrical as this analysis suggests, then . . . that would allow you to infer their distances with relatively simple modelling."

The dream scenario would be to find a clutch of other kilonovas, all with mathematically convenient symmetry, at a variety of distances. There are hopes that the gravitational wave detector LIGO, located across two sites in Louisiana and Washington, will point the way when it resumes operation next month, by detecting the giveaway ripples in space-time created by these monster mergers. That is how this 2017 kilonova, now called AT2017gfo (signifying 'astronomical transient', the year of detection, and a three-letter unique identifier), was first spied.

But, Sim cautions, "there's no reason for other kilonovas to be the same. It could turn out that this 2017 event is a weird one." There is a precedent: one early, well-studied supernova, 1987A, turned out to be unusual compared to those that followed.

It may take decades to decode the mysteries of kilonovas. Billions of stars, meanwhile, carry on their infinite business of living and dying and colliding, their matter continually remade and redistributed elsewhere in the universe — some of it, remarkably, into the slender platinum band on my ring finger.

The writer is a science commentator

Letters

Email: letters.editor@ft.com
Include daytime telephone number and full address
Corrections: corrections@ft.com
If you are not satisfied with the FT's response to your complaint, you can appeal to the FT Editorial Complaints Commissioner: complaints.commissioner@ft.com

'Over-hiking' today is insurance against a nightmare tomorrow

As interest rates continue to rise, the debate in financial markets has unsurprisingly moved on from whether central banks are perceived to have done too little, to the risk that they might end up doing too much (FT View, February 4). Policymakers acknowledge this possibility too, with references to "over-hiking" in their speeches.

What is curious about this debate is that "over-hiking" is presented as if it is a mistake that central banks might make. That doesn't feel quite right.

When people talk about "over-hiking" they have in mind that central banks will raise rates too far and slow the economy down too much and that will ultimately force central banks to not just cut rates back to normal levels, but back into accommodative territory to pump the economy back up again. In normal circumstances that does sound like a mistake.

These are not normal circumstances. Policymakers usually set rates based on what they think is most likely to happen. But they may set rates today based on what they fear could happen. The chief concern right now is that wages and prices will continue to rise at a rapid rate. Central banks may therefore keep raising rates — and slowing the economy down — until the outlook for inflation does not look that bad even in that worst-case scenario.

But if the nightmare scenario doesn't play out then interest rates will turn out to have been set too high and inflation will turn out too low. Once the danger has passed, then central banks can switch back to setting policy based on what is most likely to happen and that will mean plenty of rate cuts.

It will look like "over-hiking" but it will not have been a mistake. Central bankers are just choosing to take out insurance today against a nightmare scenario that could unfold tomorrow.

Richard Barwell
Head of Macro Research and Investment Strategy, BNP Paribas, London EC2, UK

B Corp scores must include supply chain mapping data

I read with interest The Big Read ("The struggle for the soul of B Corp", February 20) on the continuing challenges facing the B Corp movement which has come to prominence as environmental, social and governance issues have risen to the top of boardroom agendas in recent years.

As someone familiar with the scoring and assessment methodology used by the B Corporation — which started in the US but now includes thousands of companies around the world who are certified as "a force for good" — a starkly absent element is a requirement for organisations to either understand and map their supply chains, or to share that data.

The shocks that have reverberated around global supply chains in recent years — from Covid to the Suez Canal blockage and, more recently, the tragic earthquake in Turkey and Syria — have highlighted how sensitive modern society is to any supply chain disruptions. Reputationally, companies live or die by their management of human rights and environmental issues in their supply chains. Revelations by the BBC this week about sexual abuse on Kenyan tea plantations, many of which supply into major global brands, is further evidence of this.

At a basic level, if organisations have no clear understanding of where their facilities are located, in no way can they credibly claim to have any true sense of the environmental or social conditions at those facilities. If B Corp certification is a demonstration of an organisation's commitment to "prioritise people and planet", supply chain mapping ought to be an entry-level requirement.

And on the importance of openness (which, when it comes to data, has a technical definition), closed due diligence systems, in which data is locked behind paywalls, has failed us until now when it comes to protecting human rights and environments. Shifting to an open system can change that. Any organisation which is serious about radically transforming supply chain conditions would do well to recognise that.

Natalie Grillon
Executive Director, Open Supply Hub
Amenia, NY, US

The metaverse is like every new technology

The takeaway from Jemima Kelly's column is clear: she's planting herself firmly with the cynics ("Whatever happened to the metaverse?", Opinion, February 16). While Kelly is apparently ready to write off the metaverse, I say it's far easier to be a cynic of any new technology than it is to actually build one. Computers, smartphones and even the internet were all written off by early critics, but these technologies have all proved revolutionary. The world needs more innovation — not less — and at Meta we are building for the next evolution of social technology. But it cannot happen overnight.

Meta and many others are investing to build a better social experience than what's possible today on phones. It means moving beyond the 2D screens of today and developing new technologies that can bring us closer to the people and things we love. This includes virtual, mixed and augmented reality, as well as new software and social experiences.

Kelly goes on to say that nobody wants to use the metaverse. Let's look at the evidence. While this is a nascent technology, it's not unproven. People around the world are using Meta Quest devices to socialise, play and work in VR, and there are more than 200 exciting apps on the Quest platform that have made more than $1mn in revenue. And in a few months, more than 100mn people have created avatars in WhatsApp. It's early days but the potential for people is massive.

Like every new technology, making the metaverse a reality will take years of investment, commitment and ignoring the cynics.

Vishal Shah
Vice President, Metaverse, Meta
Menlo Park, CA, US

Here's my manifesto for a true democratic capitalism

Martin Wolf's essay (Life & Arts, January 21) fails to address the simple truth that capitalism isn't democratic, it's feudal. Very few business leaders are elected by their colleagues. Instead they are elected by a plutocracy and behave like medieval robber barons. For capitalism to pass the tough tests to come, we need workers to elect their leaders; and leaders who display altruism, not narcissistic self-interest. This isn't communism. This would be true democratic capitalism.

Roger Steare
Corporate Philosopher in Residence
Bayes Business School, London EC1, UK

Quebec, Catalonia and Scotland: the business case

In the run-up to the 2014 Scottish referendum, I drew attention to the damage that the push for independence in Quebec had on its economy by prompting a significant number of companies to move their corporate head offices from Montreal to Toronto ("Scotland's uncomfortable parallel with Quebec", Letters, April 22, 2014).

It was therefore interesting to see that history is repeating itself in Catalonia where it is reported that more than 8,200 companies have shifted their head offices from Barcelona to other parts of Spain, half of them moving to Madrid, since its 2017 independence referendum (which was ultimately declared illegal by Spain's top court). Particularly significant was the comment that the shift has not necessarily meant moving employees or facilities out of Barcelona. However, it has shifted the location of economic decision-making of many companies ("How Barcelona lost its way", The Big Read, February 10). As a hotelier tells the FT Barcelona businesses have not demonstrated their opposition to independence "by standing in the street and shouting. Businesses vote by leaving."

Scottish businesses have been largely silent about how they will respond to independence, or its threat. The electorate deserves to know how they will respond. If they also decide to "vote with their feet" by shifting their activities out of Scotland then it will be too late to prevent the economic damage that will occur.

Professor Colin Mason
Adam Smith Business School
University of Glasgow, UK

Blame the UN charter, not Guterres, for Syria stance

In response to Ronan L Tynan's letter ("Guterres has no excuse for delays helping Syrian quake victims", February 20) I would recommend the author look at Article 2 (7) of the Charter of the UN. As much as I agree that the emphasis should be placed on humanity, not state sovereignty, we are not there yet. The UN is a system of sovereign states. António Guterres has no more powers than those delegated by the Security Council and the General Assembly; the secretary-general cannot act on his out initiative, as he is more a "secretary" than a "general". If we want to put humanity at the centre of international law, we need to change the international system to one in which state sovereignty is no longer the priority. Let us not criticise the secretary-general for failing to respond to the humanitarian needs of the Syrian quake victim unless we are willing to empower him.

Professor Max Hilaire
The Washington Center
Washington, DC, US

How not to treat San Francisco's drug problem

I am puzzled by Michael Moritz apparent call for a San Francisco autocracy or, at least, a rollback of San Franciscans' voting rights ("San Francisco's drug and homeless crises can't go on", Opinion, February 9).

He seems to suggest that an autocracy would do better at addressing the city's drug problem without a board of supervisors or, at least, one elected by district. The California constitution requires each county have a governing body of five or more members; so there has to be a board of supervisors. As to elections, instead of district elections, in her dissent to the Shelby County vs Holder decision, Justice Ruth Bader Ginsburg singled out as a "second-generation" barrier to minority voting rights at-large elections, where all voters cast their ballots for all candidates in a jurisdiction.

If Moritz would like to help San Francisco address the problems of alcohol and drug use disorders, I suggest that he read up on the evidence for effective treatment, rather than propose roll backs of democratic rights.

Ramón Castellblanch
Professor Emeritus, Public Health
San Francisco State University
San Francisco, CA, US

Consultants and twitchers, the comparison is obvious

I read with great interest the interview with Mariana Mazzucato ("'The McKinseys and the Deloittes have no expertise in the areas that they're advising in'", The Henry Mance Interview, February 13). After 40 years of experience in the banking sector, and having been confronted with numerous reviews by the big names in consultancy, I come to just one conclusion: a large majority of consultants are like ornithologists — they know everything about birds but cannot fly themselves.

Paulus Callebaut
Varsenare, Belgium

The FT's data ruling makes sense to me

I think I agree with the FT ruling in favour of "data is" rather than "data are". After all, we don't say "the pile of books are" but "the pile of books is". So "the data (a pile of facts) is".

"Datum" is derived from "data"; not the other way round.

Robert Craig
Weston-super-Mare, Somerset, UK

Correction

● Kristóf Szalay-Bobrovniczky was Hungary's ambassador to the UK from 2016 until 2020, rather than 2022 as incorrectly stated in an article on February 20.

Opinion

Starmer should reject advice to be more daring

UK POLITICS
Janan Ganesh

Eighteen months ago, this profession of mine had Sir Keir Starmer down as a loser. Now that his UK Labour party is 20 points ahead in the polls, we are doing the gracious thing. We are telling him why he isn't further in front. He "must be brave". He "must be more radical". His party must "expand its political imagination". He has to "tell us who he is" and "spell out his real plans". It is only fair to warn you that the "What is Starmerism?" pieces are imminent.

What is worse here, the presumption, after such hopeless underestimation of the man? Or the fact that all the advice is of a piece? Almost never is Starmer told to remain cautious and inscrutable. Almost never are half-measures urged on him. His pragmatism is described. His success is acknowledged. But the causal link between the one and the other goes largely undrawn.

Contrast Starmer with Nicola Sturgeon. Scotland's departing first minister was boldness incarnate. The mission of her career was nothing less than secession from the UK. The bill she proposed on gender stretched public opinion to snapping point. In style, not just in substance, she took risks, likening a minister in London to a colonial "governor general" and reframing a mere election as a plebiscite on independence.

For all this audacity and imagination, she has to show, what? A career that is spent at 52. An independence cause that is no further along than it was a decade ago. She isn't a failure. She won a landslide in 2015. But even her resignation speech seemed to rue her own forthrightness. How many voters might she have won to the nationalist cause had she measured her tone? Or focused on the technical grind of fixing healthcare and education? Or fudged her vision of what a sovereign Scotland would look like? By defining it so sharply as a progressive haven, she put a cap on potential support in a nation that has lots of conservatives, if not Conservatives.

> The task of a politician is not to inspire. It is to get a plurality of voters to say 'Oh, go on then'

Starmer should look north, then at his critics, and carry on as he is. To say that his cautious approach is going to make him prime minister by default, not by acclamation, is to say almost nothing at all. Every leader who is elected to government is elected by default. They win because swing voters fear them slightly less than the alternative. The closest thing to an exception in Britain during my lifetime was Tony Blair's landslide of 1997. And even that has been glossed in retrospect. Turnout fell to a then postwar low. John Major had won more votes five years earlier. The national rapture cooled with a speed that exposed how frail it was to begin with.

None of this is criticism of Blair. The task of a politician is not to inspire. It is to get a plurality of voters to say, "Oh, go on then."

And that is in normal times. In turbulent ones, voters are even likelier to seek out the lesser evil. Radical propositions are even surer to flop. This, I think, is the tragedy of Sturgeon. She governed during an era when the public appetite for risk was exhausted by outside events. Brexit, Donald Trump, Covid-19: the upheaval made secession, and provocative leadership, a disruption too far.

And it makes No-Drama Starmer more viable than his critics can believe. Political commentary suffers from a version of the principal-agent problem. The agent (the commentator) is invariably obsessed with politics. The principal (the reading and voting audience) has a lay interest in it. And so the commentator will over-index certain qualities in a leader: charisma, boldness, clarity. It is what *we* like because we turn to politics for drama and meaning. The audience gets those things from entertainment, or private life.

The result is chronic journalistic underestimation of a particular kind of leader. It is hard to convey the near-audible sigh of exasperation in Washington during the winter of 2018, when it became clear that Joe Biden would run for president. Bernie Sanders was a story. Elizabeth Warren and Pete Buttigieg were stories. A middle-of-the-road veteran hoping to get third time lucky was a drag. Yet here he is.

Starmer is right to lure the principals, not the agents, of politics. Voters want a leader to have definition, yes, but mostly in the negative. I won't raise the basic rate of income tax. I won't borrow to spend. I won't reopen Brexit. Beyond that, politicians should view policy detail as some football coaches view possession of the ball: a liability, a chance to make a mistake. A "positive vision" is not what clinches elections. It is the absence of a scary one. In 1997, Blair was thought vague and tentative. He had to make do with just the 179-seat majority in parliament. Be less brave, Starmer. Narrow your political imagination.

janan.ganesh@ft.com

Illiberal democracy comes to Israel

Martin Wolf Economics

Proposed legal reforms by Netanyahu's government look rather like a power grab

Israeli politics is in crisis. A large number of people have demonstrated on the streets against the rightwing coalition's extensively criticised "judicial reforms". The president, Isaac Herzog, has even declared that "We are no longer in a political debate but on the brink of constitutional and social collapse." The programme of this government is of evident importance for the future of the country. But it is also of wider significance. This is partly because of Israel's role in the region. It is also because what is happening raises general questions about how a democracy can turn into an autocracy via unbridled majoritarianism.

Larry Diamond of Stanford University argues that liberal democracy has four individually necessary and collectively sufficient elements: free and fair elections; active participation in civic life of the citizenry; protection of the civil and human rights of all citizens; and a rule of law that binds and protects all citizens, including the most powerful. Those who have won elections are not entitled to threaten any of those essential elements of liberal democracy. If they seek to create such a state, they are subverting democracy. Democracy then is a system of majority rule, constrained by institutional checks and balances. Of those constraints, none is more important than the rule of law.

This is why the EU has such difficulty with the "illiberal democracies" of Hungary and Poland. It is also why the Israeli government's proposed legal "reforms" are so controversial. To opponents, the reforms will rip up protections against arbitrary action by the government, threatening individual freedom and legal predictability in a country dependent on foreign investment and a dynamic market economy.

This is, needless to say, not how the government sees it. It believes the Supreme Court has undermined its ability to govern by assessing even the "reasonableness" of its actions. This also puts government legal advisers in an objectionably powerful position in the development of policy. In addition, the court has opened the floodgates to litigation by allowing anybody the right to sue the government, thus paralysing necessary economic activities. In brief, the court has vastly over-reached, threatening prosperity and democracy.

This is what I learned from talking with a senior member of the government. To find out whether it makes sense I talked to Netta Barak-Corren, a professor of constitutional law at the Hebrew University of Jerusalem. Barak-Corren agrees that the Supreme Court has indeed lowered the thresholds for filing a suit against the government. It has also overruled it, not frequently, but consequentially. This has created ripple effects on the role of the government's legal advisers, which affect the government's ability to function.

Yet, she explained, this activism was largely a response to the inadequacy of the democratic structure, which consists of just one house of parliament, in which a simple majority is sufficient to pass any law, including one of constitutional import. Potentially, this structure would give a majority unchecked powers unmatched in other democracies. Thus far, these powers have been constrained more by political culture and circumstances than by law.

Barak-Corren's big point, however, is that the coalition's proposals — namely, to politicise judicial appointments, including to lower-level courts, and make it extremely difficult for the court to over-rule the government, while enabling the Knesset to overturn its rulings — are neither necessary nor sufficient to rectify the problems with the structure of Israeli democracy and the behaviour of the judiciary. This account persuades me that the reforms are mainly a power grab. They would allow the executive to operate with little judicial accountability and fill the judiciary with (possibly incompetent) loyalists, even in areas that have little to do with policy.

> The changes are unneeded in themselves and are targeted at objectives other than the ostensible ones

These changes also have potentially important economic implications, including to the highly successful high-tech sector, which has been an important contributor to the growth of the Israeli economy. Remarkably, Israel's real GDP per head is now much the same as in the UK or France. (See charts.)

Israel has become a high-income country comparable to France and the UK
GDP per head at purchasing power parity (2021 constant $'000)
Source: The Conference Board

Israel's economy has far outperformed those of its neighbours
GDP per head at purchasing power parity (2021 constant $'000)
Source: The Conference Board

The 'start-up' nation has attracted huge amounts of foreign capital
Venture capital investments in Israel ($bn)
Source: Start-Up Nation Policy Institute

The great economic danger created by illiberal democracy, one we can see in many other countries, is of "crony capitalism". It becomes too easy in such systems for the corrupt to succeed in politics, government, the judiciary and in business. That in turn discourages the entry of honest new competitors into the economy, because it is they who are always most reliant on an independent judiciary and bureaucracy. Insiders have power on their side. Outsiders depend on the rule of law.

Needless to say, the arrival of this new government has created many other concerns, not least for the future of the occupied territories. The idea of annexation of the West Bank, for example, is potentially lethal to a democratic Israel unless full citizenship is granted to Palestinians, which would turn Israel into a binational state. But in the more narrow area of legal reform the issue is whether the government is prepared to limit what it seeks to the changes experts think necessary to deal with the real problems, or whether it is determined to obtain political control over the legal system, thereby undermining the rule of law.

It is worth noting in this context that Israel's economic history demonstrates that the legal system about which the government now complains so bitterly did not prevent its past success. That also suggests that these dramatic reforms are unneeded in themselves and targeted at objectives other than the ostensible ones. Benjamin Netanyahu must think again before he does irreparable damage.

martin.wolf@ft.com

QE has become 'Hotel California' for central banks

MARKETS
Megan Greene

Quantitative easing has developed a certain resemblance to the Eagles' "Hotel California" — you can check out any time you like, but you can never leave. We should pay more attention to quantitative tightening, suggest former Reserve Bank of India governor Raghuram Rajan and others in a recent paper. Commercial banks change their behaviour when there are plentiful reserves, making QT far more volatile and difficult to pull off than expected.

Our grasp of how QE and QT really work remains tenuous. In announcing a bond-buying programme, a central bank signals to the markets it is committed to accommodative policy and that rates will be low for a long time. The entire yield curve drops as a result. In purchasing long-dated bonds, the central bank pushes their yield down and in theory incentivises investors to move into higher return securities (the so-called portfolio rebalancing channel).

However, QT isn't just QE in reverse. When rates are at the zero lower bound, the signalling channel is strong. But announcements about the central bank's balance sheet are less effective when the policy rate is well above zero.

In 2017, Janet Yellen, then Federal Reserve chair, promised QT would be more "like watching paint dry". The reality has been somewhat different. Rajan argues this is because commercial banks change their behaviour when the central bank expands its balance sheet, but do not change it back again when the balance sheet shrinks.

The mechanics of QE are a bit wonky. When the central bank buys bonds from investors, the proceeds are deposited in a commercial bank account. The banks steer them into demand deposits (which can be withdrawn at any time) because they pay less interest than time deposits. To balance these liabilities, the Fed credits the banks with the same amount of reserves as assets.

> Commercial lenders change behaviour when the balance sheet expands, but not when it shrinks

The reserves give banks confidence they can weather any significant deposit withdrawals, and are used to extend credit lines that generate fees. This shortens the average maturity of assets, undermining the portfolio rebalancing channel and increasing bank vulnerability to liquidity shortages.

According to Rajan's data, none of this unwinds when the central bank shrinks its balance sheet and reserves become less ample. Instead, banks substitute lost reserves with other assets that are eligible collateral in repo transactions, to remain confident of getting enough cash if they need it. But if every bank tries to transform their assets into cash simultaneously, there will inevitably be a shortage, as happened in the US repo market in 2019. Banks also continue to extend credit lines even as liquidity wanes, to maintain client relationships.

That means banks make greater claims on the system's liquidity during QT, which may continue until there is a market blow-up. Central banks can step in and buy bonds again to ease liquidity crises, as they did in 2019, at the start of the pandemic and in the recent liability-driven investment freeze in the UK. But that ratchets up banks' demands for liquidity still further — and makes QT even harder to pull off down the line.

One way around this is to minimise the signalling channel of QE, as the Bank of England did last year when it said it would buy gilts for a very limited period, after the fallout from the Liz Truss-Kwasi Kwarteng "mini" Budget. But that would only work in a small-scale market meltdown. Imagine the Fed announcing in March 2020 that it would buy bonds but only briefly, reserves would not be plentiful forever and rates would rise soon. Investors' dash for cash would have continued.

Central banks could simply forget about QT. Unlike commercial banks they can take losses and run in the red. But there are good reasons why they should not have an ever-growing balance sheet. Investors would have an incentive to take more risk. Governments may lean on the central bank to buy more bonds to finance pet projects. Central bank independence would be severely at risk, undermining credibility. A forever-distorted yield curve would make price discovery impossible.

Better bank capitalisation could help reduce vulnerability in the face of greater liquidity needs. Regulators could prevent reserve hoarding by allowing banks to meet an average of liquidity requirements over time rather than daily targets. Standing repo facilities can be extended to non-banks with good collateral, as the Bank of England recently did. Ultimately, however, the best way to get out of QE may be not to start it in the first place. You don't have to check out if you've never checked in.

The writer is an FT contributing editor and global chief economist at Kroll

2023/2/22 19:18 Financial Times Asia

Twitter: @FTLex

US tech pay: share the pain

In the US tech sector, hiring the best employees requires more than just competitive base pay and free snacks.

One of the more prized rewards is generous share-based remuneration. The tech stock rout is making these expensive for employers and investors.

In theory, share-based remuneration works because it keeps immediate wage costs down and motivates staff to help their employer succeed. The pay structure should align worker and investor interests. Many companies exclude the cost of stock-based pay from adjusted profit figures on the basis that it is a non-cash expense.

Tech shares slumped during last year's rotation out of growth equities. Meta is down 15 per cent over the past year. Alphabet has fallen 27 per cent. Zoom is off 42 per cent. The value of staff payouts has accordingly dropped.

Companies must either hand out more equity, pay bonuses in cash or cope with some staff quitting when confronted with real-terms pay cuts.

Zoom has picked the first option. It had 19mn of unvested, restricted stock units as of October 31, up from about 5mn the previous year. It was a glamour stock during lockdowns.

Sales growth has since stalled. But as it ratchets up handouts, it is still registering the impact of earlier stock-based compensation expenses.

Fast-growing start-ups that lure employees with offers of share awards face other pressures. Airbnb co-founder Brian Chesky was clear that employees with stock options set to expire in late 2020 pushed the company to go public in the midst of a travel sector downturn. That was costly. In 2020, Airbnb's stock-based remuneration expense was $2.8bn.

Uber beat that when it listed a year earlier, reporting an immediate $3.6bn expense. These are not one-offs. Airbnb reported $930mn of stock-based pay expense last year.

Stock-based remuneration is a drag on net income and lifts the number of shares outstanding. Expect techs to buy back shares to counteract dilution.

Zoom spent about $1bn on buybacks in the first three quarters of 2022. Last summer, Airbnb announced plans to repurchase stock worth $2bn. So far it has spent $1.5bn. Despite the cost, the number of shares outstanding has barely moved.

Tech companies that once airily dismissed stock bonuses as a non-cash expense will increasingly take a genuine hit via cash outflows.

Carbon price: Gaia buyers

How much is carbon worth? The cost of a permit for a European factory or power plant to emit a tonne of CO_2 has risen fivefold over the past three years. It topped €100 a tonne yesterday. That is good news for energy transition. But for an investor treating carbon as an asset class, a lot is now in the price.

Climate watchers should cheer the €100 milestone. For a long time, the cost of the allowances — covered by the EU's cap and trade ETS system — was too low to influence business decisions. Finally, carbon has reached a price high enough to reflect environmental costs and to change behaviour. That should help spur investment in green tech.

For instance, a glassmaker paying €50/MWh for natural gas, plus another €20/MWh equivalent in CO_2 permits, may be willing to buy biomethane, which can cost as little as €65/MWh. Capturing CO_2 from industrial sites and storing it in depleted gasfields costs something like €90-120/tonne, so this technology is becoming commercially viable too. Indeed, a carbon price of €100/tonne is enough to abate about half of emissions, according to Goldman Sachs Carbonomics research.

That is at current costs. Over time, new technologies such as green hydrogen should become cheaper as their use becomes more widespread.

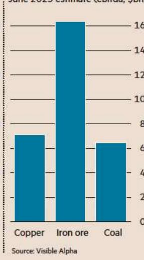
Investors betting on the rise of carbon permits have done very well so far, both for themselves and for the planet. This niche group includes utilities and industrial companies, which acquire more than their annual permit requirements, and financial investors that have spotted a juicy opportunity. The investment case has now weakened for carbon, which Lex valued at $100 (€82) two years ago when permit prices were half that.

They still need to rise over the next 20 years to force more CO_2 out of the system. Suppose they double to €200/tonne by 2040 — a reasonable guesstimate. That performance would compare poorly with many other investments. For once, a market may have efficiently done its job.

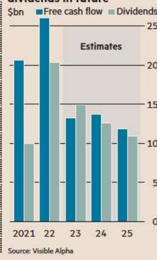
BHP: wriggle me this

Shares of the diversified Australian miner have done well this past year, helped by a high dividend yield. After years of concentrating its portfolio, three commodities — particularly iron ore — drive BHP's profits. Using forward estimates, free cash flow only just covers expected dividends to 2025.

FT graphic Source: Refinitiv



Source: Visible Alpha



Source: Visible Alpha

It can take a century or more to become a one-year wonder. Shares in BHP, a business founded in the 1880s, have outrun peers with a 40 per cent return over the past 12 months. Thank bosses — and activists — who refocused a vast portfolio BHP had built up over decades.

The new structure should continue performing well even as the commodity boom subsides. But fat returns are set to attenuate.

Since 2015, BHP has spun out minerals grab bag South32, deconsolidated remaining oil and gas production, and swapped a dual listing for a primary quote in Sydney.

Yesterday's full-year results underscored that this is now an Australian miner of iron ore, copper and coal. That description is admirably simple. There is more nuance to BHP's 10 per cent dividend yield. The share price, by implication, is low.

But everything is relative in mining's cyclical world. BHP's enterprise value of nearly 6 times forward ebitda beats that of diversified peers.

The scale of the yield also signals that the dividend is seen as unsustainable. This, in turn, points to investor caution towards prices for iron ore, copper and metallurgical coal.

Over the next few years, expect BHP's free cash flow to slide as it raises capital expenditure. Some of the money will go to Jansen, a Canadian potash fertiliser project. Chief executive Mike Henry is enthusiastic about the potash mine, scheduled to open in 2026. BHP — at some risk to its much-vaunted focus — believes it will produce earnings uncorrelated with those of other divisions.

Visible Alpha, the estimates service, forecasts group annual mean free cash flow of $12.9bn to June 2025. Dividend payouts should average about $12.8bn. That limits Henry's financial wriggle room.

It also leaves him dependent on iron ore and copper units accounting for 80 per cent of group ebitda. As economies normalise in the wake of lockdowns and rate rises, so will demand for these commodities.

Expect Henry to let the dividend drift before he slashes investment. Investors, like BHP itself, should think in multiple years, not months.

Pharma: prescription for efficiency

Big Pharma's response to Covid was agile. But hopes that drug developers could sustain some of the productivity gains are subsiding. R&D returns have reverted to their declining trend.

A Deloitte report on drug development at the 20 biggest pharma groups found that its average cost, which dipped in 2021, rose 15 per cent to $2.3bn last year. Meanwhile, average peak annual sales forecasts dropped a fifth to $389mn, reflecting the fading contribution from Covid jabs and drugs. The rate of return on big pharma companies' R&D averaged 10 per cent in the six years to 2022, estimates Berenberg, not far above their cost of capital of 8 per cent. Some, such as France's Sanofi, undershot. At the other end of the scale, Denmark's Novo Nordisk notched up returns of more than 20 per cent.

Such calculations are tricky. Drugs can take a long time to generate profits. The origins of Merck's Keytruda dates back 20 years; it was nearly dropped in 2009. The cancer treatment should be this year's top-selling drug with sales of $24bn, according to Evaluate Vantage.

Businesses can raise their game. AstraZeneca has moved from laggard to leader in the R&D productivity ranking with a focused approach. But hurdles are high. Oncology accounts for 36 per cent of Big Pharma's pipeline assets. Groups compete in a crowded field. Costs are high partly because cancer clinical trials take 30-40 per cent longer than for other drugs.

US drug pricing reforms could squeeze returns. Eli Lilly last year scrapped development of a drug targeting blood cancers. Bristol Myers Squibb has warned of similar moves.

Investors value future drugs according to their chances of success and potential market size. But future cash flows are discounted, so the pipeline typically accounts for just 15 per cent of a group's net present value.

Groups with ingenious and efficient R&D operations deserve a premium. As patents expire, pharma companies' ability to renew themselves is vital.

Home Depot/Walmart: retail politics

Capital had a great run. It is still labour's turn. That was the message from Home Depot's fourth-quarter earnings yesterday.

The DIY retailer needs more workers to help customers buy washing machines or sheets of plywood.

It expects to spend an incremental $1bn in wages for frontline staff, a figure that would depress its closely watched operating margin by 60 basis points, pushing the figure below 15 per cent.

Home Depot foresees flat sales in 2023. It believes earnings will be slightly lower as Americans shift consumption towards services instead of the goods that were in demand during the pandemic.

The company pointed out that its annual revenues have grown by $47bn in the past three years, a remarkable number for a company with annual sales already above $100bn.

The shares are still well above where they stood in 2019.

There is enough cash flow to pay out $15bn to shareholders for 2022 in the form of dividends and buybacks.

The results still confirm the worry that corporate earnings will now be braked by higher costs and softer demand. A putative monetary easing cannot alone sustain a rally in stock prices.

According to data service FactSet, the valuation of the S&P 500 has moderated to a multiple of 18 times. That is still above the 10-year average.

Home Depot is not alone in raising wages. Walmart recently announced that its minimum wage for employees will be $14 per hour while its average worker will make $17.50 per hour.

The big general retailer and grocer provided a lacklustre outlook yesterday. Home Depot stood out for being even more pessimistic.

Well-paid professionals may scoff at the wages taken home by retail workers. However, there is satisfaction for the latter in seeing pay rising at employers once decried as tight wads.

A trend first trumpeted as the pandemic abated in the US is enduring longer than some forecasters imagined. With businesses reluctant to raise prices further, investors can expect profits to take a hit.

NIKKEI Asia The voice of the Asian century

CROSSWORD

No 17,339 Set by CHALMIE

ACROSS

1 Prison shops renovated with commercial support (11)
7 Stole yacht for one missing 18 (3)
9 Get rid of former footballer (not European) (5)
10 Swimmer needs a fleshing out (9)
11 18 side of resort featured in advert (9)
12 Imprisoned old Conservative leader first (5)
13 Father invested in famous small computer (7)
15 Smell beginning to permeate swelling (4)
18 Second lawyer sailor rejected (4)
20 Duration of program revises UN remit (3,4)
23 Viewing essentially healthy 15 18? (5)
24 One who's got the 15 enchanted rides unsteadily round (9)
26 Dryad getting lost around capital is one with the 15 (9)
27 Character originally seen in *Grease* makes album (5)
28 Head Brazil? (3)
29 Bits of vegetables fraudulently sold as dates (6,5)

DOWN

1/6 15 people claim ginseng mostly damaging (8,9)
2 Procedure to imagine earth facing 18 (8)
3 Pervert loves crack (5)
4 Prepared to access data on roadside bomb (7)
5 Monopolise pictures by church's last engraver (7)
6 See 1
7 Game, though 15 18 is not a variation (6)
8 Flies when keeping President concealed (6)
14 Location city is under pressure to fix permanently (9)
16 Can name the Spanish castle in Cornwall (8)
17 Way to restrain listener fighting to the 18 (8)
19 Steals away, sleeps around and gets up (7)
20 Design change for remainder probably all achievable in the end (7)
21 Journalist in his element up country (6)
22 Plan amateur dismissed (6)
25 Gets rid of defaulting Republican and relaxes (5)*

JOTTER PAD

Solution 17,338

You can now solve our crosswords in the new FT crossword app at ft.com/crosswordapp

Get the business insights you need to succeed in Asia
Visit asia.nikkei.com

LUNAJETS
LUNAJETS.COM
LEADING PRIVATE JET CHARTER
GENEVA +41 22 782 12 12 | LONDON +44 2074 095 095 | PARIS +33 1 89 16 40 70
LunaJets SA is a flight broker and as such arranges carriage by air by simply chartering aircraft from third-party aircraft operators, acting as agent, in the name and on behalf of its customers. LunaJets SA only acts as an intermediary, does not itself operate aircraft and is not a contracting or an indirect carrier.