FINANCIAL TIMES

TUESDAY 8 NOVEMBER 2022 INTERNATIONAL NEWSPAPER OF THE YEAR ASIA

Developing world steps up climate challenge
MANAGING CLIMATE CHANGE, SPECIAL REPORT

Republicans' Trumpism faces ballot box test
BIG READ, PAGE 15

Red alert
Liverpool FC sale explored

Boston-based Fenway Sports Group is weighing a sale for Liverpool, the English Premier League football club it bought in 2010 for £300mn.

Forbes values Liverpool at $4.45bn, making it the world's fourth most valuable soccer club.

Fenway has been approached by at least one potential buyer, according to people familiar with the matter. The business, which also owns baseball's Boston Red Sox and hockey's Pittsburgh Penguins, said: "FSG has said before that under the right terms and conditions we would consider new shareholders."

The Liverpool team itself — pictured against Tottenham Hotspur at the weekend, with Mohamed Salah scoring in a 2-1 win — has struggled to find its form in the Premier League this season.

News of the potential sale was first reported by sports website The Athletic.

Full story page 7

Ian Kington/AFP via Getty Images

UN chief calls on richer nations to pay up for 'climate solidarity pact'

- COP27 opens in Egypt
- World on 'highway to hell,' says Guterres
- UK cannot afford 'reparations'

CAMILLA HODGSON — SHARM EL-SHEIKH

The head of the UN has called for a new "climate solidarity pact" in which rich countries would help poorer nations financially, singling out the US and China, saying they had a "particular responsibility" to make it a reality.

UN secretary-general António Guterres said the international financial system should be reformed to support lower-income countries burdened by debt and that needed money to recover from natural disasters.

All countries should make an "extra effort" to cut emissions and end the building of coal plants, he told the opening session of world leaders at COP27.

"The two largest economies — the United States and China — have a particular responsibility to join efforts to make this pact a reality," he said.

Humanity must "co-operate or perish," he added. "We are on a highway to climate hell with our foot still on the accelerator."

President Xi Jinping is skipping COP27, though China has sent a delegation. Other missing leaders from fossil fuel-dependent nations are Narendra Modi of India, Anthony Albanese of Australia and Justin Trudeau of Canada.

US president Joe Biden is due to arrive in Egypt this week after the midterm elections today. His climate envoy, John Kerry, is trying to build support for a system in which governments would earn credits for cutting their power sector's emissions that companies could then buy to offset their own output.

French president Emmanuel Macron told the UN climate summit that the Ukraine war should not change plans to limit global warming. He said he recognised the "injustices" of climate risks and impacts around the world, calling on multilateral institutions such as the World Bank and IMF to do more to support vulnerable nations and catalyse private sector investment.

The spring meeting of the IMF would mark a "practical step" in the reform of the Bretton Woods institutions, Macron added. "We cannot wait until the next COP." Barbadian prime minister Mia Mottley doubled down on a push for rich countries to do more to help developing nations suffering the consequences of climate change.

"How many more countries must falter?" said Mottley. She called for more "concessional funding" for emerging nations, and the creation of a "climate mitigation trust" that would use $5bn in IMF special drawing rights to "unlock" $5tn in private capital.

Former UK prime minister Boris Johnson said the UK did not have the financial resources to pay "reparations" to low-income countries. Climate action had been "one of the most important collateral victims" of Russia's invasion of Ukraine, he added.

"Per capita, people in the UK put a lot of carbon in the atmosphere," he said. "But what we cannot do, I'm afraid, is make up for that with some sort of reparations. We simply do not have the financial resources."

His successor, Rishi Sunak, told the meeting that the UK would triple its funding on "adaptation" projects to £1.5bn by 2025.

Guterres also launched a plan for a global early warning system for extreme weather events, a project that he said would cost $3.1bn over its first five years. The money would be spent on data collection and analysis, forecasting, building response capabilities and informing people about risks.

Gideon Rachman page 17
Lex page 18

> We must trigger a virtuous circle of expanding green trade, investment and innovation
>
> Ngozi Okonjo-Iweala

Page 17

Briefing

Ukraine gains US and Spanish defence systems
Kyiv has taken delivery of missile defence systems from the US and Spain as Russia persists with its missile strikes on electricity infrastructure.— PAGE 2

EDF investors want more
US funds have pushed the French state to raise its €10bn offer to minority investors, adding to pressure on Paris over the terms of the nationalisation.— PAGE 8

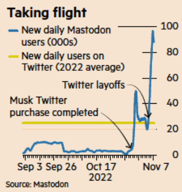
China exports shrink
Exports have contracted for the first time since the start of the pandemic as pressure mounts on an economy still gripped by Covid-19 measures.— PAGE 4

US defends gas industry
Washington has said European groups are the real winners in the transatlantic trade in liquefied natural gas amid the scramble to replace Russian gas.— PAGE 10

Russia aviation rebounds
The industry has defied forecasts that it would grind to a halt after western sanctions barred access to spare parts and maintenance expertise.— PAGE 7

Rome seeks migrant block
Italy's new rightwing government has tried to stop European charities from landing migrants at the country's ports after rescue from the Mediterranean.— PAGE 2

Datawatch



Following Elon Musk's Twitter takeover, the platform's users seem to be fleeing in favour of a little-known rival. According to Mastodon, the service gained nearly 100,000 sign-ups in a single day after Musk closed his $44bn Twitter deal

Global cruise ships revival leaves China in its wake

Analysis ▸ PAGE 4

Global law firms cut back hiring after fall in M&A deals weakens revenues

JOE MILLER — NEW YORK
KATE BEIOLEY — LONDON

Revenues at many of the largest international law firms are shrinking rapidly because of an increase in costs and a decline in the number of mergers and acquisitions and public offerings, leading some to scale back hiring as they prepare for a deep global recession.

Research from the Thomson Reuters Institute, which tracks internal data from more than 160 US-based firms, found demand for M&A work fell almost 14 per cent in the three months to the end of September compared with the same period in 2021.

While overall billable hours declined less than 1 per cent in the quarter, payroll expenses soared almost 11 per cent and overheads almost 13 per cent.

The key measure of profitability in the institute's quarterly index remained at its lowest since tracking began in 2006. This trend would "potentially place firms under immense pressure to bring expenses under control by cutting headcount, much the same as in [the financial crisis of] 2008-09", analysts at the data company warned yesterday.

Preliminary data from the US Bureau of Labor Statistics showed the legal sector in the country lost more than 13,000 jobs in August and September, with a small rebound in October when almost 3,500 were added compared with the previous month.

Hundreds of job vacancies in the US legal sector were also withdrawn last month, according to analytics provider Leopard Solutions, marking the first signs of a potential slowdown, even as the number of open positions remained higher than pre-pandemic levels.

Separately, Silicon Valley-based Gunderson Dettmer, known for its work in helping companies go public, postponed the start date for its associates from the end of October to mid-January.

The mounting evidence for a looming downturn comes after a period of frenzied hiring at global law firms. Last year they rushed to recruit to keep pace with soaring demand from clients triggered when stimulus measures in the US and elsewhere led to a boom in equity markets and record dealmaking. As recently as January, London-based law firms were struggling to fill vacancies, leading to a sharp rise in salaries and bonuses.

A survey of 1,815 lawyers conducted by legal recruiters Major, Lindsey & Africa found pay for partners in the US had increased 15 per cent since the height of the pandemic in 2020, and was averaging $1.12mn this year.

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 2022
No: 41,166 ★

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

World Markets

STOCK MARKETS

	Nov 7	Prev	%chg
S&P 500	3770.74	3770.55	0.01
Nasdaq Composite	10442.08	10475.25	-0.32
Dow Jones Ind	32551.56	32403.22	0.46
FTSEurofirst 300	1653.97	1649.94	0.24
Euro Stoxx 50	3708.64	3688.33	0.55
FTSE 100	7299.99	7334.84	-0.48
FTSE All-Share	3993.09	4001.84	-0.22
CAC 40	6416.61	6416.44	0.00
Xetra Dax	13533.52	13459.85	0.55

CURRENCIES

Pair	Nov 7	Prev	Pair	Nov 7	Prev
$/€	1.000	0.990	€/$	1.000	1.011
$/£	1.146	1.128	£/$	0.872	0.887
£/€	0.872	0.877	€/£	1.146	1.140
¥/$	146.470	147.245	¥/€	146.463	145.706
¥/£	167.899	166.093	£ index	76.499	76.668
SFr/€	0.990	0.988	SFr/£	1.134	1.126

CRYPTO

	Nov 7	Prev	%chg
Bitcoin ($)	20749.03	20912.94	-0.78

GOVERNMENT BONDS

Yield (%)	Nov 7	Prev	Chg
US 2 yr	4.73	4.68	0.06
US 10 yr	4.21	4.16	0.05
US 30 yr	4.29	4.24	0.05
UK 2 yr	3.22	3.06	0.16
UK 10 yr	3.62	3.53	0.09
UK 30 yr	3.85	3.77	0.08
JPN 2 yr	-0.04	-0.05	0.00
JPN 10 yr	0.25	0.25	0.00
JPN 30 yr	1.58	1.56	0.02

2022/11/8 20:12 All pages from Financial Times (Asia), Tuesday, November 8, 2022

Dubai

Nikkei	27527.64	27199.74	1.21
Hang Seng	16595.91	16161.14	2.69
MSCI World $	2507.22	2467.89	1.59
MSCI EM $	884.98	860.90	2.80
MSCI ACWI $	580.60	570.77	1.72
FT Wilshire 2500	4909.08	4849.95	1.22
FT Wilshire 5000	38363.57	37902.71	1.22

Ethereum	1587.64	1569.19	1.18
COMMODITIES			
	Nov 7	Prev	%chg
Oil WTI $	93.03	92.61	0.45
Oil Brent $	98.91	98.57	0.34
Gold $	1674.40	1628.75	2.80

GER 2 yr	2.21	2.11	0.09
GER 10 yr	2.34	2.30	0.05
GER 30 yr	2.26	2.22	0.04

Prices are latest for edition
Data provided by Morningstar

A Nikkei Company

INTERNATIONAL

Missiles

Ukraine hails arrival of air defence systems

Sophisticated weapons from US and Spain will aid shooting down of drones

ROMAN OLEARCHYK AND FELICIA SCHWARTZ — KYIV
JOHN PAUL RATHBONE — LONDON

Ukraine has received its first Nasams air defence systems from the US and Aspide units from Spain, as Russia continues its missile and drone strikes on electricity infrastructure that have triggered blackouts nationwide.

"Nasams and Aspide air defence systems arrived in Ukraine!" Oleksiy Reznikov, Ukraine defence minister, tweeted yesterday. "These weapons will significantly strengthen Ukraine's army and will make our skies safer."

He added: "We will continue to shoot down the enemy targets attacking us. Thank you to our partners: Norway, Spain and the US."

Nasams are a short- to medium-range surface-to-air missile defence system developed jointly by Kongsberg of Norway and Raytheon of the US.

The Aspide system made by Italy was provided to Kyiv by Spain.

The systems' arrival came weeks after Ukraine received Iris-T air defence missile systems from Germany, the first such sophisticated kit provided to Kyiv since Russia's full-scale invasion more than eight months ago.

Ukraine has long called for modern Nato standard air defence systems to protect its civilian infrastructure, as its troops push back against Russian forces occupying more than 15 per cent of its territory in its eastern and southern coastal regions.

The US is working with its allies to locate as many systems and as much ammunition as possible.

'These weapons will significantly strengthen Ukraine's army and will make our skies safer'

"There's work ongoing to figure out how much can be produced and how fast, not just for US systems, but for other systems as well," said a US defence official.

Kyiv's need for more and better air defence systems comes as Russia has stepped up its aerial bombardment of critical Ukrainian infrastructure to make up for its stalled ground campaign.

Moscow is using precision-guided missiles and swarms of Iran-supplied Shahed 136 kamikaze drones that can carry a warhead of up to 40kg.

Although Ukraine has destroyed the majority of the incoming drones and missiles, enough have made it through to take out more than a third of Ukraine's electricity-generating capacity over the past month.

About 4.5mn Ukrainians are without power, said President Volodymyr Zelenskyy in his nightly address on Sunday.

Analysts cautioned that without better air defence, thousands of Ukrainians could freeze this winter. "With rolling blackouts already affecting much of the country and the weather already getting cold, the urgency of these requirements is hard to overstate," military experts Justin Bronk, Jack Watling and Nick Reynolds argued in a report published on Monday by the Royal United Services Institute.

They said the west needed to supply Kyiv with more shoulder-launched Manpad surface-to-air missiles and radar-guided anti-aircraft guns such as Germany's Gepard to shoot down the Iranian drones.

Ukraine also needed western fighter jets, such as Swedish Saab Gripens, to consolidate its territorial gains, the report added.

See Opinion

National Rally. Succession plan

Le Pen holds reins despite leadership change

Bardella's aim to portray a less extreme party undone by MP's outburst in assembly

LEILA ABBOUD — PARIS

France's far right this weekend selected a party leader from outside the Le Pen dynasty for the first time in its 50-year history, the latest sign of the movement's bid to convince voters it has swapped extremism for professionalism.

Before a cheering auditorium, Marine Le Pen announced on Saturday evening that her protégé, Jordan Bardella, a 27-year-old member of the European Parliament, had won the vote to succeed her at the helm of the Rassemblement National (National Rally). "I will pass on a re-founded and revitalised party . . . that is proving every day that it is a real party of government, the party that will govern tomorrow," the 54-year-old said. "We must be ready!"

The succession will not alter the power dynamics; Le Pen remains the RN's uncontested boss. Bardella is in a relationship with her niece. Nor is Le Pen's long-held strategy of detoxifying the RN's image and courting new voters by focusing on the cost of living crisis gripping Europe expected to change.

But the shift comes at a difficult moment. Old demons resurfaced last week when Grégoire de Fournas, an RN lawmaker, was penalised for shouting "Go back to Africa" as a black MP was speaking in parliament about dangers migrants faced.

The incident is the party's first misstep since its win in June legislative elections that made it the biggest opposition party as President Emmanuel Macron's centrist alliance lost its majority. It has 89 MPs, up from just seven in 2017.

The win, which came less than two months after Le Pen lost her third presidential bid and hinted she could retire, transformed the party's fortunes and rekindled hopes it could win in the next presidential election in 2027.

Although the RN cannot pass laws alone, it is for the first time playing a role in day-to-day lawmaking, occupying prestigious posts in the National Assembly, and training a group of experienced national leaders.

Jean-Yves Camus, a political scientist who specialises in European nationalist movements, said Bardella's elevation was another sign of how the RN was seeking to move on from the era of founder Jean-Marie Le Pen, who was convicted of racist speech and Holocaust denial.

De Fournas incident is party's first mis-step since its win in June that made it the biggest opposition party

"There is a new generation of politicians in the RN who came of age under Marine and not her father," he said. "The election of the 89 MPs is an earthquake, but it's a victory that brings new obligations. They must show that their MPs are mainstream and respectable, they do the work, and that they do not go off the rails."

Things got off to a good start in the National Assembly. Le Pen positioned the RN as the responsible, suit and tie-clad opposition that was fighting for French people, in contrast with the leftwing Nupes alliance she slammed as rowdy and unpatriotic.

RN votes helped the Macron government pass a key law to protect households and companies from rising energy costs. But then it wrongfooted everyone by changing position to vote for a no-confidence motion in Macron's government sponsored by the left. The motion failed, but Le Pen's pivot put the government on notice that the RN might one day help bring it down.

Most importantly for the indebted RN, the 89 MPs represent an annual cash infusion of €10mn, double the amount in the last parliamentary session. Under France's public financing system, parties are paid for each elected official and their overall vote tally. Party officials said they would use the funds gradually to pay back a contentious loan from a Russian bank taken out in 2014.

Renaud Labaye, general secretary of the RN group, likened the change to a family company scaling up into a corporation. "When I was Marine Le Pen's parliamentary assistant in 2017, we had seven MPs, maybe a dozen staffers, and managed to ask only two questions at the weekly session of questions to the government in five years," he said in an interview. "Now we have 89 MPs and around 110 staffers, hold two of the six assembly vice-presidents, and get to ask four questions per week!"

In control: Marine Le Pen at the party congress in Paris where Jordan Bardella, below, was elected leader — Lewis Joly/AP

But the momentum came to a halt on Thursday, when de Fournas's yelling led the parliamentary session to be suspended. De Fournas denied racist intention, saying he was talking about the boats and migrants rather than Carlos Martens Bilongo MP, who was calling on France to increase co-operation with EU countries in assisting African migrants rescued from the Mediterranean.

On Friday, a parliamentary disciplinary panel gave de Fournas the maximum penalty of a 15-day suspension and a temporary pay cut for "provoking a tumult" in the assembly.

Publicly, Le Pen and other RN officials fiercely defended de Fournas and accused their opponents of manipulating the episode, but in private some admitted the MP's words were "catastrophic" and "lacking humanity".

During the party congress on Saturday, Bardella also defended de Fournas, and vowed to strictly regulate immigration and reserve social welfare programmes such as housing subsidies for French citizens.

State transfer

Kyiv seizes control of five strategic companies from oligarchs

ROMAN OLEARCHYK — KYIV

Ukraine's President Volodymyr Zelenskyy said yesterday that Kyiv had transferred five strategic enterprises to state control from previous oligarch ownership as part of the country's wartime effort.

The Ukrainian government nationalised top oil producer, Ukrnafta, and the country's largest refinery, Ukrtatnafta, which halted operations after being hit by Russian missile strikes in the first months of Moscow's invasion of Ukraine.

Both companies were controlled by Igor Kolomoisky, an oligarch who backed Zelenskyy's presidential bid in 2019 and who is now facing probes into the insolvency of PrivatBank, another of his previous businesses. Kyiv has also seized ownership of Motor Sich, an plane turbine and helicopter engine maker based in Zaporizhzhia, close to the front lines in the south.

"Such steps, which are necessary for our country in condition of war, . . . will help to provide the urgent needs of our defence sector," Zelenskyy said in a Telegram channel statement. "In these difficult times, we must direct all our forces to liberate our land and people and support the Ukrainian army."

The nationalisations, which other officials described as temporary, came after weeks-long Russian missile and kamikaze drone strikes on electricity infrastructure across Ukraine have triggered daily power blackouts and electricity rationing across the country.

They also came a year after the president pushed through parliament so-called "de-oligarchisation" reforms aimed to curb the influence of the nation's wealthiest entrepreneurs.

Kolomoisky is facing domestic and international investigations for the insolvency of PrivatBank. The commercial lender was nationalised in 2016 after authorities uncovered losses of more than $5bn unaccounted for in its balance sheet.

Vyacheslav Boguslaev, MotorSich's former owner, was arrested last month on treason charges. Local prosecutors allege he helped supply Russia with parts for helicopters. Boguslaev sold his controlling stake in MotorSich to Chinese company Skyrizon but Ukrainian trust and security authorities blocked the move by freezing the shares.

Kolomoisky and Boguslaev deny any wrongdoing.

AvtoKraz, a truck manufacturer that produces vehicles for domestic military transport as well as rocket systems, was also among the groups taken under state control. It was previously owned by Ukrainian oligarch Kostyantyn Zhevago, who has lived in exile in the past years as Ukrainian authorities pursued cases against him related to the insolvency of a bank he previously owned.

Zaporizhtransformator, an electricity grid parts producer located in Zaporizhzhia, was also nationalised.

Ukraine defence minister Oleksiy Reznikov insisted the takeovers of these enterprises by the state legally did not amount to "nationalisations".

"This is a direct taking over of assets during wartime. These are totally different legal forms," Reznikov was quoted as saying by Reuters.

FT FINANCIAL TIMES

MAKE A WISE INVESTMENT

Subscribe today at ft.com/subscribetoday

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

Japan: Nikkei Tokyo Newspaper Printing Center, Inc., 1-10-5, Shinonome, Koto-Ku, Tokyo 135-0062
Representative; Hiroko Hoshino; ISSN 0915-9460

Mediterranean crossings

Italy cracks down on charities landing rescued sea migrants

AMY KAZMIN AND GIULIANA RICOZZI
ROME

Italy's new rightwing government is trying to stop European charities landing migrants rescued from the Mediterranean at the country's ports, in a first test of its campaign pledge to curb illegal migration from north Africa.

Rome's tough new tactics have left

the port and Italian waters immediately.

The captain of the Humanity 1 refused, insisting maritime law obliged him to "bring all those rescued from distress at sea to a place of safety" and that leaving with rescued people still on board would constitute "an illegal pushback", SOS Humanity said.

It said the rescued people had the right to "an individual protection

to remain on the ship. Amnesty International slammed Rome's "creative interpretation" of the law of the sea and its efforts to push some rescued migrants back out to international waters.

Another two ships were still awaiting permission to enter Italy's territorial waters to land rescued migrants, despite what the charities said were worsening conditions.

stranded at sea for 14 days is inhumane."

The rightwing coalition led by Giorgia Meloni and her Brothers of Italy pledged ahead of its September election victory to stem illegal migrants arriving from north Africa if it won power.

The new government has called for a pan-European approach to migration into the EU via the Mediterranean and

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

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 2022. 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

migrants stuck for up to 14 days on board four ships operated by humanitarian charities, including Médecins Sans Frontières, SOS Méditerranée and SOS Humanity.

The vessels rescue migrants from overloaded, unsafe boats in the Mediterranean and ferry them to the closest safe harbours, usually in Italy.

On Saturday night, Italy permitted the Humanity 1, a ship operated by Berlin-based SOS Humanity, to dock at the port of Catania to put ashore 144 children, pregnant women, mothers accompanying young offspring and "vulnerable people" in need of urgent medical care.

But the government barred 35 other migrants from disembarking, and on Sunday ordered the Humanity 1 to leave

assessment, which can only take place on land", and that forcing the ship away amounted to violation of both European human rights law and the Geneva Convention on the treatment of potential refugees.

The non-governmental organisation said on Sunday night that it was bringing a legal case against the Italian government to ensure the rights of those still stuck aboard the ship.

Meanwhile, MSF's Norwegian-flagged Geo Barents vessel, with more than 570 people on board, was permitted to dock at Catania on Sunday afternoon but, as with the Humanity 1, could only put ashore people the Italian government deemed vulnerable or in need of care.

Italy allowed 357 of the Geo Barents' passengers to disembark, but forced 215

The situation on board is becoming more and more unsustainable," said Claire Juchat, of SOS Méditerranée, which has 234 rescued people aboard its Ocean Viking. "To leave people

Catania: Humanity 1 was allowed to dock to let off 'vulnerable people'

has its sights on NGOs bringing people from unsafe boats to Italian ports.

Interior minister Matteo Piantedosi issued a decree last month declaring that the operations of the Ocean Viking and Humanity 1 contravened "the spirit of the European and Italian regulations on security and border control, and the fight against illegal immigration".

Piantedosi later told the Corriere della Sera newspaper that the government wanted to signal that Italy could not "take on migrants picked up at sea by foreign ships that systematically operate without prior co-ordination with authorities".

Currently, he said, migrants rescued by NGO ships accounted for about 16 per cent of illegal migrants arriving in Italy across the Mediterranean.

INTERNATIONAL

Midterm elections

Biden and Trump hit campaign trail on eve of polls

Control of Congress at stake as US president and predecessor rally support

LAUREN FEDOR AND JAMES POLITI
WASHINGTON

US president Joe Biden and former president Donald Trump headed to political rallies yesterday on the eve of midterm elections that will determine which political party will control Congress, stoking speculation about whether they are headed for a rematch in 2024.

While latest opinion polls suggested Republicans were on course to regain control of the House of Representatives, non-partisan analysts saw the Senate as a "toss-up" likely to come down to races in key swing states, including Pennsylvania, Georgia and Nevada.

At the same time, today's midterms are likely to fire the starting gun on the next presidential elections in 2024, with Biden and Trump eyeing another White House bid.

Yesterday more than 40mn Americans had already cast their ballots by voting early in person or by mail, pointing to a high turnout that could exceed the 122mn who voted in the 2018 midterm election.

Four years ago, a backlash against Donald Trump led Democrats to capture a majority in the House, but this year the political winds have swung in the opposite direction, amid voter discontent with high inflation, crime levels and immigration that has favoured Republicans.

Biden has for months largely shied from the campaign trail amid persistently low approval ratings, but in the final stretch of campaigning he has travelled the country backing a handful of congressional candidates and Democrats running for state governor.

On Saturday, Biden shared the stage with former president Barack Obama in Pennsylvania to rally support for John Fetterman, the Democratic Senate candidate, and Josh Shapiro, running for governor. Yesterday Biden was in another Democratic stronghold, Maryland, where polls suggested former investment banker Wes Moore was favourite to be elected governor.

Trump has re-emerged on the political stage with a series of high-profile rallies alongside candidates he has endorsed in several key swing states, as well as more traditional Republican strongholds.

Hunt for votes: Donald Trump speaks at a 'Save America' rally in Miami, Florida, on Sunday — Eva Marie Uzcategui/AFP/Getty Images

At the weekend he campaigned in Pennsylvania and Florida. Yesterday he was set to share the stage in Ohio with JD Vance, author of bestseller *Hillbilly Elegy*, who became the Republican nominee for the Senate there with Trump's endorsement. Trump won Ohio by 8 percentage points over Biden in 2020, but latest polls show Vance locked in a much tighter race with his Democratic opponent, congressman Tim Ryan.

Trump, 76, has for months flirted with another run at the White House. At a campaign event in Iowa last week, he teased supporters, saying: "In order to make our country successful and safe and glorious, I will very, very, very probably do it again . . . very soon."

US media reported last week that Trump and his advisers are eyeing next Monday, November 14, as a potential formal launch date.

Biden, who will turn 80 later this month, has not formally said he will seek re-election in 2024.

See FT Big Read and Outlook

Asia. Social trends

Singapore rights activists bemoan hardline rule

City state remains politically authoritarian and dirigiste despite shift over gay issues

MERCEDES RUEHL — SINGAPORE

Civil rights activists in Singapore were puzzled when their government issued a challenge to Sir Richard Branson. The UK billionaire entrepreneur was invited last month to take part in a televised debate in response to his blog post criticising the city state's strict drug policy and death penalty.

Home affairs and law minister K Shanmugam's offer of a plane ticket and accommodation for him to come and argue his position seemed at odds with Singapore's stance at home. The government had shown a willingness to use the country's laws and other means to silence local criticism, discourage opposing views and stop behaviours deemed unacceptable, critics said.

Writing on Twitter, Jolovan Wham asked Shanmugam why the minister could not debate the issue with his local community in Singapore instead. In response, Shanmugam blocked Wham on social media and deleted his comment, the activist said.

The incident serves as a reminder that while Singapore continues to embrace western commerce and has shifted on

'There is a will to govern not just the economy but also social values that are [vital] to political stability'

some issues such as gay rights, the island remains politically authoritarian and socially dirigiste.

Singapore is trying to attract global talent in everything from cryptocurrencies to the metaverse, after leaping ahead of Hong Kong in September to become the world's biggest financial hub behind London and New York.

As the ruling People's Action party, in power since independence in 1965, prepares for new leadership, it has redoubled efforts to protect the cultural status quo, according to experts. But its popularity is in decline and its stance ignores

ble to really regulate individual activities, it does feel it needs to state its position on values publicly, even as a symbolic act," said Chua Beng Huat, a professor at the Yale-National University of Singapore college. "There is a will to govern not just the economy but also social values that are important to political stability."

One of the biggest moves came a week ago when the government filed bills to prevent court challenges to laws and policies concerning marriage.

Despite softening attitudes towards homosexuality, the city decriminalised sex between men in August via the repeal of a colonial-era law, Singapore has sought to protect itself against court challenges that could legalise gay marriage. The intervention in effect makes this a political issue the PAP can control, rather than a legal one.

A similar sentiment was at play last month when Vogue Singapore saw its licence cut from one year to six months. The fashion magazine was issued a warning by the information ministry over nudity and content that promoted non-traditional families, the ministry said. Vogue did not respond to a request for comment.

A film, *#LookAtMe* by local filmmaker Ken Kwek set in Singapore and which premiered in New York, was banned by authorities in October. It is about a young man who is offended by a pastor's stance on homosexuality. Government agencies said the film had the potential to cause social division and denigrated a religious community.

"You're seeing a series of reactions based on insecurity," said Michael Barr, associate professor in international relations at Flinders University and the author of several books on Singapore politics. "I have spoken to a few academics and civil society types and the sense of the creeping level of repression is very real." He added that decision makers feared losing control of the narrative.

Singapore maintains that the majority of its citizens support the government's stance. In a speech in August, Prime Minister Lee Hsien Loong noted longstanding reservations by religious groups on legalising homosexuality. Shanmugam points to public surveys of Singaporeans that show majority support for the death penalty as a deterrent

YOUR
GREAT IDEAS
SHOULD
AND WILL
COME
TO LIFE
WITH US ON YOUR SIDE

Societe Generale, **Bank of the year for sustainability***, brings you innovative finance solutions to meet your ambitions for a more sustainable future. Discover our clients' successes and meet our experts and bankers at Positive Impact Week, starting November 28th.

the views of a more liberal, younger generation of Singaporeans.

In October alone, a global fashion magazine was chided for promoting non-traditional families, a bill has been introduced to amend the constitution to protect the heterosexual definition of marriage, a controversial film has been banned on religious grounds and an adult content creator has been jailed. Unlike Branson, some local activists against the death penalty have been issued with police warnings.

"The government has always taken an interesting position that even if it is una-

K Shanmugam: offered to hold a rights debate with Richard Branson

to drug trafficking.

But experts said the liberalisation of the cultural scene and the growth in activism were unavoidable. "People are more liberal across generations. It is becoming more visible," said Chua.

That is especially true of online activity, another area where Singapore has clamped down. A court last month fined and jailed Titus Low, a 22-year-old OnlyFans creator, for three weeks for accessing his account in breach of a police order to stay off the video site. Low's channel features many sexually explicit videos and photos. He was originally charged with transmitting obscene materials by electronic means last year. Low's lawyer did not respond to a request for comment.

Even so, some citizens are hopeful the repeal of Section 377A, as the law banning gay sex was known, will mean opportunities to push boundaries without breaking the law.

"If peaceful activism and changing attitudes contributed to [the repeal], maybe there is hope for a softening on other issues, such as the death penalty," a Singaporean student said. However, even for them, it still feels far away.

THE FUTURE IS YOU
SOCIETE GENERALE

ADVISORY • INVESTMENT BANKING • FINANCING • MARKETS • TRANSACTION BANKING
SECURITIES SERVICES • EQUIPMENT FINANCE • FLEET AND MOBILITY SOLUTIONS

*Awarded by International Financing Review for 2022. Societe Generale, S.A. with a share capital of €1 062 354 722,50 - 552 120 222 RCS PARIS - Registered office: 29, bd Haussmann, 75009 PARIS. November 2022.

Cruise ships give China a wide berth amid zero-Covid push

Virus has knocked Asia passenger volumes and it could take years before they recover

CHAN HO-HIM — HONG KONG

Jessi Chen "had the best time" when she held her bachelorette party with about 50 friends during a "cruise-to-nowhere" trip in Hong Kong a year ago.

"It was really fun," the business executive, who is in her 30s, said about her trip on Dream Cruises' 1,674-cabin Genting Dream, a three-day round trip into international waters then back to Hong Kong. It was her first time on a cruise ship in Asia, and she enjoyed it so much she was looking forward to another trip at a time when international travel was all but impossible because of Covid-19 restrictions.

Then authorities suspended cruises to nowhere, too. Hong Kong as well as mainland China, with its commitment to zero-Covid, have been virtually abandoned by international cruise lines and Chen might have to wait months to set sail again from Victoria Harbour.

While cruise bookings around the world are rising to pre-pandemic levels, analysts and industry insiders said a recovery for the sector in China and Asia could begin only after 2024, given that cruise lines typically plan operations a year or more ahead.

Carnival's Costa Cruises, which used to have a strong Asia presence with a quarter of its fleet stationed in the region, has suspended sailings owing to uncertainties over a tourism rebound. Norwegian Cruise Line and MSC Cruises no longer deploy ships in the region, while Genting Hong Kong, which used to operate Dream Cruises, went bankrupt this year.

Royal Caribbean is basing just one of its ships, the 2,137-cabin Spectrum of the Seas, in Singapore as its home port. Hong Kong, its former port, removed cruise restrictions only in October.

The Asia-Pacific region, thanks to a rapidly growing Chinese market, had accounted for up to a fifth of big cruise lines' global revenues before 2019.

But the pandemic resulted in Asia passenger volumes falling from 3.7mn to 626,000, according to Cruise Lines International Association, an industry body. Passenger volumes in mainland China plummeted 99 per cent to just 6,000 last year, from nearly 2mn in 2019.

Cathy Hsu, a professor at Hong Kong Polytechnic University's school of hotel and tourism management, said it could take another two to three years for Asia to experience a rebound post-Covid.

"A full recovery to the pre-pandemic level [in Asia] will be challenging without mainland [Chinese] tourists," said Hsu. "As long as there are policy uncertainties, international cruise lines will most likely stay away from making commitments."

Hopes of travel relaxations dimmed after China's Communist party reaffirmed its commitment to its rigid zero-Covid policy last month at its congress. Hong Kong's borders are still not fully open, with all inbound travellers barred from restaurants, bars and clubs for the first three days after arrival.

Docked: Royal Caribbean's Spectrum of the Seas in Hong Kong. Below, on board the Genting Dream

Peter Parks/AFP/Getty; Lam Yik/Bloomberg

The Chinese territory's Kai Tak cruise terminal in Kowloon, which used to host the region's biggest cruise ships, has been turned into a 786-bed government quarantine facility.

Jeff Bent, managing director of Worldwide Cruise Terminals, which manages Kai Tak, expected "it would be a few years until we get back to the same breadth of cruise lines that we had in the past".

Trey Hickey, a former Carnival senior executive, said that most big cruise lines were focused on their core domestic businesses in Europe and the US rather than on emerging markets such as Asia amid the "financial and reputational damage the industry has experienced".

Cruise lines including Carnival had to refinance large amounts of corporate debt after borrowing heavily amid the pandemic, while the industry suffered damaging publicity when passengers were trapped on Covid-ridden cruise ships in the early days of the outbreak.

But Hickey believes companies that stay engaged with the region could be rewarded.

Silversea Cruises, operated by Royal Caribbean, has planned cruises in Asia that will call at Hong Kong in early 2023, despite not stopping at mainland Chinese ports. Norwegian Cruise Lines has said it will bring back one of its cruises, the Norwegian Jewel, to Asia from October next year. And Carnival's joint venture partnership with China State Shipbuilding Corporation, CSSC-Carnival, is set to have its first cruise ship to serve mainland China delivered in 2023.

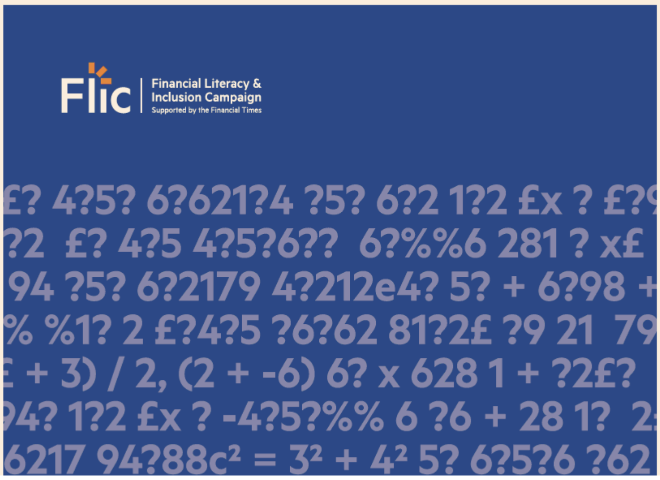
> 'The scale and potential of the China market are [unbroken] but there is a need to rebuild trust and faith'

"The scale and potential of the China market are undiminished" when it eventually opens up to the world, said Brian King, at Texas A & University. But, he added that "there is a need to rebuild trust and faith".

According to Chen, the business executive, cruise lines should tap into a younger clientele, who got a taste for life on the seas when all other leisure travel was proscribed.

But Royal Caribbean, which saw its proportion of global revenues from Asia-Pacific fall from about 15 per cent in 2019 to only 9 per cent last year, disclosed it had "no insight on when we will return to service in mainland China".

"China is the growth engine . . . and is now the only market without a return to service," the company said. "Hopefully, this will start to change in 2023."



China

Exports fall for first time since 2020

THOMAS HALE — SHANGHAI
WILLIAM LANGLEY — HONG KONG

China's exports contracted last month for the first time since the early stages of the Covid-19 pandemic, a sign of mounting pressure on an economy still gripped by strict antivirus measures.

Exports in dollar terms fell 0.3 per cent year on year in October, official data showed yesterday, compared with an economists' forecast of 4.5 per cent growth and a 5.7 per cent gain in September. The figure last fell in May 2020.

China's trade has supported its economy throughout the pandemic. Its exports rocketed in 2020 and 2021 as global markets shifted to buying goods rather than services.

But the latest data highlight the country's exposure to a global slowdown as other big economies raise interest rates to tackle higher inflation. Unlike China, most countries have largely removed

economist at Guotai Junan International, an investment bank.

As policy tightens, "the risk of economic recession overseas will rise, considerably weighing on global demand".

The weaker-than-expected trade data add to domestic pressures on China's economy as policymakers struggle to contain a property downturn and the damping impact of its strict zero-Covid policy. The strategy aims to rapidly eliminate all coronavirus outbreaks through mass testing, lockdowns and quarantine for close contacts of positive cases.

> 'Decline in goods consumption overseas undermines the demand for China's exports'

In the three months to the end of September weighed on consumer demand, with retail sales up just 2.5 per cent in September.

Equities in Hong Kong and mainland China have gyrated in the past week following rumours that the zero-Covid policy would be eased. But Beijing quashed the rumours over the weekend. At the Communist party's congress last month, zero-Covid was praised and no timetable was offered for any relaxation of the rules.

Last month, imports also fell for the first time in more than two years, dropping 0.7 per cent in dollar terms year on year.

Zichun Huang, an economist at Capital Economics, noted that a third of China's imports were in turn used for its exports. "We anticipate further weakness," he said.

China on Friday launched its fifth International Import Expo in Shanghai, a conference that hosts thousands of

Covid restrictions.

"Consumer preferences overseas have changed, and the decline in goods consumption undermines the demand for China's exports," said Hao Zhou, chief

tember, China's economy grew just 3.9 per cent year on year, below a 5.5 per cent target that was already the lowest in three decades. Lockdowns of big cities to contain small outbreaks have

foreign and domestic companies. President Xi Jinping, in remarks delivered by video link, emphasised that China remained committed to opening up to the outside world.

Shipping tracker

Sanctions reshape Beijing-Moscow trade links

VALENTINA ROMEI — LONDON
MARTIN ARNOLD — FRANKFURT

China has become Russia's main trading partner as imports from the EU contracted sharply following sanctions imposed by western countries in response to the invasion of Ukraine.

In June, July and August, Russia's goods imports were 24 per cent lower than for the same period last year, leading to a monthly import gap worth $4.5bn, the Kiel Institute for the World Economy, based in Germany, calculated.

Trade with the EU was down 43 per cent as a result of the sanctions while Russian trade with China rose 23 per cent, making it Russia's top trading partner. Russia stopped publishing most foreign trade data in February.

"Since China's exports are not sufficient to compensate for the drop of Russia's trade with the EU, Russia's efforts to replace slipping imports from Europe are proving increasingly difficult," said Vincent Stamer, head of the Kiel Trade Indicator. "The sanctions . . . are apparently hitting the Russian economy hard and noticeably limiting the population's consumption options."

The institute, which tracks shipping loads of 57 countries and the EU, reported that cargo unloaded in October at St Petersburg, a hub for trade with Europe, was a tenth of the volume for the same month last year.

Official Chinese data released yesterday showed the value of imports and exports with Russia rose by an annual rate of 35 per cent in October, in contrast with China's overall trade contraction.

Last month Russian goods exports fell 2.6 per cent, and imports 0.4 per cent, according to Kiel.

Together with a trade contraction in Germany and the US, monthly global trade volumes were down 0.8 per cent, Kiel analysis showed.

Leah Fahy, economist at Capital Economics, the consultancy, forecast that global trade would fall on an annual basis from next year as more countries went into recession.

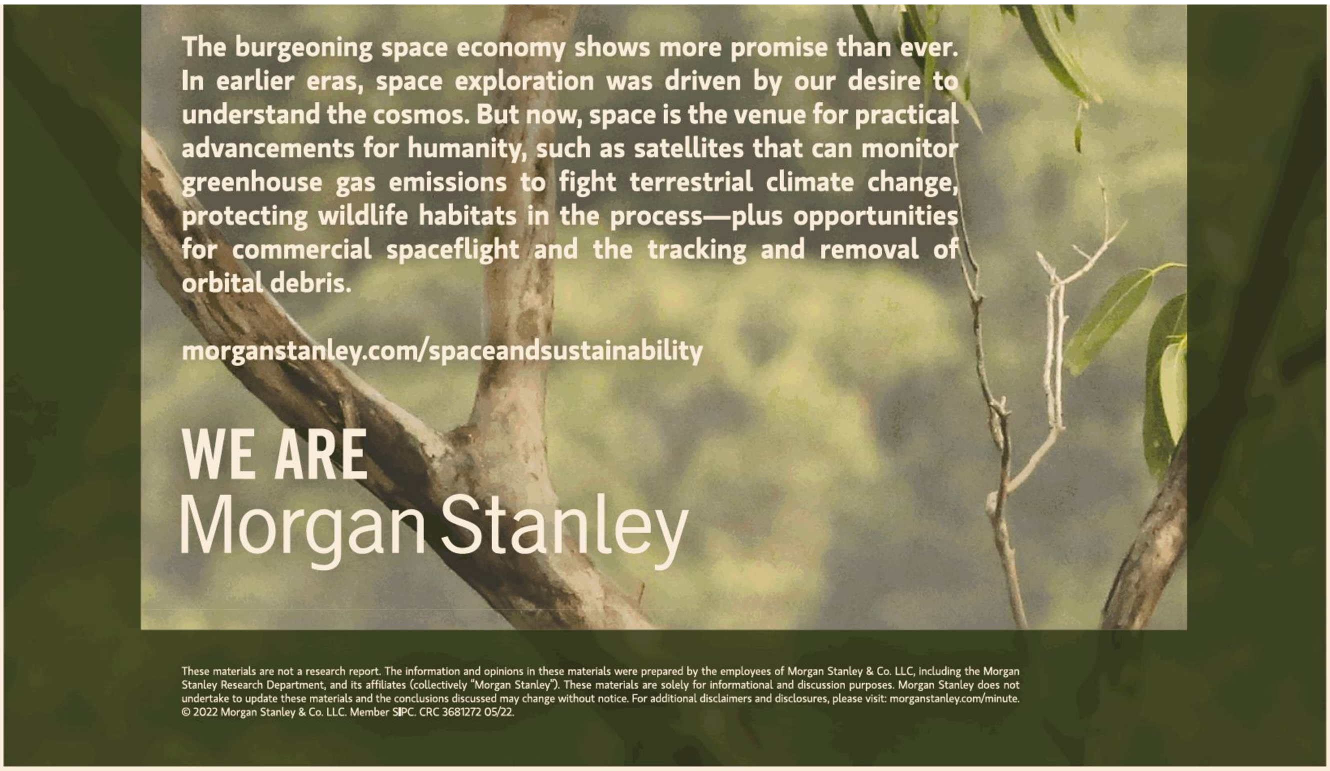
Germany's economy continued to suffer supply chain disruption as imports fell 0.9 per cent and exports also declined slightly in October, Kiel said.

But there was some relief for German industry as freight rates on China-EU routes have fallen two-thirds this year, taking prices for a standard container below $5,000 for the first time in two years, it said.

German industrial output rose unexpectedly in September despite a fall in the most energy-intensive sectors in response to soaring energy prices.

Monthly production at German factories rose 0.6 per cent, driven by sharply higher automotive and pharmaceutical output. But output in the energy-intensive sectors such as chemicals, metals and glass was down 0.9 per cent, taking the full-year fall to almost 10 per cent.

New orders for German factories fell 4 per cent in September and analysts at Goldman Sachs expected hard data on the economy to "deteriorate significantly" from October, especially after Chinese exports to the EU dropped 9 per cent year on year.



'Every day you see people die. It is not safe to walk around outside. I have never seen it like this'

Resident

Outbreak: a young cholera victim is helped on arrival at a Port-au-Prince clinic last month
Ramon Espinosa/AP

Caribbean. Leadership woes

US looks for support to halt Haiti violence

Gangs fighting for territory have exacerbated political and humanitarian crisis

JOE PARKIN DANIELS — BOGOTÁ

Over one recent weekend in Port-au-Prince, Haiti politician Éric Jean Baptiste and his bodyguard were murdered by gangsters while driving through the capital in an armoured car.

Across town at a protest outside a police station, radio journalist Romelson Vilsaint was fatally wounded when he was hit on the head by a tear gas canister launched by police, witnesses said.

The acts of violence were unrelated, but signify the chaos engulfing Haiti as its regional neighbours try to rally an international response.

On Friday, the US and Canada levied sanctions on two members of the political elite, Joseph Lambert, president of the Haitian Senate, and former senator Youri Latortue. Both are accused of drug trafficking and having ties to the violent gangs plaguing the country. Both denied the charges in social media posts.

"The United States and our international partners will continue to take action against those who facilitate drug trafficking, enable corruption and seek to profit from instability in Haiti," Brian Nelson, the US Treasury's under secretary for terrorism and financial intelligence, said in a statement.

"Canada will not remain idle while gangs and those who support them terrorise Haiti's citizens," said Mélanie Joly, Canada's foreign minister. More sanctions are expected to be announced in the weeks ahead.

Haiti is mired in a political and humanitarian crisis that escalated in July last year when President Jovenel Moïse was assassinated in his mansion in circumstances that remain mysterious. Acting prime minister Ariel Henry emerged victorious in the ensuing power struggle, although his leadership has since been dogged by mass protests and questions of his legitimacy.

The situation has worsened as gangs, some reportedly operating with support from politicians, have fought over territory, with civilians often caught in the

Meanwhile the US is attempting to drum up support among its neighbours for another international intervention in order to lift gang roadblocks and guarantee the passage of aid around the country.

Although Henry has requested the measure, few countries have offered to lead such a task force, but the Bahamas has said it will send troops or police if requested. Washington has said it is confident of securing a resolution at the UN Security Council for a deployment.

"This is a work in progress and we are continuing to pursue it," US secretary of state Antony Blinken told reporters during a recent visit to Ottawa.

"We have both [US and Canada] been talking to a variety of countries to gauge their interest in and willingness to participate in that."

Previous interventions in Haiti have exacerbated the country's woes. UN peacekeepers that arrived following the 2010 earthquake were accused of sexual violence and abuse, as well as bringing cholera to the nation.

Renata Segura, deputy director for Latin America and the Caribbean at the International Crisis Group, said that while such a deployment this time might open humanitarian corridors, it would be fraught with difficulties.

> 'Troops could be seen by many in Haiti as . . . aggravating the political crisis'

"The fact that these troops could be seen by many in Haiti as consolidating the power of unelected Henry could mean that, as they alleviate the humanitarian crisis, they end up aggravating the political crisis."

On Thursday, the police announced they had seized control of the Varreux fuel terminal in Port-au-Prince, lifting a weeks-long blockade by the powerful G9 coalition of gangs.

Amid nationwide protests against Henry's leadership, the gang said it would not move until the acting prime minister resigned, and then went on to throttle fuel supplies in a country where much of the population relies on gener-

2022/11/8 20:12 All pages from Financial Times (Asia), Tuesday, November 8, 2022

crossfire.

"Every day you see people die," one Port-au-Prince resident said, asking not to be named for fear of reprisals. "It is not safe to walk around outside. I have never seen it like this."

The number of displaced Haitians has reached 96,000, tripling in the past five months, according to the UN, which also estimates that a record 4.7mn, nearly half of the population, are facing acute hunger.

Cholera is spreading once more, with 3,429 suspected cases across six provinces last month, according to the Pan American Health Organization. A previous outbreak, believed to have been started by UN peacekeepers, killed nearly 10,000 between 2010 and 2019.

ators to power their homes and businesses.

Aid workers said on Friday that fuel deliveries had not yet been made, despite the end of the siege. The UN Security Council last month unanimously voted to sanction Jimmy Chérizier, leader of the G9. Chérizier said on social media on Sunday that the G9 had lifted its blockade.

Louis-Henri Mars, who runs a long-standing peace-building initiative in Haiti, said sanctions would do little if gang financiers in Haiti and overseas were not tackled. "They demonise the locals but have so far closed their eyes to those profiting sweetly from gun and ammunition sales for the murderous rampages," he said.

Summit

G20 nations kept in the dark over Putin's Bali attendance

GIDEON RACHMAN — JAKARTA
MAX SEDDON — RIGA
HENRY FOY — BRUSSELS

Indonesia's president has said he has a "strong impression" that Vladimir Putin will not attend next week's summit of G20 leaders in Bali, the first meeting of the world's largest economies since the Russian president launched his war against Ukraine.

The suggestion from Joko Widodo, who will host the summit, came after the US rejected an offer by Indonesian officials to arrange a bilateral meeting between Putin and US President Joe Biden at the event, a senior US official said last month.

There has been speculation for weeks about Putin's potential attendance at the Bali gathering, amid heightened tension between Russia and western powers over Ukraine.

If the Russian president were to attend, it would be his first meeting since the start of his invasion in February with Biden and other Nato leaders, who have provided tens of billions of dollars in military support to Ukraine and imposed myriad economic sanctions on Moscow.

Widodo spoke to Putin last Wednesday about the G20 event and as a result of that call believed the Russian leader would not be attending, the Indonesian president said in an interview with the Financial Times.

Dmitry Peskov, Putin's spokesperson, did not immediately respond to a request for comment. Peskov told reporters earlier yesterday that the Kremlin would make a decision about Putin's attendance this week.

Putin said last month: "Russia will definitely be represented [in Bali] at a high level. Maybe I will go, too. I will think about it."

Widodo emphasised that the Russians remained welcome to attend the G20 meeting and that Indonesia hoped to facilitate international dialogue to counter what he called a "very worrying" rise in international tension.

He also expressed frustration that geopolitical tension would overshadow the summit: "The G20 is not meant to be a political forum," he said. "It's meant to be about economics and development."

The Indonesians intend to put food and energy security at the centre of next week's discussions, two issues that have become global concerns as a result of Putin's invasion.

Gideon Rachman see Opinion

Zero-Covid woe An iPhones plant might be in havoc, but China is unlikely to soften just to oblige western groups ● COMPANIES & LEX

Companies & Markets

Liverpool FC sale explored by US owners Fenway Sports

- Banks advising after buyer approach
- Wave of activity in prestige assets

JAMES FONTANELLA-KHAN
AND SARA GERMANO — NEW YORK
JOSH NOBLE — LONDON

Fenway Sports Group is in the early stages of exploring the sale of Liverpool FC, people familiar with the matter said, making the English Premier League side the latest prestige sports asset to go on the market.

FSG, which bought Liverpool in 2010 for £300mn, is being advised by Goldman Sachs and Morgan Stanley after it was approached by at least one potential buyer, said two of the people.

In a statement, FSG said it frequently received interest "from third parties seeking to become shareholders in Liverpool. FSG has said before that "under the right terms and conditions we would consider new shareholders if it was in the best interests of Liverpool as a club."

> Investors have been drawn to European football by the fast-rising value of media rights

News of the potential sale was earlier reported by The Athletic website.

for a French team. Investors, particularly from the US, have been drawn to European football by the fast-rising value of media rights and what some see as the relatively low valuations compared with US sports.

But the failure of the European Super League project has removed one possible catalyst for significant valuation growth, while the Premier League's recent rights deal in the US has locked in a key source of revenue for six years in its most important growth market.

High-profile sports assets outside football that have come on the market this year include the US National Football League's Washington Commanders, the National Basketball Association's Phoenix Suns and Major League Baseball's Anaheim Angels.

Under FSG, Liverpool has returned to the top of European football, reaching three Champions League finals and winning once. The club won the Premier League in 2020, ending a 30-year spell without an English league title.

But competition is becoming more intense at the top of the Premier League, especially since Newcastle United was bought last year by Saudi Arabia's sovereign wealth fund. Newcastle is third in

Airborne Russia domestic air travel returns to near pre-Covid levels but safety worries grow

Manufacturers Airbus and Boeing in March suspended the supply of spares and services — Yuri Kadobnov/AFP/Getty Images

SYLVIA PFEIFER — LONDON

Russia's aviation industry has defied predictions it would grind to a halt after western sanctions barred access to spare parts and maintenance expertise.

Domestic air travel has rebounded close to levels last seen before the Covid-19 pandemic, triggering concerns

suspended the supply of spares and services and removed regular maintenance support, as did engine makers including Rolls-Royce.

Before the start of the war, the two aerospace groups accounted for 70 per cent of Russia's commercial fleet of roughly 880 aircraft, according to data from Cirium, a consultancy.

The market is dominated by west-

in normal times. And that's . . . creating some concerns on the safety side."

Phil Seymour, president of IBA, said most western-made aircraft can operate without too much maintenance in the short term, but Russian authorities "would not want planes to fly in an un-airworthy condition".

For those due a "major six-year or 12-year check, then the operator will

Lack of female executives on UK boards is 'appalling'

DANIEL THOMAS — LONDON

The lack of women in executive roles in British companies is "appalling", according to a FTSE board report from Cranfield University and EY.

The annual survey of the UK's FTSE 350 raises new concerns that companies are not doing enough to put women in management posts despite hitting targets for women directors in the boardroom.

The number of women on FTSE-listed company boards has risen this year to almost 40 per cent but nine in 10 were in non-executive positions, suggesting the increase has been driven by appointments to comply with targets.

The survey showed there are nine female chief executives in the FTSE 100. While the number of women in non-executive roles in the FTSE 100 has risen 15 per cent over the past year, the number in executive directorships increased 3 per cent to 36.

Alison Kay, managing partner for client service at EY, UK & Ireland said FTSE businesses were "falling woefully short of the intended outcome — distributing the power and influence necessary to achieve true gender parity".

Tough decisions were needed "to push further into root-and-branch reform" given the "alarming lack of progress in gender-proofing executive succession planning", she said.

Sue Vinnicombe, professor of women and leadership at Cranfield School of Management, said the "lack of progress in terms of seeing women in these key executive roles is frankly appalling".

The survey showed about 17 per cent of executives in the FTSE 100 are female — much lower than the headline 40 per cent figure for boards. This falls to 12 per cent among smaller companies on the

https://digital.olivesoftware.com/olive/odn/ftasia/printpages.aspx?doc=FTA%2F2022%2F11%2F08&ts=20221107203207&uq=20220804103507 7/44

2022/11/8 20:12 All pages from Financial Times (Asia), Tuesday, November 8, 2022

FSG's move comes months after Chelsea FC was sold by Russian billionaire Roman Abramovich to a consortium led by US financier Todd Boehly for £2.5bn.

During the sale process Chelsea received more than 200 bids, highlighting the appetite for Premier League teams. In addition to Boehly, Chelsea received bids from private equity tycoon Josh Harris and British industrialist Sir Jim Ratcliffe.

The Chelsea sale was followed by two more record-breaking football deals. Italian champions AC Milan were sold to a US investment firm for €1.2bn, a record in Europe outside England, and Olympique Lyonnais was sold to a US businessman for €800mn, the highest

the league, Liverpool eighth.

Forbes values Liverpool at $4.45bn, making it the most valuable football club in the world after Real Madrid, Barcelona and Manchester United. It ranks 22nd across all sports.

Last year the club generated revenue of £487mn, according to Deloitte, the seventh-highest figure in Europe, and more than Chelsea's £436mn.

FSG, the parent of Liverpool, baseball's Boston Red Sox and hockey's Pittsburgh Penguins, is controlled by John Henry, a self-made commodities billionaire who was among Premier League owners who apologised to supporters for his advocacy of the European Super League project in 2021.

among western executives that safety may eventually be put at risk.

Since Russia lifted all pandemic-related travel curbs in the summer, domestic flights have surged and were up 4 per cent on 2019 levels in October, according to data from IBA, an aviation consultancy.

International travel is far below 2019 levels as most western countries banned Russian airlines from their airspace following the invasion of Ukraine. Travel has continued to countries such as China, Turkey and former Soviet Union states.

The domestic rebound, however, has triggered fears about long-term safety. Airbus and Boeing in March

'We are worried about the conditions for maintenance as . . . the planes are flying a lot'

ern lessors that provided domestic airlines with more than 500 planes but have retrieved few of them.

Guillaume Faury, chief executive of Airbus, said last month: "We are worried about the conditions for maintenance as actually the planes are flying a lot.

"Because of the sanctions, we cannot really monitor and support as . . .

have a problem. Spare parts, tooling and equipment are all quite specialist," he said.

As time runs on, Russian airlines would have to cannibalise some aircraft or source components from other countries, executives said.

Moscow's decision to deregister the western-owned aircraft has complicated their future. Under western regulations, each aircraft has a servicing guide that details every modification made and needs to be kept up to date.

"There is a difference between whether the aircraft can still fly OK and whether it meets international safety standards," a leasing executive added.

FTSE 250, where for the third year running only 47 women hold executive directorships.

Women account for almost 40 per cent of directors on FTSE 100 boards and 39 per cent among smaller companies on the FTSE 250, in line with the Women Leaders Review targets.

Last week, the government extended the review, previously known as the Hampton Alexander Review, to include some of the largest private companies.

While targets are being reached on an average basis in the FTSE 100, some individual companies are falling short. The report found 10 in the FTSE 100 with 30 per cent or less female representation in their boardrooms.

HSBC's days as the embodiment of globalisation are over

INSIDE BUSINESS
FINANCE

Patrick Jenkins

As a financial expression of globalisation, the Hong Kong and Shanghai Banking Corporation has had a history stretching back to its founding by a Scot in 1865. As recently as seven years ago, the core of its model — financing China's business activities with the world — looked smarter than ever.

Remember The Plough at Cadsden? That's the pub where then UK prime minister David Cameron supped ale with Xi Jinping, a couple of days after the Chinese president had told British parliamentarians that the UK and China had formed an "interdependent community of entwined interests".

Today those interests are rapidly untwining. Xi is turning increasingly authoritarian at home and hostile to the west. And HSBC's model is gratingly out of kilter in a generally fracturing world. Tensions between Hong Kong and London — HSBC's twin bases — are acute.

Last week a row between HSBC and its largest shareholder, Chinese insurance group Ping An, spilled into the public arena after Michael Huang, chair of the insurer's asset management unit, said the bank should break itself up and be "far more aggressive" in its cost-cutting.

The dust-up, brewing in private for several years, according to people close to the bank, came to light in the spring when it emerged that Ping An had told HSBC management they should pursue a break-up. HSBC has largely sat on its hands in the interim, fuelling frustration at Ping An.

"The global finance model that once dominated and shaped the global financial industry in the last century is no longer competitive," Huang said. "Just divesting a few small markets or businesses" would not be enough to address the challenges. He urged the bank to "adopt an open attitude by studying the relevant suggestions carefully and prudently . . . rather than attempting to simply bypass and reject them".

Ouch.

Why the outburst? In part, it reflects irritation with HSBC's relatively weak performance and its perceived slowness in addressing it. It has long been an inescapable fact that the group's profitability outside Hong Kong, greater China, and Asia more broadly is a drag. The region generates close to 70 per cent of group profits.

The model 'that once dominated and shaped the global financial industry in the last century is no longer competitive'

The tipping point in the relationship between HSBC and its biggest shareholder was the cessation of dividend payments in 2020, when UK regulators banned banks from making shareholder distributions given fears over the impact of the pandemic on the financial sector.

Ping An itself, with an HSBC stake of close to 9 per cent, would normally expect to generate close to $1bn a year from the bank's dividend payout. But the bank also alienated its customers in Hong Kong, many of them small investors who rely on the bank's dividends for retirement income. The notion that the regulator of a former colonial power should have dictated such a policy was anathema in the region.

Adding to all of the above are the geopolitical tensions.

A flashpoint for Beijing occurred in 2018, when the bank provided information to US prosecutors on Huawei's chief financial officer, Meng Wanzhou, who was arrested in 2018. UK and US politicians, conversely, were highly critical of HSBC executives who expressed support for Hong Kong's national security law. Then there is the role of Ping An. Its roots in the 1980s lie in state-owned companies and its dominant investor is the Chearavanont family, which has long been close to the Chinese Communist party.

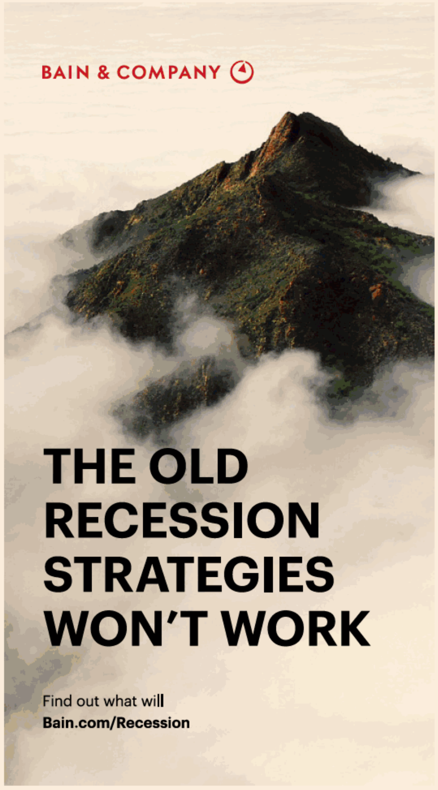
Where does HSBC go from here? The bank is wisely beginning to prepare for the next generation of leadership. But the surprise appointment of a new London-based finance director as part of chief executive succession planning peeved Ping An, which has been pressing for more senior staff to move to Hong Kong.

The pace of cost-cutting and divestments of units that do not mesh well with the Asian franchise (Canada is on the block) has been slow.

An obvious step would be to spin off the group's already ringfenced UK business. Ping An reckons freeing the Asian business from the shackles of the rest of the world could bolster HSBC's value by a quarter and release $8bn of capital, because regulators would require fewer buffers as it would be no longer "globally systemic".

It is time for HSBC to accept the uncomfortable conclusion of its biggest shareholder: its days as the banking embodiment of globalisation are over.

patrick.jenkins@ft.com



COMPANIES & MARKETS

Energy

Funds press Paris to lift EDF offer

Minority shareholders ask regulator to challenge value of nationalisation bid

SARAH WHITE — PARIS

Several US funds are pushing the French state to raise its €10bn buyout offer to minority shareholders of energy utility EDF and asking France's market regulator to recommend a price bump, adding to pressure from investors unhappy with the terms of the nationalisation.

The French government is moving to buy out the 16 per cent it does not already own in EDF, as the group grapples with production outages at its French nuclear reactors and soaring wholesale power prices in Europe, and gears up to build costly new plants.

The process reverses a 2005 privatisation and subsequent fall in the power group's stock price since it was listed at €32 a share, leading to opposition to the €12 a share buyout price from investors, such as employee shareholders.

US funds holding several hundred million euros worth of EDF shares, which include hedge fund TIG Advisors, have now called on France's Autorité des Marchés Financiers (AMF) to challenge the offer price and recommended it be raised to €15.80 per share, according to a November 3 letter sent by lawyer Sophie Vermeille and seen by the Financial Times.

The funds have argued that disclosures over the impact of government decisions in recent years on EDF's finances were insufficient and not taken into account by an independent consultancy hired by the utility to review the offer. They have also called for some changes to the terms of the tender and how bids are collected.

"By not allowing minority shareholders a chance to benefit from a fair price or from the necessary information to come to an informed opinion about the financial conditions, [the AMF] would be sending an extremely negative signal about Paris as a financial centre," Vermeille wrote.

The AMF is due to rubber-stamp or raise objections to the bid, in a decision that could be made public today according to the tender offer filings. The AMF, EDF and France's economy ministry declined to comment.

Once the offer is launched, the government needs to reach a 90 per cent acceptance threshold from its 84 per cent holding before it is able to squeeze out the rest of the minority shareholders. EDF shares are hovering just under the €12 offer price level, after sliding close to all-time lows at €5.8 in March.

The state's €9.7bn buyout offer includes a bid for EDF's convertible bonds. The bid represented a 53 per cent premium to the company's closing price before the nationalisation was announced in July.

EDF, which last week cut its production forecast for the fourth time this year owing to reactor outages and maintenance programmes, was also hit in January when the French government made it absorb the cost for its bid to cap rises in consumers' power bills at 4 per cent in 2022.

Vermeille told the FT the funds were not looking to derail the nationalisation, but pushing for more transparency around the process.

Some other shareholders are also calling for the price to be raised to at least €15 per share, such as employees who invested in the shares and own collectively about 1.5 per cent of EDF's capital.

"Minority shareholders are being forced to sell at the worst time in EDF's history," said Martine Faure, a representative of the CFE-CGC union and chair of two employee investor funds.

Technology. Sanctions

China designers tailor chips to dodge US curbs

Alibaba and Biren processing speeds cut after Washington throws spanner into works

QIANER LIU — HONG KONG
RYAN MCMORROW AND NIAN LIU
BEIJING
KATHRIN HILLE — TAIPEI

Alibaba and start-up Biren Technology are tweaking their most advanced chip designs to reduce processing speeds and avoid US-imposed sanctions aimed at suppressing Chinese computing power.

Alibaba, Biren and other China design houses have spent years and millions of dollars creating blueprints for advanced processors to power the country's next generation of supercomputers, AI algorithms, and data centres. They are made offshore by Taiwan Semiconductor Manufacturing, the biggest contract chipmaker. But sanctions announced by Washington last month that cap processing power of any semiconductor shipped to China without a licence have thrown a spanner into the works.

Both Alibaba and Biren had conducted expensive test runs of their chips at TSMC when Washington unveiled the controls. The rules have forced them to halt further production and make changes to their designs, according to six people briefed on the situation.

They mark another blow for Alibaba, founded by Jack Ma. Its shares have lost 80 per cent of their value since Beijing cancelled sister Ant's IPO two years ago. The group's new chip was to be its first graphics processing unit and was close to being unveiled, according to three

vocal. The group has raised Rmb5bn ($695mn) from investors, including Hillhouse, Qiming Venture Partners and China and Russia state funds, to create a processor it claims outperforms GPUs from Nvidia and AMD.

"You have to be low-key," said a Shanghai-based founder of a rival fabless start-up. "They've done too much PR and their specs are out there in black and white. Now it's difficult for TSMC to help them find a way out."

Three China engineers at design groups working with TSMC said it was hard for the Taiwan group or any fab to accurately judge a processor's power. TSMC had begun to ask China clients to self-report chips' output and sign disclaimers. A person close to TSMC said Biren's presentations on processors had forced the chipmaker to halt supplies because the chips' performance probably met the specifications banned by the US curbs. "Unless they can prove they are OK under the export controls, we will not be able to ship to them."

Chinese engineers said figuring out what was compliant was complicated because of Washington's unclear rules for calculating the bidirectional transfer rate. The export controls cap chips at below 600 gigabytes per second.

"There are several ways in which [this

'Too much PR and their specs are out there. Now it's difficult for TSMC to help them find a way out'

transfer rate] can be calculated," said an

https://digital.olivesoftware.com/olive/odn/ftasia/printpages.aspx?doc=FTA%2F2022%2F11%2F08&ts=20221107203207&uq=20220804103507 8/44

2022/11/8 20:12 All pages from Financial Times (Asia), Tuesday, November 8, 2022

Tough call
China factory havoc leads to iPhone delays

Demand for the iPhone 14 and Pro Max remains strong but Apple says it expects lower shipments so that customer waiting times will lengthen — Wu Hao/epa-EFE/Shutterstock

Apple has warned that shipments of its newest high-end iPhones will be delayed after China's zero-Covid lockdowns caused havoc at a factory run by main supplier Foxconn.

The group made a rare announcement about iPhone delays on Sunday, little more than a week after it warned of "significant" headwinds to revenue growth due to the impact of a strong dollar and supply constraints for its high-end models.

Apple said demand for the iPhone 14 Pro and Pro Max models, whose popularity helped to drive iPhone revenue up 10 per cent last quarter, remained strong, but "we now expect lower . . . shipments than we previously anticipated and customers will experience longer wait times to receive their new products".

The iPhone powers about half of Apple sales, and the December quarter is typically its most lucrative. Although Apple has repeatedly said Covid-19 constraints have caused supply issues costing it billions of dollars, it has not issued such a warning outside of earnings calls since February 2020.

The delays come as the situation worsens in the largest iPhone factory, which Apple said was "operating at significantly reduced capacity".

The 200,000-person complex in central China, owned by Foxconn, has seen a worker exodus to escape a coronavirus outbreak and being locked down in deteriorating living conditions.

A 37-year-old worker surnamed He said the staff shortages at the Zhengzhou plant were increasing. His warehouse, usually staffed with 200 people, had 90 employees left last week and only 65 people by yesterday.

"A lot of my colleagues were taken into quarantine," said He, who has taken to sleeping on a board in the warehouse for fear of being infected in crowded dormitory rooms. "Everyone is nervous that they'll turn positive."

Another worker said his assembly line of 20 people had been reduced to three yesterday, after colleagues left and others tested positive for coronavirus, requiring long quarantines.

Analysts have warned of worsening disruptions heading into winter after more than three-quarters of large Chinese cities reported new coronavirus cases in October.

The supply constraints could further hamper year-on-year revenue growth for the December quarter, after Apple warned last month that revenues would "decelerate" from 8 per cent growth during the September quarter.

Shares in Foxconn fell 0.5 per cent yesterday. Apple shares have fallen $800bn this year to a $2.2tn market capitalisation — still the highest among America's tech groups.

Carolina Milanesi, analyst at Creative Strategies, said: "The restrictions on the factory are impacting what was already a reduced production and limiting supply of the two iPhones in higher demand."

Foxconn separately announced on Sunday that it would "revise down" its outlook for the fourth quarter due to the lockdown in Zhengzhou. It was working with authorities to "stamp out the pandemic and resume production to its full capacity as quickly as possible".

The manufacturing group has been rushing to shift production to its other Chinese plants, but the Zhengzhou plant is responsible for 80 per cent of its iPhone 14 production capacity, according to analysts at research group Counterpoint. Last week, Foxconn quadrupled daily worker bonuses as it tried to lure employees back to production lines.

On Saturday, Beijing quashed market rumours that it was considering easing China's zero-Covid curbs, which had led to a surge in the price of China stocks in Hong Kong last week. *Patrick McGee, Tabby Kinder, Ryan McMorrow and Nian Liu; additional reporting by Gloria Li and Edward White*

See Lex

people close to the matter.

The US controls extend to third-country chipmakers because almost all semiconductor fabrication plants use US parts or software, meaning the rules may amount to an embargo on all high-end processors entering China. Washington earlier restricted such imports from Nvidia and AMD. China's domestic plants are possibly decades away from producing cutting-edge chips such as those designed by Alibaba and Biren.

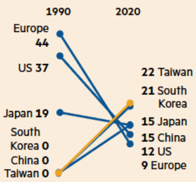
"Attempting to freeze a country in place for a technological level of hardware is a big deal," said Paul Triolo, head of tech policy at ASG. "That is what the US is trying to do by restricting sales and closing off the manufacturing road map to get to these advanced levels of hardware." He said high-end processors were the building blocks for research into supercomputing and AI. "If Commerce doesn't give out licences, then China has a real problem."

Kevin Wolf, an expert on export controls at Akin Gump, said the US Department of Commerce was unlikely to grant such licences. "This part of the rule states that such applications will be 'presumptively denied'," he said.

China's chip design sector is quickly catching up with US rivals, helped by state funding and venture capitalists. Biren is among the most advanced and

Taiwan, S Korea and China leave US and Europe behind

Chips manufacturing market share (%)



Sources: Credit Suisse; VLSI Research; SEMI Q2 2020 database; BCG analysis

engineer at Biren who asked not to be named. The company had begun to tweak its designs to reduce processor speeds in the hope of getting them manufactured by TSMC, the person said.

Archived versions of Biren's website from before the US imposed sanctions show specifications for its first processor, the BR100, that would give it a transfer rate of 640 GB/s, exceeding the US limits. Now Biren's site shows slower specs for the BR100 of 576GB/s, according to calculations from Bernstein.

Dylan Patel, chief analyst at SemiAnalysis, who first noticed Biren's change of specs, said the group was attempting to slow down its processors by disabling part of the chip. "They are not changing the chip design, so it's like saying 'pinky promise we won't re-enable it later on' and it's unclear if the [US] government will accept that."

Biren celebrated the unveiling of its new chip line in August with a press conference attended by Shanghai's top officials. But its website has deleted one photo from the event: founder Mike Hong posing in front of the chip's specs.

People briefed on the situation at Alibaba's T-Head chips unit said the team was studying how to modify its 5-nanometer processor designed for AI. Changes being contemplated could require another production test run at TSMC, which would mean a months-long delay and could cost $10mn.

The unit's fear was turning into HiSilicon, the chip design unit of Huawei, which has been shattered by US-imposed sanctions, said one of the people. "Many of T-head's core team members are from HiSilicon, so it's like a nightmare all over again," the person said. "Internally, we've all agreed we will do anything to remain compliant . . . At least then we can still operate."

Biren did not respond to a request for comment.

A spokesperson for T-head said: "T-Head core products are solely for Alibaba Group's proprietary use and compliant with all relevant regulations."

TSMC declined to comment.

Pharmaceuticals

Waning jabs demand takes toll on BioNTech

ABBY WALLACE

Covid-19 vaccine maker BioNTech has reported sharp falls in revenue and profits compared with last year amid waning demand for jabs.

The German biotech company yesterday reported revenues of €3.5bn for the three months to September 30, down from around €6.1bn for the same period last year. Net profit fell from €3.2bn in the third quarter of 2021 to about €1.8bn.

The group also updated its forecast for vaccine revenues for 2022, from previous guidance of between €13bn and €17bn to a narrower range of €16bn- to €17bn. Last year it made €19bn in vaccine revenues.

It said increased shipments of its Omicron adapted bivalent vaccine boosters and the positive impact of foreign currency movements had allowed it to narrow the range for this year.

Ugur Sahin, chief executive and co-founder of BioNTech, said the company had allowed people to access a vaccine adapted to the BA.4/BA.5 variants at "unprecedented speed".

He added that the company was working to apply lessons learnt from the development of Omicron-adapted vaccines to other disease areas and product candidates.

BioNTech said shipment of its Omicron bivalent boosters began early in September and that about 300mn doses of the original Omicron vaccine and of the adapted bivalent vaccine, which has now been approved in more than 45 countries or regions, had been invoiced as of October.

Chief strategy officer Ryan Richardson said the company had added 2.1bn doses to its 2022 order book, but some deliveries would be delayed to early 2023 as a result of supply shortages.

BioNTech said it was expanding its research in infectious diseases and oncology, with up to 10 clinical trial updates expected in 2023.

The company was also hit by additional expenses associated with inventory write-offs, production costs linked to contracts with manufacturers, and an increase in employees. Diluted earnings per share fell to €6.98 in the third quarter, down from €12.35 in the third quarter of 2021.

The largest Covid-19 vaccine manufacturers are looking to expand into other areas as demand from the pandemic starts to slow. BioNTech said the market for Covid-19 vaccines would depend on how often further variants appeared and how severe they were.

Oil & gas

Shell in Brazil move for 3.2bn litres of ethanol

EMIKO TERAZONO — LONDON

Shell is making a push into more sustainable sources of biofuels with a deal to buy ethanol made from sugarcane waste from its Brazilian joint venture Raízen.

Ethanol, which emits far less greenhouse gas than fossil fuels, is blended with diesel or petrol and used to power vehicles in several countries including Brazil, where most cars can use the fuel.

Second-generation biofuels made from waste and non-edible crops have long been touted as a replacement for that from corn and sugar, but have been slow to take off because of high production costs.

Shell said it would buy 3.25bn litres of ethanol made from sugarcane waste under a long-term agreement with Raizen, its venture launched in 2011 with Brazilian sugar and energy conglomerate Cosan. Raízen will invest $1.5bn in five new plants, the first of which will start production in 2025.

In 2021, biofuels represented 3.6 per cent of transport energy demand, mainly for road transport, according to the International Energy Agency. Although the amounts remain small, analysts project a greater role for biofuels as governments seek to reduce emissions from cars, or as a transitional fuel in some countries ahead of EV adoption.

The IEA is forecasting annual demand of 86bn litres of biofuels by 2026, up 28 per cent from current levels.

Andrew Smith at Shell Trading and Supply said combining Raízen's sugarcane waste tech with the group's distribution network and customer relationships would help meet growing demand.

The announcement comes as Shell enjoys record profits this year on surging oil and gas prices.

The group, which aims to cut output of traditional fuels 55 per cent by 2030 and provide more low-carbon fuels such as biofuels and hydrogen, bought 9.1bn llitres of biofuels last year to blend with other fuels.

It has a smaller second-generation biofuels purchasing deal with Swiss speciality chemicals business Clariant's Romanian plant and is building an 820,000-tonnes-a-year biofuels facility in Rotterdam to produce sustainable aviation fuel and renewable diesel made from waste.

The biofuels push has alarmed campaigners, who say demand for crops that can be used for energy has accelerated deforestation, and note that conversion of food crops for energy has come at a time of surging food prices.

COMPANIES & MARKETS

US accounting industry divided over taking private equity cash

Marcum, BDO and Grant Thornton are among those exploring deals as new capital fuels M&A

STEPHEN FOLEY — NEW YORK

Several of the largest US accounting firms have explored the possibility of taking private equity cash in recent months, as money from buyout funds adds fuel to a mergers and acquisitions boom across the industry.

BDO and Grant Thornton are among those to have considered a deal with private equity, and while neither immediately decided to take an investment, bankers and executives expect a number of smaller firms to do so, and use the cash to swoop on rivals.

Private equity has been drawn to the fragmented US accounting industry for its relatively stable cash flows and consolidation prospects, but selling some or all of the business to the so-called barbarians at the gate has split a sector dominated by traditional partnerships.

"We've been partnerships for a long time. Part of those partners' desire to be here is they are business owners," said Eric Miles, chief executive of Moss Adams, a firm based in Seattle, who has talked to private equity but

Healthcare

Walgreens affiliate in $9bn deal for medical care provider

ORTENCA ALIAJ, ANTOINE GARA AND JAMES FONTANELLA-KHAN — NEW YORK

VillageMD, an affiliate of Walgreens Boots Alliance, has agreed to acquire physicians' group and urgent care provider Summit Health in a deal valued at almost $9bn, adding to a wave of consolidation in the US healthcare sector.

The deal, which includes debt, will combine VillageMD with the operator of CityMD, whose urgent care centres are found throughout the north-east US. The entity will have more than 680 provider locations, the two groups said.

Walgreens has agreed to invest $3.5bn as part of the transaction through a mix of debt and equity, and will remain VillageMD's largest shareholder with a 53 per cent stake in the business. Evernorth, a subsidiary of health insurance company Cigna, has invested an undisclosed amount and will be a minority owner in VillageMD.

News of the deal comes months after Walgreens was forced to abandon its planned sale of the Boots pharmacy chain in the UK after struggling to draw

https://digital.olivesoftware.com/olive/odn/ftasia/printpages.aspx?doc=FTA%2F2022%2F11%2F08&ts=20221107203207&uq=20220804103507 9/44

decided to watch from the sidelines. "If private equity is right for the industry, what do you lose by waiting to see if that's true?"

EisnerAmper, a top 20 accounting firm by revenue, electrified the sector by selling a majority stake to TowerBrook Capital last year and using cash from the deal for an acquisition spree. Three more firms, Citrin Cooperman, Schellman and Cherry Bekaert, have followed suit with stake sales to other private equity groups.

Marcum, the 15th largest by revenue, is in talks about doing a deal, according to sources familiar with the situation, even as rising interest rates complicate private equity financing arrangements and price negotiations in the short term.

Jeffrey Weiner, Marcum chief executive, declined to comment.

Until recently, accounting executives had largely assumed private equity would not make a foray into the sector, since US regulators say auditors cannot be owned by non-accountants. EisnerAmper kept a partnership structure for its audit work but sold TowerBrook a majority stake in a company made up of its tax and consulting services to overcome such challenges.

The structure is different to EY's plan to spin off its consulting division as an entirely separate company and list it on the stock market next year. Partners on the audit side of the business, which will retain a partnership structure, stand to receive cash payments of up to four times their annual earnings. The consulting division will not be able to use the EY brand.

In the mid-market deals, audit and consulting retain a tight relationship. Charly Weinstein, chief executive of EisnerAmper, said it took almost a decade of conversations with private equity to orchestrate a deal, but the model means profits can be more easily reinvested in the business than in a partnership, where earnings are typically distributed to partners in full each year.

"We saw the opportunity to recapitalise the firm," he said, calling EisnerAmper a "platform company" for rolling up a fragmented industry. "Prior to the TowerBrook transaction, we averaged one M&A transaction a year.

Private equity has been drawn to the fragmented US accounting industry for its relatively stable cash flows and consolidation prospects
FT montage/Getty Images

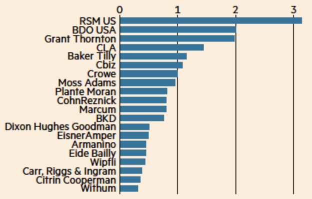
In the last 13 months, we have done nine transactions and we have a pipeline of very good firms that are considering joining us."

Wayne Berson, US chief executive of BDO, said he had given private equity bidders a hearing after years of turning down talks. Private-equity-funded rivals had become more aggressive bidders on acquisitions that he wanted to do, he said. "We need to know what the competition is doing, but it's not something we are entertaining today. We are a long way from being convinced it's the way to go for us. It's got to be good for our partners, and the jury is still out on how regulators will react, given the need for auditor independence. Small firms may find it easier to do a deal."

BDO is one of only two accounting firms outside the Big Four of EY, PwC, KPMG and Deloitte that audits companies in the S&P 500. The other, Grant Thornton, also had talks with private equity earlier this year about selling a stake in its non-audit business to raise investment funds, according to sources familiar with the mooted deal. Ultimately, partners decided against proceeding.

A Grant Thornton spokesman declined to comment.

Below the Big Four
Largest US accounting firms by annual revenue ($bn)



Fiscal year ending 2021
Source: Accounting Today

This year is shaping up as the busiest in memory for M&A activity among mid-market US accounting firms. With surging labour and technology costs, businesses are seeking benefits of scale, and bulking out their consulting arms to offer a wider range of services to clients.

"Accounting firms, starting with the Big Four, have gradually evolved to not only be your audit provider, your tax provider, but also to be your business expert," said Andrew Nicholas, professional services analyst at William Blair. "Now smaller and midsize businesses also prefer to have a single vendor relationship."

By the beginning of September, analysts at William Blair had counted 64 acquisitions in the accounting sector, putting this year on pace to eclipse the previous record in 2019 by about a fifth.

"Three words: off the chart," said Allan Koltin, a Chicago-based consultant who is the most prolific deal adviser to mid-market accounting firms. "A couple of months ago it was the calm before the storm. And the storm has arrived." Even firms that have not taken private equity money are stepping up dealmaking.

> Selling some or all of the business to the so-called barbarians at the gate has split the sector

"We have done 18 deals in the last four years without private equity money," said Alan Whitman, chief executive of Baker Tilly. "There are two things that scale brings you — intellectual capital, or great minds, and financial capital — and smaller organisations in the US and overseas are realising that to stay relevant and competitive takes significant investment."

Baker Tilly was able to persuade its partners to fund a war chest for deals, Whitman said, after a 35 per cent rise in profits in the last financial year, when clients turned to accounting and consulting firms to help them through the pandemic.

Jerome Grisko, chief executive of CBiz, the only listed US accounting services business, told investors last month that competition for deals meant prices for accounting firms had "ticked up a little" but continued to be good value.

CBiz has spent $95.8mn on acquisitions so far this year, already eclipsing the full-year record of $88.8mn of 2020.

William Blair's Nicholas projected that the deal wave would continue, despite headwinds from rising interest rates and economic uncertainty. "There's a chicken-and-egg situation here, where the industry is consolidating so then there's a competitive dynamic to try to keep up," he said. "And that leads to more consolidation."

interest from buyers, a move it blamed on market conditions.

Warburg Pincus, a New York-based private equity group, acquired CityMD in 2017 at a $600mn valuation, which included debt and the rollover of physician equity interests. Warburg later merged CityMD with Summit Health, a network of medical practices with more than 370 locations in New Jersey, New York, Connecticut, Pennsylvania and Oregon, according to its website.

The deal will rank the Berkeley Heights, New Jersey-based business among Warburg's most successful investments, according to people familiar with the matter. Warburg is set to make a multibillion-dollar profit from the $500mn in equity it invested, according to calculations from the Financial Times.

About 1,000 physicians and doctors who own nearly half of Summit Health's equity will also see a large financial return, according to people familiar with the matter.

Medical employees and management in CityMD, Summit and nearly 40 other practices that Warburg acquired during its investment held on to their equity interests through the mergers, which will give them a significant stake in the VillageMD-Summit combination.

Healthcare providers have drawn great interest since the coronavirus pandemic. In August, Amazon agreed to pay $3.9bn for OneMedical, which offers patients a subscription-based model where they can pay a monthly fee to have access to doctors. That deal was followed by CVS Health's acquisition of Signify Health for about $8bn.

Other private equity groups have also become investors in healthcare companies. Blackstone acquired hospital staffing supplier Team Health in 2016 and two years later, KKR bought physician services and emergency room operator Envision Healthcare for $9.9bn.

Warburg Pincus is one of the most active private equity investors in the healthcare sector, having invested over $14bn in such companies, including on demand healthcare provider Alignment Healthcare and veterinarian practice BondVet.

See Lex

Shipping

Maersk demands affordable green methanol

OLIVER TELLING — LONDON
BARNEY JOPSON — MADRID

The oil industry is holding back a clean energy transition in global supply chains, the head of decarbonisation at AP Møller-Maersk has warned, as he called for the shipping group's suppliers to offer more affordable green fuel.

Morten Bo Christiansen said Maersk risked not having the green methanol supplies it needs to fuel zero carbon ships, as the Danish group signed an agreement with the Spanish government to explore clean energy production in the country.

"Today, we buy our fuel from the oil companies. But they have not offered us any green methanol at a price point we can accept," he pointed out.

"You would have expected that your current supplier would help you find the new juice. But that has not been the case so far."

Shipping companies, which are responsible for transporting most goods between countries, have long been among the world's most polluting. In recent months, several have announced commitments to clean up, with Maersk declaring its ambition to achieve net zero emissions by 2040.

But Christiansen said the group would need about 5mn tonnes of green methanol per year by 2030 to hit its targets, adding it may not secure this level of supply unless production accelerates.

He was speaking as Maersk announced it had signed a "general protocol for collaboration" with Madrid, through which it will "explore the feasibility" of clean energy production.

> 'You would have expected your supplier would help you find the new juice'
> Morten Bo Christiansen

"We are concerned that we will not see that supply in the market and that is why we have done this arrangement," said Christiansen. "We want to initiate new projects that are not on the drawing board today."

Madrid said the project could eventually draw €10bn of investment. Maersk, which has generated record profits due to high freight rates during recent supply chain disruptions, is only investing in research that will determine whether a development is economically viable, Christiansen said.

Nadia Calviño, economy minister and one of Spain's deputy prime ministers, hailed the move as "a very good symbol" of investor interest in Spain.

"We are in a very attractive position, due obviously to our geographical location for the maritime transportation sector, with top quality infrastructure," she said.

In recent months, the country has pitched itself as a potential new energy hub for Europe, after the fallout from the Ukraine war disrupted supplies of Russian gas.

Analysts say a number of energy sources could emerge as fossil fuel alternatives for the shipping sector, including ammonia and methanol produced using renewable energy or biomass.

But Christiansen said Maersk did not expect green ammonia to be scalable until the end of the decade, adding that its toxicity posed a safety risk.

Property

Creditor Oaktree sells seized Evergrande plot

CHAN HO-HIM AND WILLIAM LANGLEY
HONG KONG
TABBY KINDER — SAN FRANCISCO
THOMAS HALE — SHANGHAI

Oaktree Capital has sold a vast plot of land seized from Evergrande in Hong Kong that was intended for the construction of a Versailles-inspired mansion, forcing the indebted Chinese property developer to take a $770mn loss on one of its most significant assets.

Evergrande said receivers of the plot, codenamed Project Castle because the developer's chair had intended to build his own mansion there, sold it for about $637mn to repay debts connected to the project, according to a filing to the Hong Kong stock exchange. The land was taken over by Oaktree in January.

The distressed debt investor had appointed a receiver to seize control of the 2.2mn sq ft plot after Evergrande defaulted on a loan against which it had security. A person familiar with the matter said Oaktree had recouped its investment plus interest.

The seizure by Oaktree, which has also taken control of an Evergrande plot called Project Venice near Shanghai, was one of the most high-profile plays made by offshore creditors to claim the developer's assets.

Oaktree declined to comment. Evergrande did not immediately reply to a request for comment.

China's property sector has struggled with a liquidity crisis in the past year, with a wave of such companies defaulting. The Evergrande sale is one of the earliest indications of the losses Chinese property developers are exposed to as they rush to sell assets to meet debts.

The real estate companies have often struggled to sell their assets, prolonging a crisis that began after many of them ran out of cash following tighter government restrictions on leverage in 2021.

The sale highlights the scale of losses Chinese developers are exposed to

Evergrande has about $300bn of liabilities, about $20bn of which are held by offshore bondholders. The developer did not provide a restructuring plan after missing a July deadline for one this year. Creditors have seized Evergrande's assets as they push for repayments.

Last week, Evergrande chair Hui Ka Yan lost his luxury mansion in the exclusive Peak neighbourhood in Hong Kong after it was taken over by state-owned China Construction Bank (Asia).

Evergrande's Hong Kong headquarters in Wan Chai was seized in September by lenders led by China Citic Bank International, the Hong Kong subsidiary of the state-owned bank. The building was pledged in exchange for a loan of HK$7.6bn (US$968mn), with restructuring company Alvarez & Marsal appointed as the receiver.

A source close to the sale said the building had attracted interest from more than 30 prospective buyers.

Additional reporting by Cheng Leng in Hong Kong

COMPANIES & MARKETS

Fixed income. High-yield credit

Fund manager stars hunt for corporate debt bargains

Commodities

US hits back over claims of gas crisis profiteering in Europe

TOM WILSON — LONDON
JUSTIN JACOBS — HOUSTON

European energy groups have been the real winners in the transatlantic trade in liquefied natural gas, the US government has said, pushing back against criticism that North American producers were profiteering as Europe scrambles to replace Russian gas.

A chasm between US and European gas prices has delivered bumper profits for companies buying American gas and selling it into Europe this year.

French president Emmanuel Macron

said last month the "double standard" was creating undeserved "superprofits" for energy producers in the US and Norway, which have both significantly increased flows to Europe since Russia's invasion of Ukraine in February.

But Brad Crabtree, an assistant secretary for the US department of energy, said it was European off-takers that were benefiting from the arbitrage between US and European prices, not US producers.

"What's happening is the companies that hold those long-term contracts with US LNG producers, they're marking that up and earning that margin in the European market," he told the Financial Times. "It's not the US LNG company, it's basically European-headquartered international oil companies and traders."

'The companies that hold those long-term contracts with US LNG producers, they're marking that up'

The biggest European energy majors and commodity traders, including BP, Shell, Glencore and Vitol, all have long-term offtake agreements with US LNG producers.

BP reported earnings of $8.2bn last week, noting "exceptional" profits from its gas trading and marketing business.

Shell, which is the world's biggest LNG trader, has reported earnings of more than $30bn in the first nine months of the year, leaving it on course to smash its annual profit record of $31bn set in 2008.

European spot LNG prices have cooled in recent weeks to about $25 per million British thermal units, having reaching record highs of more than $70 per million Btu in the summer. That compares with a domestic US price that has ranged between $5 and $10 since Russia launched its assault on Ukraine.

Europe's scramble for gas has upended the global LNG trade, with the US and other big exporters diverting shipments to the continent.

In March, US president Joe Biden struck a deal with EU commission president Ursula von der Leyen to boost US gas shipments to Europe.

Cheniere Energy, the largest US LNG exporter, said about 70 per cent of shipments from its facilities in Texas and Louisiana have gone to Europe compared with roughly 30 per cent last year.

Junk bonds have slid too far relative to the risk of default, say industry's big names

LAURENCE FLETCHER

Big-name hedge funds are snapping up bargains in junk bonds and other corners of the corporate debt market as they bet a sell-off sparked by the darkening global economic outlook has gone too far.

Corporate debt has been hard hit this year by fears that steep increases in borrowing costs will lead to a wave of defaults at groups that have grown accustomed to years of easy money. Interest rates for risky borrowers have soared.

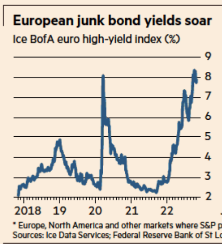
But several managers, including Third Point's Daniel Loeb, Elliott Management's Paul Singer and CQS's Sir Michael Hintze, said parts of the credit market have fallen too far relative to the risks of default — and some are starting to build up their holdings.

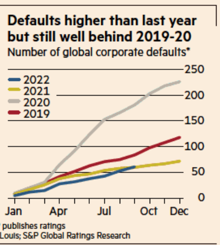
"We find the current opportunity set in high-yield credit attractive," wrote billionaire trader Loeb in a recent letter to investors, referring to companies with lower credit ratings.

He has upped his bets on corporate debt and plans to increase exposure as volatility accelerates, even though he does "not anticipate a quick rebound".

Loeb added: "We are seeing some of the most lucrative investing opportunities in structured credit since the Covid-19 crisis."

Elliott, which recently warned that the world could be heading for its worst financial crisis since the second world war, told investors that previously absent opportunities in corporate debt and distressed investing are rapidly increasing, according to investor documents seen by the Financial Times.





* Europe, North America and other markets where S&P publishes ratings
Sources: Ice Data Services; Federal Reserve Bank of St Louis; S&P Global Ratings Research

And Hintze, one of the most experienced names in hedge fund credit trading, said he had used recent falls in debt prices to buy credit positions and to cut his fund's hedges against falling prices in the sector.

After large price falls across major asset classes, "we especially favour the opportunities in credit and structured credit markets", he wrote in a letter seen by the FT.

Yields on junk debt, which rise as prices fall, have soared from 2.8 per cent at the start of 2022 to 7.8 per cent, according to the Ice Data Services euro high-yield index.

Naruhisa Nakagawa, founder of hedge fund Caygan Capital, which is betting on rising corporate bond prices, said the recent widening of spreads, a measure of the perceived risk of holding corporate debt versus ultra low risk government bonds, "was hardly justified by the fundamentals, so I think there was some kind of forced selling".

In Europe, high-yield funds have suffered €12.7bn of net outflows this year to late October, equal to more than 15 per cent of their assets, according to JPMorgan data, while investment grade funds lost €25.2bn in outflows.

Many of the redemptions have come in passive ETFs, which track broad indices of bonds and which have therefore had to sell a wide array of credits when investors sell out.

Assets in the iShares iBoxx $ High Yield Corporate Bond ETF, for instance, have dropped by more than $10bn since the end of 2020, mostly as a result of outflows.

Overall, US high-yield ETFs suffered $17.1bn of net outflows in the first nine months of this year, according to data group ETFGI.

"Redemptions are leading to forced selling, which is leading to price declines — it's self-fulfilling," said the head of one European hedge fund that has been picking up bonds recently. "It's already attractive and it's probably going to get even more attractive."

Lee Robinson's Altana Wealth wrote to investors in recent days to declare that "bonds are back".

Buying opportunities: Sir Michael Hintze, Paul Singer and Daniel Loeb are among traders searching for undervalued junk debt assets
FT montage/Bloomberg/Getty

He highlighted a number of "very attractive" opportunities including Carnival Corp and Jaguar Land Rover.

A BNP Paribas survey of investors managing more than $380bn in total hedge fund assets found that they planned to increase allocations to credit funds in all regions, with US funds being the most popular.

Some industry insiders also argue that while defaults — which are close to historical lows — are expected to rise, they are unlikely to reach levels seen in some previous crises.

In European high-yield, rating agency S&P expects defaults to rise from current levels of 1.4 per cent to 3 per cent by mid next year, or 5 per cent in a more pessimistic scenario, compared with the 9 per cent reached in 2008. Fitch expects 2.5 per cent next year.

And in the US, Fitch thinks defaults will reach 2.5 to 3.5 per cent by the end of next year and 3 to 4 per cent in 2024. This compares with a 21-year historical average of 3.8 per cent and 5.2 per cent during 2020s coronavirus pandemic. S&P expects 3.5 per cent mid-next year.

"Markets are pricing in a 40 per cent default rate in European high yield over the next five years," said Tatjana Greil-Castro, co-head of public markets at Muzinich & Co. "It's all in the price."

'It's already attractive and it's probably going to get even more attractive'

Loeb wrote that, even if credit spreads rose above levels seen in 2011 or 2015, investors buying the index would still make money over a year because of the yields on offer and the effect of bond prices moving back towards par.

"We do expect an increase in defaults as the economy slows but not one that would justify those spreads," he said.

Additional reporting by Katie Martin

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

Commodities

South Africa's Gold Fields refuses to raise bid for Canadian miner Yamana

HARRY DEMPSEY

Gold Fields has decided not to increase its takeover bid for Yamana Gold after a surprise joint bid by a pair of rival miners.

South Africa-based Gold Fields said yesterday it decided not to change its original all-stock offer because of a "commitment to capital discipline".

On Friday, precious metals mining groups Pan American and Agnico Eagle unveiled a rival stock and cash deal worth $4.8bn to split Yamana's assets in Latin America and Canada between them, trumping the bid made by Gold Fields at the end of May.

The initial all-stock offer by Gold Fields initially valued Canada's Yamana at $6.7bn but a drop in Gold Fields' share price driven by investor disappointment at the deal and softer gold prices brought the value of the offer down to approximately $4bn as of last week.

The fragmented gold sector, which has a reputation for overspending, poor capital discipline and excessive executive pay in North America, has been undergoing consolidation in recent years.

A lack of spending on exploration and new projects mean many gold miners are turning to acquisitions to grow future production.

Toronto-based Yamana owns a portfolio of five producing precious metals mines located across Canada, Brazil, Chile and Argentina that generated 884,793 ounces of gold last year.

The takeover battle comes as gold mining companies struggle to deal with sharply rising costs for inputs such as fuel, cyanide and explosives at a time of weaker revenues. Gold prices have slid 18 per cent to $1,680 a troy ounce since peaking at an all-time high above $2,000 in March on rising interest rates and a strong dollar.

Gold mining groups are struggling to deal with sharply rising costs

The merger of Gold Fields and Yamana would have created the fourth-largest gold mining company in the world but Gold Fields came under fire from its shareholders who viewed the deal as expensive and dilutive.

Gold Fields shares, down 0.5 per cent in trading in Johannesburg yesterday, have fallen nearly 12 per cent this year. Yamana's Toronto-listed stock has risen 27 per cent this year.

Chris Griffith, chief executive of Gold Fields, said: "The board was unanimous in its decision not to offer to change the terms of the transaction as we continue to believe our transaction is strategically and financially superior."

Yamana's board said on Friday that the offer from Pan American and Agnico Eagle was a "superior proposal".

Yamana shareholders will meet to vote on the Gold Fields offer on November 21, which could result in the Canadian miner paying out $300mn for pulling out of the deal.

Equities

Wall Street stock hedging strategies backfire this year amid $13tn rout

NICHOLAS MEGAW AND ERIC PLATT
NEW YORK

Investors who poured money into funds aimed at protecting them from the sell-off in shares are finding many of the strategies have backfired, offering little or no safeguard from a drawdown that has sliced $13tn off the US stock market.

Funds that focused on buying equity put options, which are often used as insurance against stock declines, have struggled to make gains even as the S&P 500 suffers its worst drawdown since the 2008 financial crisis.

Those who prepared for violent swings by buying call options on the Cboe's Vix index — which would pay off if the market gauge of expected volatility spiked — have also been left wanting.

A Cboe index that tracks a theoretical portfolio that buys both stocks within the S&P 500 and equity put options — known as the PPUT index — has fallen about 20 per cent this year, not any better than the total return of the S&P 500.

Dylan Grice, co-founder of Calderwood Capital, a hedge fund advisory and research firm, said the performance of put options this year had raised "fundamental" questions about the point of some strategies. "It's like an insurance company that doesn't pay out when you have an accident," he said.

The lacklustre performance has been driven in part by the slow grind lower in the stock market, which has driven up costs without providing the sort of sharp sell-off that provided mammoth pay-offs in the early days of the coronavirus pandemic in March 2020 or the midst of the financial crisis in September and October 2008.

'The Vix has been completely useless as a hedge since the initial days of the Ukraine war'

Many mutual funds and exchange traded funds that are marketed as hedging against declines in the US stock market use relatively simple strategies, continuously buying contracts that would protect their portfolio if the S&P 500 falls below a given threshold.

They adjust those thresholds each month, spending heavily on new put contracts in the process.

While the Vix has been well above its historical average throughout 2022, it has stayed in a relatively narrow range, limiting returns for traders.

In past crises, a return of 200 per cent or 300 per cent from a relatively small bet on the so-called "fear gauge" could offset declines on an endowment or pension plan's wider portfolio.

Recent swings between 25 and 35, in contrast, provided only a fraction of the return that some investors enjoyed when the index shot from 13.68 in February 2020 to 82.69 a month later.

Peter van Dooijeweert, a hedging specialist at hedge fund Man Group, said: "The Vix has been completely useless as a hedge since the initial days of the Ukraine war."

Funds that use a broader mix of assets to hedge against downturns have had a far better year.

The Eurekahedge tail risk index, which tracks a basket of specialist hedge funds, is up 13 per cent year to date. That is because volatility in sovereign bond and currency markets has been far higher than in the equity market.

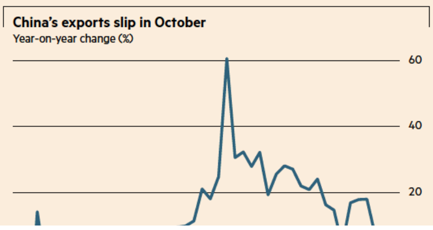
The day in the markets

What you need to know

- Wall Street indices hover in tight range ahead of inflation report
- Chinese stocks volatile on latest news over stringent Covid curbs
- European gas prices fall sharply amid greater than expected supplies

US stocks hovered in a tight range yesterday as investors took a cautious stance ahead of this week's inflation data and kept close tabs on China's Covid-19 measures.

Wall Street's benchmark S&P 500 rose 0.2 per cent and the tech-heavy Nasdaq Composite fell 0.1 per cent in morning



Lula has hard road ahead to gain investor favour over Bolsonaro

Michael Stott

Markets Insight

Luiz Inácio Lula da Silva's victory in Brazil's presidential election will unlock a flood of money from international

ent from what we have seen in the early 2000s", said Martín Castellano, head of Latin America research at the Institute of International Finance. He noted that

his first two governments from 2003-10.

But whether he will make good on his pledge to "reposition Brazil in the hearts of international investors" is a different

Composite fell 0.1 per cent in morning trading in New York.

Investors have feared the impact on global economic growth of aggressive rate rises from the US Federal Reserve, which signalled last week that interest rates will increase higher than previously expected.

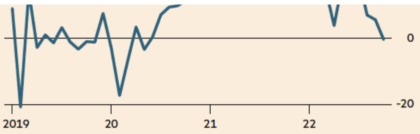
Traders, meanwhile, continued to bet that China would soften its zero-Covid policy, a move they hope will boost flagging global economic growth.

The US Dollar index, which measures the currency against a basket of peers, fell 0.6 per cent.

China equities rose sharply, before trimming their gains, as the government said there would be no change to its stringent Covid prevention measures.

Hong Kong's Hang Seng index added 2.7 per cent while China's CSI 300 rose 0.2 per cent.

Emmanuel Cau, European equity strategist at Barclays, said a "quick and broad reopening [in China] seems highly unlikely" but that "there may be a case for authorities to turn more supportive of growth into 2023, which could be a game changer for markets".



Source: Refinitiv

Elsewhere in Asia, Tokyo's Topix rose 1 per cent and Seoul's Kospi index gained 1 per cent.

European gas prices fell sharply yesterday with Dutch TTF gas futures, the region's benchmark contract, down as much as 10 per cent to €108 per megawatt hour.

The wholesale European gas price hit an intraday high of €343 per MWh in late August but has dropped thanks to relatively warm weather and greater than expected supplies.

Investors welcomed better than expected German economic data.

Industrial production rose 0.6 per cent month on month in September, better than the 0.2 per cent decline expected by economists polled by Reuters.

The pan-regional Stoxx Europe 600 closed up 0.3 per cent while London's FTSE 100 fell 0.5 per cent.

In government bond markets, there was selling pressure from investors as the yield on the two-year Treasury added 7 basis points to 4.72 per cent while the yield on the benchmark 10-year debt was up 5bp to 4.21 per cent. **George Steer**

money from international investors who shunned the country under President Jair Bolsonaro because of his terrible environmental record.

This thesis was common currency this year among political analysts in Brazil and commentators overseas.

Lula himself hinted at it, accusing Bolsonaro of leaving the country "more isolated than Cuba" and adding: "Nobody wants to come here anymore."

There is just one problem: the facts tell a different story. Amazon deforestation did surge under Bolsonaro to a 13-year high and many European and Latin American countries shunned the hard-right president diplomatically. But most investors never left Brazil over environmental, social and corporate governance concerns and many were drawn in during his tenure by strong economic fundamentals, high real interest rates and the pro-market stance of the Friedmanite finance minister, Paulo Guedes.

"The preferred strategy of most investors [under Bolsonaro] has been one of constructive engagement rather than disinvestment," said Graham Stock, partner at BlueBay Asset Management, who co-chaired an investor dialogue on deforestation with the Bolsonaro government. "As a result, there isn't this wall of money waiting for a change of government to invest."

Data tell a similar story. Foreign portfolio investment surged into Brazil during 2021 and most of this year. Looking at the capital flows to Brazil from foreign investors relative to the rest of Latin America, "the picture is not very different" of International Finance. He noted that "the pick-up in foreign direct investment in Brazil has been quite remarkable" — it soared to $73.8bn in the year to September from $49.9bn a year earlier.

Luis Oganes, global head of emerging markets research at JPMorgan, said the share of Brazilian local bonds held by foreigners has been stable since the end of 2020 while declining in other Latin American markets.

"There have been important inflows into Brazilian equities in the first quarter of 2022 and in August and October," he added. "Part of this is because of high commodity prices." The Bovespa index has gained some 16 per cent over the past year, leaving the market priced at eight times trailing earnings.

> 'The preferred strategy of most investors under Bolsonaro has been one of constructive engagement'

How could ESG-conscious investors put money into Brazil while deforestation surged and a hard-right president railed against gays?

Many asset managers use broad data sets to screen investments against ESG criteria and, despite the Amazon destruction under Bolsonaro, Brazil scores well for clean energy (most electricity is generated from renewables), vibrant democracy and a free press.

Lula's promise to crack down on deforestation has raised hopes that he will repeat the environmental success of of international investors" is a different matter. Lula has pledged to scrap a constitutional cap on government spending to boost welfare payments. He has promised to be fiscally responsible but has not yet said how he will pay for his expensive promises in a country that has one of the region's highest tax takes.

Investors in state-controlled oil company Petrobras have reason to be wary.

During the last government run by Lula's Workers' party, the debt burden of Petrobras rose to $130bn by 2015 and the company suffered from mismanagement and corruption scandals.

Its American depositary receipts have fallen 4.9 per cent over the past month.

Saverio Minervini, head of Latin America energy at Fitch, has analysed the risks to Brazil's national oil champion under Lula and said "leave Petrobras alone", adding: "There's no economic rationale for the government to influence Petrobras because the government stands to get almost 1.5 per cent of GDP in [tax and dividends] from Petrobras." Minervini believes Lula's plans for new oil refineries would cost the company $20bn-$30bn.

Petrobras will be closely watched as a bellwether under Lula. It will also serve as a reminder that, despite ESG pledges, most investors in Brazil remain focused on economic policy fundamentals.

"Beyond environmental pledges, I think that what will be key for investors to increase their investments in Brazilian bond and equity markets will be a credible plan of fiscal adjustments," said JPMorgan's Oganes.

michael.stott@ft.com

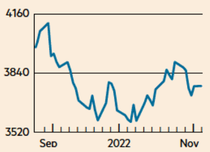
Markets update

	US	Eurozone	Japan	UK	China	Brazil
Stocks	**S&P 500**	**Eurofirst 300**	**Nikkei 225**	**FTSE100**	**Shanghai Comp**	**Bovespa**
Level	3770.74	1653.97	27527.64	7299.99	3077.82	116094.18
% change on day	0.01	0.24	1.21	-0.48	0.23	-1.74
Currency	**$ index (DXY)**	**$ per €**	**Yen per $**	**$ per £**	**Rmb per $**	**Real per $**
Level	110.456	1.000	146.470	1.146	7.239	5.116
% change on day	-0.380	1.010	-0.526	1.596	-0.407	1.440
Govt. bonds	**10-year Treasury**	**10-year Bund**	**10-year JGB**	**10-year Gilt**	**10-year bond**	**10-year bond**
Yield	4.209	2.342	0.253	3.622	2.698	11.602
Basis point change on day	4.880	4.700	0.150	9.100	-0.300	15.600
World Index, Commods	**FTSE All-World**	**Oil - Brent**	**Oil - WTI**	**Gold**	**Silver**	**Metals (LMEX)**
Level	384.80	98.91	93.03	1674.40	19.97	3747.70
% change on day	0.50	0.34	0.45	2.80	5.52	5.77

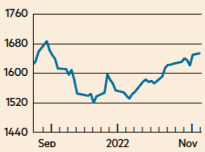
Yesterday's close apart from: Currencies = 16:00 GMT; S&P, Bovespa, All World, Oil = 17:00 GMT; Gold, Silver = London pm fix. Bond data supplied by Tullett Prebon.

Main equity markets

S&P 500 index



Eurofirst 300 index



FTSE 100 index

Biggest movers

%	US		Eurozone		UK	
Ups	Viatris	15.61	Telecom Italia	10.65	Ocado	6.34
	EQT	7.08	Thyssenkrupp	5.16	Frasers	5.77
	Meta	4.82	A.p. Moller - Maersk B	5.04	Sainsbury (J)	4.46
	Baker Hughes	4.46	Renault	3.97	Flutter Entertainment	2.65
	Dish Network	4.19	Volkswagen	3.79	Next	2.54
Downs	Dominion Energy	-8.04	Oci	-5.06	Gsk	-4.72
	Expedia	-6.15	Novozymes	-3.12	Centrica	-4.13
	Nortonlifelock	-5.69	Danone	-2.51	Scottish Mortgage Investment Trust	-3.05
	Nisource	-5.48	Coloplast	-2.10	Convatec	-2.78
	Paycom Software	-4.55	Vi	-2.00	Hsbc Holdings	-2.16

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

Two well-received acquisitions pushed **Viatris** to the top of the S&P 500 index with the healthcare group announcing that it was buying **Oyster Point Pharma** and Famy Life Sciences for a combined price of between $700mn and $750mn.

Viatris, which plans to create an ophthalmology franchise with these purchases, said the two companies had the potential to add at least $1bn in sales and $500mn in adjusted core profits by 2028.

Ophthalmic diseases specialist Oyster Point Pharma also rallied off the back of this news, having accepted a $11 per share upfront bid — a 32 per cent premium on Friday's closing price.

Oyster stockholders were eligible for a further $2 per share from Viatris contingent on the group achieving certain metrics based on full-year 2022 performance.

Facebook owner **Meta** rallied in anticipation that it would be reducing its overheads by cutting thousands of jobs.

Budget airline **Ryanair**, which delisted from the London Stock Exchange last December, climbed on Wall Street after reporting half-year profits of €1.37bn against a loss of €48mn a year earlier.

Ryanair benefited from "record" second-quarter traffic and "robust summer fares" that were 14 per cent up on pre-Covid pricing, it said. *Ray Douglas*

Europe

Debt-laden **Telecom Italia**, which has been at the centre of mergers and acquisitions chatter this year, rallied after talk of a government-approved takeover.

It was reported at the weekend that cabinet under-secretary Alessio Butti viewed the creation of one broadband company a priority in a move that would merge Telecom's fixed network assets with those of smaller rival Open Fiber.

Germany's **Pfeiffer Vacuum** jumped on news that it had received notification about concluding a so-called domination and profit-transfer agreement with its largest shareholder.

Under the terms of this arrangement, the vacuum components supplier would become the "controlled company" while shareholder Pangea, which has a 64 per cent stake, would be the "controlling company with the right to transfer profits", it said.

Pangea said the reason behind this move was a desire to simplify co-ordination between the two groups, in particular decision-making.

A ratings upgrade helped lift **Colruyt**, the Belgian food retailer, which was raised to a "buy" from "hold" by Jefferies.

With its shares down more than 30 per cent this year, the broker said a discount grocer such as Colruyt would become more attractive to shoppers as higher prices crimped spending. *Ray Douglas*

London

Retailer **Joules** tumbled after revealing that it was trading below expectations for the 11 weeks to October 30.

It blamed this on a deterioration in consumer confidence and "milder than expected weather", which had hit sales of outerwear, wellies and knitwear.

Russ Mould, investment director at AJ Bell, said: "The fact Next pulled out of investment talks in September with the retailer would suggest Joules could unwind as easily as a cat pulling yarns from a woolly jumper."

Frasers Group, which owns Sports Direct and House of Fraser, rose on news that it would be returning money to investors through a share buyback programme of up to £70mn.

Financial services business **Appreciate**, which specialises in gifting and reward products, soared after agreeing to be bought by PayPoint.

The payment system group's cash and shares offer was equivalent to 44p per share — 69 per cent higher than Friday's closing price.

Dealmaking rumours sent **IWG** surging, with Sky News reporting that CVC Capital Partners was among the private equity firms weighing a purchase of the office space group's digital division.

The unit could reportedly fetch £1.5bn, which would surpass IWG's current market cap. *Ray Douglas*

PWM
PROFESSIONAL WEALTH MANAGEMENT

RECEIVE A FREE ONE-YEAR PRINT SUBSCRIPTION

Professional Wealth Management (PWM) magazine carries the latest analysis of private banks, wealth managers and regional financial centres around the world.

Register today, and if you are eligible under our independently audited terms of control you will receive a free one-year subscription. There are no obligations – the copies and delivery are free if you qualify.

Register now, visit pwmnet.com/registration

A publication from the Financial Times

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 $
0.01%	-0.32%	0.46%	-0.48%	0.24%	1.21%	2.69%	0.50%	1.010%	1.596%	-0.526%	-0.570%	-0.69%	2.80%

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

AMERICAS

Oct 08 - - Index All World — S&P 500 New York

Oct 08 - Nov 07 Index All World — S&P/TSX COMP Toronto

EUROPE

Oct 08 - Nov 07 Index All World — FTSE 100 London

Oct 08 - Nov 07 Index All World — Xetra Dax Frankfurt

ASIA

Oct 08 - Nov 07 Index All World — Nikkei 225 Tokyo

Oct 08 - Nov 07 Index All World — Kospi Seoul

3,639.66 / 3,770.74	Day ↗0.01%	Month ↘-10.78%
	Year ↘-14.89%	

Nasdaq Composite — New York
10,652.41 / 10,442.08 — Day ↘-0.32% Month ↘-17.71% Year ↘-30.50%

Dow Jones Industrial — New York
32,551.56 / 29,296.79 — Day ↗0.46% Month ↘-3.31% Year ↘-5.77%

18,979.01 / 19,532.36 — Day ↗0.34% Month ↘-3.02% Year ↘-4.82%

IPC — Mexico City
46,046.58 / 51,454.36 — Day ↘-0.13% Month ↗5.46% Year ↘-0.39%

Bovespa — São Paulo
117,197.82 / 117,698.83 — Day ↘-1.74% Month ↗4.01% Year ↗6.55%

6,991.00 / 7,299.99 — Day ↘-0.48% Month ↘-3.28% Year ↗5.78%

FTSE Eurofirst 300 — Europe
1,553.62 / 1,653.97 — Day ↗0.24% Month ↘-3.95% Year ↘-5.44%

CAC 40 — Paris
5,866.94 / 6,416.61 — Day 0.00% Month ↘-1.22% Year ↘-2.34%

12,273.00 / 13,533.52 — Day ↗0.55% Month ↗3.40% Year NaN%

Ibex 35 — Madrid
7,436.90 / 7,962.30 — Day ↗0.25% Month ↘-4.58% Year ↘-9.19%

FTSE MIB — Milan
20,901.56 / 23,493.00 — Day ↗0.90% Month ↗4.27% Year ↘-8.61%

27,120.53 / 27,527.64 — Day ↗1.21% Month ↘-4.79% Year ↘-9.69%

Hang Seng — Hong Kong
17,740.05 / 16,595.91 — Day ↗2.69% Month ↘-16.18% Year ↘-33.50%

Shanghai Composite — Shanghai
3,024.39 / 3,077.82 — Day ↗0.23% Month ↘-5.53% Year ↘-14.84%

2,232.84 / 2,371.79 — Day ↗0.99% Month ↘-4.85% Year ↘-24.48%

FTSE Straits Times — Singapore
3,151.56 / 3,141.31 — Day ↗0.36% Month ↘-3.44% Year ↗2.07%

BSE Sensex — Mumbai
58,222.10 / 61,185.15 — Day ↗0.39% Month ↗2.57% Year ↗3.66%

Country	Index	Latest	Previous
[illegible]	[illegible]	[illegible]	[illegible]

(c) Closed. (u) Unavailable. † 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 page.

STOCK MARKET: BIGGEST MOVERS

AMERICA				LONDON				EURO MARKETS				TOKYO			
[illegible]				[illegible]				[illegible]				[illegible]			

UK MARKET WINNERS AND LOSERS

FTSE 100	Nov 07 price(p)	%Chg week	%Chg ytd	FTSE 250	Nov 07 price(p)	%Chg week	%Chg ytd	FTSE SmallCap	Nov 07 price(p)	%Chg week	%Chg ytd	Industry Sectors	Nov 07 price(p)	%Chg week	%Chg ytd
[illegible]				[illegible]				[illegible]				[illegible]			

Based on last week's performance. †Price at suspension.

CURRENCIES

Country	Currency	Dollar Closing Mid	Day's Change	Euro Closing Mid	Day's Change	Pound Closing Mid	Day's Change
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]		146.4682	-0.7786	146.4620	0.7549	167.8974	1.8026
[illegible]		146.4623	-0.7904	146.4586	0.7482	167.8985	1.7979
Kenya	Kenyan Shilling	121.6500	0.1500	121.6439	1.4136	139.4477	2.3950
Kuwait	Kuwaiti Dinar	0.3096	-0.0006	0.3095	0.0026	0.3548	0.0050
Malaysia	Malaysian Ringgit	4.7395	-0.0085	4.7393	0.0409	5.4329	0.0771
Mexico	Mexican Peso	19.4505	-0.0790	19.4495	0.1241	22.2962	0.2668
New Zealand	New Zealand Dollar	1.6872	-0.0108	1.6871	0.0069	1.9340	0.0187
Nigeria	Nigerian Naira	442.7500	-	442.7279	4.6044	507.5255	8.1007
Norway	Norwegian Krone	10.2423	-0.0478	10.2417	0.0592	11.7407	0.1335
Pakistan	Pakistani Rupee	221.5000	-0.0500	221.4889	2.2540	253.9060	3.9963
Peru	Peruvian Nuevo Sol	3.9464	-0.0087	3.9462	0.0324	4.5238	0.0623
Philippines	Philippine Peso	58.5850	0.0350	58.5821	0.6439	67.1561	1.1114
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Singapore	Singapore Dollar	1.4027	-0.0046	1.4026	0.0100	1.6079	0.0205
South Africa	South African Rand	17.6950	-0.2900	17.6941	-0.1029	20.2838	-0.0034
South Korea	South Korean Won	1401.1500	-18.0000	1401.0800	-3.2404	1606.1421	5.3320
Sweden	Swedish Krona	10.8606	-0.1033	10.8600	0.0108	12.4495	0.0822
Switzerland	Swiss Franc	0.9896	-0.0086	0.9896	0.0018	1.1344	0.0084
Taiwan	New Taiwan Dollar	32.0635	-0.1240	32.0619	0.2107	36.7545	0.4468
Thailand	Thai Baht	37.4175	-0.1575	37.4156	0.2333	42.8918	0.5069
Tunisia	Tunisian Dinar	3.2860	-0.0107	3.2858	0.0235	3.7668	0.0480
Turkey	Turkish Lira	18.5779	-0.0366	18.5770	0.1570	21.2959	0.2986
United Arab Emirates	UAE Dirham	3.6731	0.0001	3.6729	0.0383	4.2105	0.0673
United Kingdom	Pound Sterling	0.8724	-0.0142	0.8723	-0.0049	-	-
..One Month		0.8725	-0.0141	0.8722	-0.0049	-	-
..Three Month		-	-	0.9992	-0.1281	1.1467	0.0183
..One Year		-	-	0.9973	-0.1281	1.1474	0.0183
Vietnam	Vietnamese Dong	24872.0000	-1.5000	24870.7962	257.1686	28510.9040	453.4086
European Union	Euro	1.0001	-0.0105	-	-	1.1464	0.0064
..One Month		0.9998	-0.0105	-	-	1.1462	0.0064
..Three Month		0.9993	-0.0105	-	-	1.1460	0.0065
..One Year		0.9974	-0.0105	-	-	1.1449	0.0064

Rates are derived from WM Reuters Spot Rates and MorningStar (latest rates at time of production). Some values are rounded. Currency redenominated by 1000. The exchange rates printed in this table are also available at www.FT.com/marketsdata

FTSE ACTUARIES SHARE INDICES

UK SERIES www.ft.com/equities

Produced in conjunction with the Institute and Faculty of Actuaries

	£ Strlg Nov 07	Day's chge%	Euro Index	£ Strlg Nov 04	£ Strlg Nov 03	Year ago	Div yield%	Cover	P/E ratio	X/D adj	Total Return
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FTSE All-Share Industrial Support Services (31)	9511.03	1.06	7512.04	9411.32	9232.98	11975.19	1.99	1.69	29.61	182.30	10838.75
FTSE All-Share Industrial Transportation (8)	5286.90	1.32	4175.72	5217.96	5068.05	7024.42	2.21	3.42	13.26	98.14	5539.28
FTSE All-Share Industrial Materials (1)	16203.02	-2.41	486.18	16603.10	15152.83	20953.91	2.03	1.81	27.24	329.06	20466.84
FTSE All-Share Industrial Metals and Mining (9)	7725.78	0.33	6102.00	7700.28	7260.46	6246.33	6.76	2.01	7.36	517.27	11858.86
FTSE All-Share Precious Metals and Mining (5)	9288.29	0.88	7336.12	9207.41	8616.41	20374.52	3.85	1.86	13.97	358.99	6548.57
FTSE All-Share Chemicals (7)	12590.98	0.20	9944.65	12565.64	12112.48	18884.13	2.82	2.11	16.81	324.25	12619.25
FTSE All-Share Oil, Gas and Coal (12)	8756.07	-0.49	6915.76	8799.32	8679.57	5988.21	3.08	2.97	10.94	213.64	10943.11
FTSE Sector Indices											
Non Financials (334)	**4916.60**	**-0.19**	**4394.34**	**4925.86**	**4842.14**	**5003.09**	**3.55**	**1.68**	**16.82**	**149.20**	**8862.78**

Hourly movements	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	High/day	Low/day
FTSE 100	7289.58	7336.59	7330.27	7327.71	7328.72	7322.07	7314.49	7298.13	7295.53	7346.50	7288.39
FTSE 250	18315.31	18440.29	18528.25	18554.38	18628.29	18632.95	18614.37	18546.43	18514.35	18670.34	18312.72
FTSE SmallCap	5966.36	5982.98	5994.39	5999.90	6001.42	6008.70	6006.08	6003.08	5996.46	6012.00	5966.04
FTSE All-Share	3980.22	4005.72	4005.74	4005.46	4008.21	4005.35	4001.39	3991.81	3989.54	4011.05	3980.22

Time of FTSE 100 Day's high:09:02:45 Day's Low08:03:15 FTSE 100 2010/11 High: 7672.40(10/02/2022) Low: 6826.15(12/10/2022)
Time of FTSE All-Share Day's high:10:25:00 Day's Low08:03:00 FTSE 100 2010/11 High: 4296.96(10/02/2022) Low: 3712.50(12/10/2022)

Further information is available on http://www.ftse.com © FTSE International Limited. 2013. All Rights reserved. "FTSE®" is a trade mark of the London Stock Exchange Group companies and is used by FTSE International Limited under licence. † Sector P/E ratios greater than 80 are not shown. For changes to FTSE Fledgling Index constituents please refer to www.ftse.com/indexchanges. ‡ Values are negative.

FT 30 INDEX

	Nov 07	Nov 04	Nov 03	Nov 02	Nov 01	Yr Ago	High	Low
FT 30	2419.90	2404.60	2375.20	2386.30	2391.40	0.00	2880.10	2152.10
FT 30 Div Yield	-	-	-	-	-	0.00	3.93	2.74
P/E Ratio net	-	-	-	-	-	0.00	19.44	14.26

FT 30 hourly changes

8	9	10	11	12	13	14	15	16	High	Low
2404.6	2421.1	2422.7	2425.1	2426.9	2428.4	2425.8	2418.8	2419.8	2431.2	2394.6

FT30 constituents and recent additions/deletions can be found at www.ft.com/ft30

FT WILSHIRE 5000 INDEX SERIES

	Nov 04		Nov 04
FT Wilshire 5000	38363.57	FT Wilshire Mid Cap	5230.65
FT Wilshire 2500	4909.08	FT Wilshire Small Cap	4752.04
FT Wilshire Mega Cap	4867.21	FT Wilshire Micro Cap	4748.56
FT Wilshire Large Cap	4927.68		

Source: Wilshire. Wilshire Advisors LLC (Wilshire) is an investment advisor registered with the SEC. Further information is available at https://www.wilshire.com/solutions/indexes . Wilshire® is a registered service mark. Copyright ©2022 Wilshire. All rights reserved.

FTSE SECTORS: LEADERS & LAGGARDS

Year to date percentage changes

Oil & Gas Producers	52.70	Mobile Telecomms	-7.97	Equity Invest Instr	-19.76
Oil & Gas	52.07	Health Care Eq & Srv	-8.16	Food Producers	-19.83
Tobacco	25.02	Utilities	-8.87	FTSE 250 Index	-20.96
Aerospace & Defense	13.44	Travel & Leisure	-9.10	Support Services	-21.23
Mining	12.17	Gas Water & Multi	-10.15	Construct & Material	-21.84
Pharmace & Biotech	5.73	Beverages	-10.84	Industrial Eng	-23.68
Health Care	4.78	Media	-10.91	Fixed Line Telecomms	-26.30
Basic Materials	4.44	Nonlife Insurance	-11.51	Household Goods & Ho	-28.23
Personal Goods	0.38	Telecommunications	-13.21	Electronic & Elec Eq	-29.77
Beverages	31.66	Tech Hardware & Eq	-13.85	Food & Drug Retailer	-31.05
Banks	-0.09	Technology	-14.72	Leisure Goods	-31.56
FTSE 100 Index	-1.14	Software & Comp Serv	-14.82	Chemicals	-31.59
Oil Equipment & Serv	-1.96	Financials	-15.04	Real Est Invest & Tr	-33.31
NON FINANCIALS Index	-3.06	Financial Services	-16.10	General Retailers	-36.35
Consumer Goods	-4.96	Industrials	-17.47	Real Est Invest & Se	-36.77
Electricity	-5.04	Consumer Services	-18.01	Industrial Transport	-43.42
FTSE All{HY-}Share Index	-5.11	Life Insurance	-18.67	Automobiles & Parts	-62.80
		FTSE SmallCap Index	-19.50	Industrial Metals &	-81.46

FTSE GLOBAL EQUITY INDEX SERIES

Nov 7 Regions & countries	No of stocks	US $ indices	Day %	Mth %	YTD %	Total retn	YTD %	Gr Div Yield
FTSE Global All Cap	9524	652.39	1.7	-0.2	-23.0	1044.05	-21.5	2.4
FTSE Global All Cap	9524	652.39	1.7	-0.2	-23.0	1044.05	-21.5	2.4
FTSE Global Large Cap	1907	581.99	1.7	-0.4	-23.3	960.04	-21.8	2.4
FTSE Global Mid Cap	2264	846.60	1.6	0.5	-21.1	1274.47	-19.6	2.3
FTSE Global Small Cap	5353	878.67	1.4	0.2	-23.2	1264.96	-21.9	2.2
FTSE All-World	4171	382.87	1.7	-0.2	-22.9	648.87	-21.4	2.4
FTSE World	2664	695.04	1.6	-0.1	-22.6	1580.63	-21.1	2.4
FTSE Global All Cap ex UNITED KINGDOM In	9232	689.46	1.6	-0.3	-23.1	1082.24	-21.7	2.3
FTSE Global All Cap ex USA	7714	451.10	2.3	0.8	-24.8	801.01	-22.6	3.4
FTSE Global All Cap ex JAPAN	8119	682.20	1.8	-0.1	-22.9	1101.33	-21.4	2.4
FTSE Global All Cap ex Eurozone	8859	693.18	1.5	-0.5	-22.5	1085.12	-21.1	2.3
FTSE Developed	2180	638.36	1.6	-0.1	-22.6	1028.44	-21.2	2.2
FTSE Developed All Cap	5832	666.12	1.6	0.0	-22.7	1057.31	-21.3	2.2
FTSE Developed Large Cap	834	597.86	1.6	-0.2	-22.9	980.38	-21.5	2.2
FTSE Developed Europe Large Cap	220	345.03	3.2	2.7	-23.2	682.88	-20.9	3.3
FTSE Developed Europe Mid Cap	355	511.26	3.6	3.0	-33.7	878.35	-31.9	3.1
FTSE Dev Europe Small Cap	750	721.93	2.9	3.2	-34.6	1191.43	-32.9	3.3
FTSE North America Large Cap	234	808.52	1.3	-1.0	-22.5	1213.12	-21.4	1.8
FTSE North America Mid Cap	423	1071.12	1.3	0.1	-18.1	1485.73	-16.9	1.9
FTSE North America Small Cap	1333	1063.47	1.3	0.0	-19.4	1414.47	-18.4	1.7
FTSE North America	657	530.82	1.3	-0.8	-21.7	814.22	-20.6	1.8
FTSE Developed ex North America	1523	236.99	2.2	1.7	-24.8	453.23	-22.7	3.3
FTSE Japan Large Cap	169	338.79	-0.7	-0.9	-25.7	497.92	-23.8	2.6
FTSE Japan Mid Cap	340	476.52	-0.6	-3.5	-22.4	665.11	-20.4	2.7
FTSE Global wi JAPAN Small Cap	896	530.18	-0.5	-2.6	-23.8	768.30	-21.7	2.8
FTSE Japan	509	139.44	-0.7	-1.4	-25.0	229.46	-23.2	2.6
FTSE Asia Pacific Large Cap ex Japan	1088	602.11	2.9	-1.5	-27.8	1096.14	-25.8	3.4
FTSE Asia Pacific Mid Cap ex Japan	868	877.02	2.2	1.2	-22.6	1539.62	-20.3	3.6
FTSE Asia Pacific Small Cap ex Japan	2115	496.31	1.6	-0.5	-31.8	846.75	-30.0	3.2
FTSE Asia Pacific Ex Japan	1956	480.73	2.8	-1.2	-27.3	930.12	-25.2	3.4
FTSE Emerging All Cap	3692	655.77	2.7	-1.4	-25.5	1142.02	-23.1	3.9
FTSE Emerging Large Cap	1073	600.57	3.0	-2.1	-27.0	1051.77	-24.7	4.0
FTSE Emerging Mid Cap	918	978.53	2.2	2.5	-14.9	1714.58	-12.0	4.0
FTSE Emerging Small Cap	1701	722.44	1.6	-0.2	-25.4	1204.61	-23.0	3.5
FTSE Emerging Europe	111	106.49	3.1	12.3	-74.3	222.66	-73.2	3.1
FTSE Latin America All Cap	262	777.08	2.1	5.6	9.6	1519.94	17.6	10.7
FTSE Middle East and Africa All Cap	331	745.50	1.9	0.1	-6.4	1364.65	-3.7	3.2
FTSE Global wi UNITED KINGDOM All Cap In	292	289.28	2.9	2.4	-19.6	589.99	-17.0	3.7
FTSE Global wi USA All Cap	1810	912.18	1.2	-0.8	-21.7	1319.27	-20.7	1.7
FTSE Europe All Cap	1465	389.57	3.3	2.9	-27.2	740.22	-25.1	3.3
FTSE Eurozone All Cap	665	372.82	3.8	3.6	-28.1	703.28	-26.0	3.3
FTSE EDHEC-Risk Efficient All-World	4171	442.05	1.6	1.2	-19.0	695.10	-17.3	2.8
FTSE EDHEC-Risk Efficient Developed Europe	575	282.62	3.4	2.5	-31.6	496.56	-29.6	3.4
Oil & Gas	131	419.45	1.3	10.8	27.9	855.21	33.3	4.5
Oil & Gas Producers	87	421.27	1.3	11.5	32.6	881.73	38.5	4.7

Nov 7 Sectors	No of stocks	US $ indices	Day %	Mth %	YTD %	Total retn	YTD %	Gr Div Yield
Oil Equipment & Services	24	281.75	1.9	11.3	20.4	520.44	24.8	4.1
Basic Materials	394	551.95	4.4	0.9	-17.9	1015.45	-14.5	5.1
Chemicals	196	750.09	2.9	1.0	-22.6	1325.55	-20.5	3.2
Forestry & Paper	20	246.52	3.7	1.1	-19.2	496.66	-16.8	3.9
Industrial Metals & Mining	98	452.67	5.6	5.1	-18.2	865.35	-14.0	8.4
Mining	80	846.31	6.1	-1.6	-9.1	1649.36	-3.5	6.6
Industrials	803	462.49	1.8	3.2	-23.0	737.05	-21.6	2.1
Construction & Materials	154	525.38	2.1	1.0	-28.9	883.58	-27.5	2.3
Aerospace & Defense	35	855.18	0.6	11.1	6.5	1332.81	7.9	1.5
General Industrials	76	225.03	2.6	7.8	-18.9	396.90	-17.1	2.6
Electronic & Electrical Equipment	157	577.74	1.3	4.4	-28.1	829.93	-27.1	1.6
Industrial Engineering	158	923.25	2.7	7.2	-20.2	1466.95	-18.7	2.0
Industrial Transportation	133	849.94	2.1	0.7	-23.5	1380.11	-21.2	3.6
Support Services	90	484.16	1.1	-4.9	-31.8	719.95	-31.0	1.6
Consumer Goods	569	525.08	1.8	-0.7	-23.8	882.06	-22.3	2.4
Automobiles & Parts	132	508.96	0.2	-5.6	-34.2	822.76	-33.2	1.9
Beverages	72	732.65	2.1	1.2	-9.1	1242.52	-7.5	2.3
Food Producers	134	687.62	1.3	1.7	-12.4	1184.40	-10.6	2.5
Household Goods & Home Construction	65	478.90	1.8	0.6	-26.8	807.19	-24.9	2.9
Leisure Goods	53	222.68	0.6	-0.5	-30.1	314.84	-29.2	1.4
Personal Goods	98	810.97	4.9	-0.4	-29.7	1246.78	-28.7	2.0
Tobacco	15	938.95	1.7	5.3	-2.3	2654.27	2.1	6.1
Health Care	343	688.96	0.7	2.7	-12.7	1097.35	-11.4	1.8
Health Care Equipment & Services	133	1310.63	0.6	-0.5	-21.2	1607.07	-20.6	1.1
Pharmaceuticals & Biotechnology	210	466.68	0.7	4.9	-6.1	799.10	-4.1	2.3
Consumer Services	427	498.65	1.7	-3.8	-29.2	711.45	-28.5	1.3
Food & Drug Retailers	69	309.82	1.6	3.7	-10.0	492.29	-8.1	2.4
General Retailers	141	867.90	1.9	-8.3	-32.1	1185.03	-31.6	1.1
Media	75	278.95	-0.3	-1.3	-40.6	400.90	-39.9	1.4
Travel & Leisure	142	425.85	2.4	3.6	-17.0	621.06	-16.2	1.1
Telecommunication	89	127.38	0.9	1.8	-14.1	299.90	-10.9	4.3
Fixed Line Telecommuniations	31	99.01	1.2	3.6	-12.2	267.88	-8.1	5.2
Mobile Telecommunications	58	150.96	0.7	0.9	-15.1	306.13	-12.3	3.8
Utilities	200	301.30	1.1	-1.3	-12.2	702.75	-9.8	3.5
Electricity	142	345.49	0.9	-1.6	-10.4	793.52	-8.1	3.3
Gas Water & Multiutilities	58	287.81	1.5	-0.7	-16.5	694.91	-14.1	3.8
Financials	853	246.63	2.1	2.4	-17.8	473.41	-15.5	3.3
Banks	270	192.07	2.4	4.0	-15.1	411.00	-12.0	4.1
Nonlife Insurance	71	338.40	1.2	4.6	-3.4	564.64	-0.7	2.9
Life Insurance	51	199.20	3.3	2.4	-17.6	383.26	-14.5	4.2
Financial Services	211	405.44	2.1	2.7	-18.8	614.93	-17.6	1.8
Technology	362	419.15	1.6	-7.3	-38.2	546.75	-37.7	1.2
Software & Computer Services	186	622.69	1.5	-11.3	-41.8	752.60	-41.5	0.8
Technology Hardware & Equipment	176	377.85	1.7	-2.8	-34.1	530.62	-33.2	1.7
Alternative Energy	20	164.97	-1.2	-5.1	-20.9	236.72	-20.5	0.5
Real Estate Investment & Services	142	225.19	2.7	-6.2	-31.6	437.87	-29.8	3.4
Real Estate Investment Trusts	108	418.19	1.3	-2.5	-29.9	976.17	-28.0	4.0
FTSE Global Large Cap	1907	581.99	1.7	-0.4	-23.3	960.04	-21.8	2.4

The FTSE Global Equity Series, launched in 2003, contains the FTSE Global Small Cap Indices and broader FTSE Global All Cap Indices (large/mid/small cap) as well as the enhanced FTSE All-World index Series (large/mid cap) - please see https://research.ftserussell.com/Products/indices/Home/indexfiltergeis?indexName=GEISAC&currency=USD&rtn=CAP&segment=global-developed--emerging. The trade names Fundamental Index® and RAFI® are registered trademarks and the patented and patent-pending proprietary intellectual property of Research Affiliates, LLC (US Patent Nos. 7,620,577; 7,747,502; 7,778,905; 7,792,719; Patent Pending Publ. Nos. US-2006-0149645-A1, US-2007-0055598-A1, US-2008-0288416-A1, US-2010- 0063942-A1, WO 2005/076812, WO 2007/078399 A2, WO 2008/118372, EPN 1733352, and HK1099110). "EDHEC™" is a trade mark of EDHEC Business School As of January 2nd 2006, FTSE is basing its sector indices on the Industrial Classification Benchmark - please see www.ftse.com/icb. For constituent changes and other information about FTSE, please see www.ftse.com. © FTSE International Limited. 2013. All Rights reserved. "FTSE®" is a trade mark of the London Stock Exchange Group companies and is used by FTSE International Limited under licence.

FTSE 100 SUMMARY

FTSE 100	Closing Price	Day's Change	FTSE 100	Closing Price	Day's Change
3I Group PLC	1235.5	14.50	International Consolidated Airlines Group S.A.	127.78	2.80
Admiral Group PLC	1984.5	-35.50	Intertek Group PLC	3819	46.00
Airtel Africa PLC	120.70	-0.30	Jd Sports Fashion PLC	104.40	0.35
Anglo American PLC	2978	26.50	Kingfisher PLC	225.40	-0.90
Antofagasta PLC	1274	12.00	Land Securities Group PLC	589.00	10.20
Ashtead Group PLC	4824	44.00	Legal & General Group PLC	239.20	0.90
Associated British Foods PLC	1428.5	5.00	Lloyds Banking Group PLC	42.02	-0.74
Astrazeneca PLC	10646	-96.00	London Stock Exchange Group PLC	7750	50.00
Auto Trader Group PLC	535.60	-5.00	M&G PLC	178.90	2.00
Aveva Group PLC	3138	-2.00	Melrose Industries PLC	123.95	2.40
Aviva PLC	434.70	5.40	Mondi PLC	1536	29.00
B&M European Value Retail S.A.	357.00	-0.50	National Grid PLC	955.80	-11.60
Bae Systems PLC	788.60	-10.20	Natwest Group PLC	238.40	0.40
Barclays PLC	152.60	-0.92	Next PLC	5258	130.00
Barratt Developments PLC	385.70	-2.90	Ocado Group PLC	674.20	40.20
Berkeley Group Holdings (The) PLC	3580	-4.00	Pearson PLC	947.80	-3.40
BP PLC	501.80	1.85	Pershing Square Holdings LTD	2905	20.00
British American Tobacco PLC	3368	-8.50	Persimmon PLC	1323	-7.00
British Land Company PLC	380.20	5.80	Phoenix Group Holdings PLC	551.80	0.80
Bt Group PLC	115.20	1.10	Prudential PLC	906.60	-7.00
Bunzl PLC	2901	1.00	Reckitt Benckiser Group PLC	5640	-98.00
Burberry Group PLC	1949	15.50	Relx PLC	2281	-27.00
Centrica PLC	76.62	-3.30	Rentokil Initial PLC	527.60	6.80
Coca-Cola Hbc AG	1925.5	25.00	Rightmove PLC	503.40	-4.40
Compass Group PLC	1872	-10.50	Rio Tinto PLC	5044	14.00
Convatec Group PLC	210.20	-6.00	Rolls-Royce Holdings PLC	86.35	1.24
Crh PLC	3222	-1.50	Rs Group PLC	893.00	10.50
Croda International PLC	6492	-18.00	Sage Group PLC	714.40	-4.80
Dcc PLC	4944	29.00	Sainsbury (J) PLC	218.00	9.30
Dechra Pharmaceuticals PLC	2596	-4.00	Schroders PLC	405.60	1.00
Diageo PLC	3645	-43.00	Scottish Mortgage Investment Trust PLC	743.40	-23.40
Endeavour Mining PLC	1581	8.00	Segro PLC	778.40	-2.20
Entain PLC	1313.5	29.50	Severn Trent PLC	2556	4.00
Experian PLC	2693	-	Shell PLC	2501	-25.50
F&C Investment Trust PLC	896.00	-10.00	Smith & Nephew PLC	1043	-5.00
Flutter Entertainment PLC	11815	305.00	Smith (Ds) PLC	300.50	6.60
Frasers Group PLC	706.00	38.50	Smiths Group PLC	1559.5	-21.50
Fresnillo PLC	774.00	18.20	Smurfit Kappa Group PLC	3014	72.00
Glaxosmithkline PLC	1377.4	-68.20	Spirax-Sarco Engineering PLC	10930	125.00
Glencore PLC	532.00	-	Sse PLC	1570	-8.50
Haleon PLC	278.60	3.30	St. James's Place PLC	1080	7.50
Halma PLC	2157	-	Standard Chartered PLC	558.00	3.40
Harbour Energy PLC	407.20	-1.40	Taylor Wimpey PLC	96.48	-0.08
Hargreaves Lansdown PLC	803.80	7.80	Tesco PLC	227.70	4.50
Homeserve PLC	1188	-	Unilever PLC	4032	-21.50
HSBC Holdings PLC	479.40	-10.60	Unite Group PLC	891.00	-2.00
Imperial Brands PLC	2134	16.00	United Utilities Group PLC	956.00	3.40
Informa PLC	571.20	-6.60	Vodafone Group PLC	104.72	-0.04
Intercontinental Hotels Group PLC	4702	-87.00	Whitbread PLC	2537	-39.00
Intermediate Capital Group PLC	1133.5	11.50	Wpp PLC	805.60	5.60

UK STOCK MARKET TRADING DATA

	Nov 07	Nov 04	Nov 03	Nov 02	Nov 01	Yr Ago
Order Book Turnover (m)	71.78	256.01	256.01	64.00	142.29	93.64
Order Book Bargains	668103.00	823987.00	823987.00	706159.00	704395.00	806830.00
Order Book Shares Traded (m)	1450.00	1437.00	1437.00	1363.00	1560.00	2005.00
Total Equity Turnover (£m)	5437.91	5816.58	5816.58	5513.65	6101.48	5949.19
Total Mkt Bargains	883794.00	1056704.00	1056704.00	927828.00	902316.00	1013253.00
Total Shares Traded (m)	5947.00	6648.00	6648.00	5734.00	6445.00	7024.00

† Excluding intra-market and overseas turnover. *UK only total at 6pm. ‡ UK plus intra-market turnover. (u) Unavaliable. (c) Market closed.

All data provided by Morningstar unless otherwise noted. All elements listed are indicative and believed accurate at the time of publication. No offer is made by Morningstar or the FT. The FT does not warrant nor guarantee that the information is reliable or complete. The FT does not accept responsibility and will not be liable for any loss arising from the reliance on or use of the listed information.
For all queries e-mail ft.reader.enquiries@morningstar.com

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

POWERED BY MORNINGSTAR

UK RIGHTS OFFERS

Issue price	Amount paid up	Latest renun. date	High	Low	Stock	closing Price p	+or-

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

UK COMPANY RESULTS

Company		Turnover		Pre-tax		EPS(p)		Div(p)		Pay day	Total	
BlackRock Greater Europe Investment Trust	Pre			200.555L	197.262	199.440L	225.790	4.85000	4.55000	Dec 16	6.600	6.300

Figures in £m. Earnings shown basic. Figures in light text are for corresponding period year earlier.
For more information on dividend payments visit www.ft.com/marketsdata

UK RECENT EQUITY ISSUES

Issue date	Issue price(p)	Sector	Stock code	Stock	Close price(p)	+/-	High	Low	Mkt Cap (£m)
10/31	4.00		BWN	Bowen Fintech PLC	6.00	0.00	7.35	5.90	330.0
10/27	10.00		UMR	Unicorn Mineral Resource PLC	18.50	0.00	19.50	10.00	513.5
10/24	1.00		ATN	Eastinco Mining and Exploration PLC	0.95	0.00	1.00	0.90	916.5
10/21	55.00	AIM	SND	Sondrel (Holdings) PLC	59.00	-1.00	60.00	51.67	5160.2
10/07	10.00		ACG	ACG Acquisition Company Ltd	9.98	0.05	10.10	9.85	155.9
10/04	1.00		MII	Milton Capital PLC	1.03	0.00	1.20	1.00	102.5

§Placing price. *Intoduction. ‡When issued. Annual report/prospectus available at www.ft.com/ir
For a full explanation of all the other symbols please refer to London Share Service notes.

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$)							
ANZ Bank	24.33	-1.17	28.33	20.78	5.90	10.72	47076.74
BHP Group	40.48	1.92	53.72	35.69	9.65	9.99	132615.55
CmwBkAu	103.08	0.03	110.19	86.98	3.23	20.38	113155.96
CSL	277.16	1.56	319.78	240.10	1.04	41.72	86492.09
NatAusBk	31.73	-0.39	33.75	25.43	2.69	17.77	64760.5
Telstra	3.92	0.02	4.20	3.62	2.43	33.52	29311.5
Wesfarmers	45.78	0.55	61.34	40.03	3.70	24.74	33591.68
Westpac Bank	23.19	-0.95	24.67	18.80	3.64	17.73	52542.75
Woolworths	32.81	0.25	41.13	31.67	3.13	39.34	25829.37
Belgium (€)							
AnBshInBv	52.62	0.39	58.72	45.56	0.98	27.27	91406.41
KBC Grp	53.44	0.44	86.50	45.53	6.20	9.03	22277.15
Brazil (R$)							
Ambev	16.37	-0.08	18.12	12.81	3.23	26.35	50393.61
Bradesco	15.90	-0.42	17.72	13.53	4.89	7.84	15136.2
Cielo	5.61	-0.03	6.22	2.01	2.43	20.24	2978.93
ItauHldFin	24.89	-0.54	26.04	18.86	2.92	10.50	24121.09
Petrobras	31.26	-0.45	42.08	26.56	14.39	4.75	45472.06
Vale	72.03	-0.22	107.11	61.85	16.91	3.43	67279.11
Canada (C$)							
Bausch Hlth	9.87	0.37	36.26	5.10	-	-3.27	2647.33
BCE	61.53	-0.22	74.09	55.66	5.14	22.77	41590.5
BkMontrl	127.88	1.01	154.47	113.73	3.20	10.87	64195.36
BkNvaS	65.92	0.07	95.00	63.19	5.09	9.11	58210.58
Brookfield	55.09	0.58	79.04	51.07	1.08	20.19	66140.03
CanadPcR	103.47	1.19	106.93	86.12	0.66	27.38	71328.38
CanImp	62.35	-0.09	167.50	55.35	8.71	4.77	41829.59
CanNatRs	82.63	0.18	88.18	48.42	2.19	14.15	67976.72
CanNatRy	160.93	0.26	171.48	137.26	1.38	25.84	81071.19
Enbridge	53.77	-0.40	59.69	46.88	5.62	20.73	80698.08
GtWesLif	30.26	0.17	41.50	27.99	5.77	9.40	20899.7
ImpOil	77.30	0.18	79.83	41.04	1.20	24.57	35036.99
Manulife	22.43	-0.17	28.09	20.81	4.72	7.01	31392.11
Nutrien	98.36	-0.43	147.93	82.48	2.14	15.61	38153.23
RylBkC	127.69	0.37	149.60	116.75	3.15	12.53	131194.88
SHOP	43.14	-0.19	222.87	33.00	-	1.65	31892.25
Suncor En	49.04	0.34	53.62	28.77	1.94	19.59	49215.79
ThmReut	142.41	0.93	156.62	119.23	1.30	10.85	50760.52
TntoDom	88.29	0.32	109.08	77.27	3.35	12.22	118749.55
TrnCan	60.20	0.14	74.44	54.60	5.23	35.80	45154.25
China (HK$)							
AgricBkCh	2.32	0.05	3.15	2.22	8.68	3.21	9084.86
Bk China	2.62	0.04	3.20	2.51	8.02	3.43	27910.61
BkofComm	4.05	0.08	5.74	3.84	8.16	3.53	18064.02
BOE Tech	0.68	0.03	0.87	0.57	-	11.57	17.24
Ch Coms Cons	3.26	0.05	5.17	3.09	5.90	2.85	1834.99
Ch Evrbrght	2.13	0.03	3.11	2.04	10.62	3.04	3440.38
Ch Rail Cons	3.99	0.09	5.95	3.75	6.20	2.24	1055.38
Ch Rail Gp	3.66	0.02	5.88	3.48	5.31	3.11	1961.74
ChConstBk	4.37	0.10	6.23	4.12	8.02	3.35	133842.73
China Vanke	11.06	0.34	21.70	9.96	12.16	5.26	2686.2
ChinaCitic	3.09	0.08	4.08	2.92	8.58	3.02	5858.21
ChinaLife	9.66	0.25	15.04	8.53	6.68	4.46	9157.18
ChinaMBank	30.30	0.95	70.80	25.40	4.45	5.90	17720.88
ChinaMob	48.15	0.10	58.65	45.90	6.32	7.84	125500.98
ChinaPcIns	15.02	0.22	25.90	12.10	8.26	5.16	5310.37
ChMinsheng	2.42	0.05	3.29	2.19	9.60	3.30	2565.06
ChMrchSecs	13.02	-0.07	18.56	12.06	3.33	11.70	13348.7
Chna Utd Coms	3.58	-0.07	4.08	3.30	3.11	18.08	15311.84
ChShenEgy	22.55	0.40	27.65	15.74	8.58	7.22	9702.49
ChShpbldng	3.59	-0.03	4.36	3.36	-	-268.71	10951.58
ChStConEng	4.88	0.06	6.40	4.52	4.37	3.81	27527.12
ChUncHK	3.50	0.01	4.43	3.27	4.24	8.14	13642.79
CNNC Intl	6.06	0.03	8.92	5.78	2.04	15.95	15779.67
CSR	2.71	0.06	3.80	2.37	7.21	7.86	1509.02
Daqin	6.59	-0.02	7.25	5.95	7.24	10.05	13533.68
GuosenSec	8.91	-0.02	11.70	8.43	2.56	10.31	10864.33
HaitongSecs	4.18	0.09	7.34	3.77	6.50	4.79	1815.6
Hngzh HikVDT	29.83	-0.19	55.55	28.10	2.66	16.50	37809.18
Hunng Pwr	3.03	0.01	5.74	2.62	6.16	-3.59	1814.35
IM Baotou Stl	1.93	0.06	3.21	1.75	-	33.08	8445.14
In&CmBkCh	3.58	0.09	4.94	3.37	8.02	3.46	39584.16
IndstrlBk	15.47	0.04	23.22	15.01	4.98	4.27	44393.73
Kweichow	1507.11	-9.46	2216.96	1359	1.27	34.18	261522.75
Midea	0.36	-	0.61	0.35	-	-4.07	13.61
New Ch Life Ins	14.66	0.74	24.70	12.04	9.87	2.94	1931.28
PetroChina	3.31	0.13	4.49	3.01	6.82	7.04	8896.77
PingAnIns	36.80	2.15	69.40	31.30	6.43	6.17	34914.61
PngAnBnk	10.88	0.06	19.06	10.39	1.59	6.54	29164.98
Pwr Cons Corp	7.35	0.05	9.81	5.99	1.20	15.38	11159.57
SaicMtr	14.51	0.01	23.45	13.77	4.07	7.31	23417.75
ShenwanHong	0.09	0.00	0.18	0.05	-	2.84	102.09
ShgPdgBk	6.81	0.02	8.81	6.64	6.71	4.39	27611.88
Sinopec Corp	3.36	0.04	4.28	3.06	3.92	4.27	10897.48
Sinopec Oil	1.96	0.02	2.37	1.70	-	656.08	3673.91
Denmark (kr)							
DanskeBk	123.65	1.95	133.25	91.28	1.56	8.80	14330.91
MollerMrsk	15320	735.00	24070	13185	2.14	2.59	17242.7
NovoB	852.50	10.80	864.40	604.40	1.06	42.70	199692.96

Stock	Price	Day Chg	52 Week High	52 Week Low	Yld	P/E	MCap m
BASF	47.61	0.79	69.15	37.90	6.67	8.19	43721.99
Bayer	54.28	0.40	67.99	43.91	3.55	55.29	53323.32
BMW	81.03	1.23	97.60	67.58	2.26	4.49	48777.23
Continental	55.16	0.96	111.96	44.44	-	8.83	11031.78
Deut Bank	9.77	0.04	14.64	7.46	-	9.98	20183.09
Deut Tlkm	19.65	0.04	19.80	14.47	2.94	23.46	97959.08
DeutsPost	35.82	0.30	58.31	29.68	3.71	9.42	44380.89
E.ON	8.59	-0.11	12.54	7.28	5.27	4.96	22687.79
Fresenius Med	28.56	-0.08	63.66	26.19	4.52	8.96	8367.78
Fresenius SE	23.36	0.16	40.74	19.76	3.71	7.67	13045.96
HenkelKgaA	59.75	0.65	75.05	56.55	2.95	16.51	15522.03
Linde	310.70	2.15	315.35	244.00	1.16	50.15	153596.04
Mercedes-Benz	59.83	0.09	77.90	50.19	2.17	6.22	64005.18
MuenchRkv	271.70	-0.50	282.25	205.15	3.47	13.49	38062.98
SAP	96.87	0.63	129.74	81.35	1.84	22.57	118999.26
Siemens	114.56	1.52	156.98	93.67	2.94	17.90	97371.13
Volkswgn	181.15	7.15	301.40	158.80	2.55	6.36	53452.85
Hong Kong (HK$)							
AIA	67.70	2.15	92.50	57.25	1.68	18.23	102397.42
BOC Hold	25.80	0.60	32.75	23.20	4.10	13.94	34749.87
Ch OSLnd&Inv	16.48	0.50	27.35	14.58	6.21	4.31	22978.02
ChngKng	45.45	0.50	57.00	42.90	3.32	10.95	20874.01
Citic Ltd	7.44	0.19	9.26	6.96	6.16	3.62	27571.75
Citic Secs	13.72	0.60	21.32	11.82	2.97	7.44	4579.45
CK Hutchison	41.85	0.85	60.45	38.80	4.64	5.58	20443.1
CNOOC	10.14	0.26	12.54	7.55	3.80	9.31	57615.89
HangSeng	115.70	3.00	169.50	110.00	4.49	19.59	28179.27
HK Exc&Clr	259.60	13.40	483.60	208.20	3.00	30.80	41928.79
MTR	35.90	1.10	43.70	33.45	2.92	27.36	28364.44
SandsCh	17.04	0.14	24.90	12.50	-	-19.81	17568.45
SHK Props	84.20	-4.05	101.70	83.10	5.01	10.12	31082.92
Tencent	245.40	6.80	509.00	198.60	0.56	10.16	300391.53
India (Rs)							
Bhartiartl	822.70	6.30	841.45	628.75	-	188.54	59800.5
HDFC Bk	1508.8	11.65	1722.1	1271.6	-	27.46	102650.3
Hind Unilevr	2532.8	12.45	2734	1927	1.18	72.83	72633.5
HsngDevFin	2507.4	20.75	3021.1	2026	0.86	22.91	55616.23
ICICI Bk	917.50	12.20	943.25	642.15	0.20	31.24	78057.78
Infosys	1507.45	-6.55	1923.3	1360	1.88	31.97	77418.49
ITC	353.50	-0.10	358.50	207.00	2.84	31.53	53516.86
L&T	2017.65	2.55	2056	1456.35	0.83	35.92	34601.45
OilNatGas	138.55	0.70	189.80	119.85	6.13	4.21	21273.63
RelianceIn	2606.6	13.85	2856.15	2222	0.25	32.02	215253.27
SBI NewA	614.15	20.20	622.70	430.70	0.61	18.39	66897.1
SunPhrmInds	1028.35	-11.55	1070.95	733.70	0.68	41.13	30114.52
Tata Cons	3233.7	16.30	3920	2950.1	1.05	33.15	144414.89
Israel (ILS)							
TevaPha	30.42	-0.59	37.23	23.83	-	27.08	9516.75
Italy (€)							
Enel	4.74	0.06	7.32	3.96	7.45	22.90	48162.21
ENI	14.27	0.26	14.85	10.43	4.55	6.24	51442.07
Generali	16.00	0.32	21.55	13.67	8.84	9.34	25295.84
IntSPaolo	2.13	0.06	2.92	1.58	1.65	68.56	41365.32
Unicred	12.80	-0.24	15.93	7.75	0.90	19.75	28635.52
Japan (¥)							
AstellasPh	2060.5	-10.00	2205	1739	2.40	29.52	25826.26
Bridgestne	5326	76.00	5509	4042	3.35	11.53	25951.78
Canon	3182	47.00	3516	2467	3.30	14.65	28975.46
CntJpRwy	17005	150.00	17920	14660	0.82	-30.34	23916.37

Stock	Price	Day Chg	52 Week High	52 Week Low	Yld	P/E	MCap m
AmerMvl	19.53	-0.01	21.44	15.66	1.61	16.39	42661.92
FEMSA UBD	146.04	1.61	169.96	120.63	1.34	123.94	16226.75
WalMrtMex	77.10	0.32	82.93	64.81	0.63	39.88	69215.43
Netherlands (€)							
ASML Hld	476.80	12.40	777.50	376.10	0.68	38.24	193797.34
Heineken	83.78	0.02	100.95	77.50	1.13	15.09	48255.09
ING	11.09	0.15	14.00	7.90	5.21	9.37	41777.13
Unilever	46.22	0.06	48.81	39.36	3.10	23.73	134326.56
Norway (Kr)							
DNB	180.75	-1.45	220.50	168.05	9.46	11.75	27518.63
Equinor	393.40	0.65	410.95	217.70	1.23	17.26	121968.32
Telenor	93.94	0.76	148.80	88.54	9.42	16.14	12835.56
Qatar (QR)							
QatarNtBk	20.50	0.30	27.00	18.40	2.34	17.44	51993.33
Saudi Arabia (SR)							
AlRajhiBnk	84.70	0.40	117.40	78.60	2.36	17.22	90154.32
NatnlcomBnk	58.60	0.60	82.00	56.80	2.06	23.59	69827.25
SaudiBasic	86.10	0.50	141.40	84.80	3.15	13.43	68733.36
SaudiTelec	39.35	0.10	48.88	37.10	8.47	8.34	52355
Singapore (S$)							
DBS	34.43	-0.04	37.49	29.45	3.15	15.14	63167.95
JardnMt US$	47.75	-0.52	62.10	42.60	3.05	9.39	13849.3
OCBC	12.12	0.08	13.54	10.98	3.05	12.96	38867.58
SingTel	2.55	0.03	2.88	2.31	2.58	46.16	30008.78
UOB	28.50	0.10	33.33	25.47	3.06	13.60	34024.64
South Africa (R)							
Firstrand	65.91	0.56	79.34	53.25	3.74	12.53	20894.11
MTN Grp	134.78	-0.16	211.49	115.46	-	19.31	14352.18
Naspers N	2210	30.00	2853.25	1392.5	0.25	12.49	54392.74
South Korea (KRW)							
HyundMobis	221000	2000	265500	189500	1.81	8.64	14871.36
KoreaElePwr	16900	50.00	25100	16500	7.24	-9.89	7743.06
SK Hynix	86500	2000	134000	80400	1.78	6.20	44943.23
SmsungEl	60200	800.00	80800	51800	2.39	10.45	256489.98
Spain (€)							
BBVA	5.34	0.03	6.19	3.97	6.70	7.55	32181.1
BcoSantdr	2.66	-0.01	3.48	2.32	2.77	5.54	44679.32
CaixaBnk	3.34	0.09	3.64	2.22	0.78	22.83	26937.31
Iberdrola	10.00	-0.01	11.49	8.47	4.06	17.82	63617.76
Inditex	23.60	0.05	32.34	18.55	0.90	25.86	73549.31
Repsol	14.30	0.01	16.23	9.60	4.04	9.06	20768.23
Telefonica	3.58	-0.05	5.06	3.24	9.31	2.71	20651.21
Sweden (SKr)							
AtlasCpcoB	110.60	1.58	133.60	22.08	6.70	7.34	15895.42
Ericsson	60.46	0.34	117.32	58.81	3.78	8.85	17103.84
H & M	116.28	0.26	191.86	98.25	5.50	15.92	15638.89
Investor	180.86	0.06	228.75	158.22	1.96	7.73	30340.59
Nordea Bk	105.98	-0.34	113.78	85.25	14.00	12.29	36452.36
SEB	116.65	-1.25	141.85	91.64	8.78	9.69	23141.61
SvnskaHn	103.70	-0.70	105.40	80.88	4.89	10.11	18569.35
Swedbank	164.65	-2.10	195.30	124.50	8.97	8.74	17161.63
Telia Co	29.10	0.04	41.70	27.93	6.98	10.20	10957.84
Volvo	186.56	0.62	218.65	148.24	3.53	12.07	27286.27
Switzerland (SFr)							
ABB	28.56	0.33	33.86	23.84	2.68	14.17	56702.84
CredSuisse	4.07	-0.12	9.59	3.52	2.26	-6.61	10901.92
Nestle	107.58	-1.08	128.90	103.42	2.35	19.31	298954.12

Stock	Price	Day Chg	52 Week High	52 Week Low	Yld	P/E	MCap m
Imperial Brands	2134	16.00	2150	1434.23	6.47	7.13	23330.41
Jardine Mathes.	62.50	-	60.50	50.06	2.33	12.29	18127.36
LlydsBkg	42.02	-0.74	56.00	38.10	6.12	5.84	34710.45
LSE Group	7750	50.00	8612	6230	0.99	79.24	30738.1
Natl Grid	955.80	-11.60	1271.45	844.29	5.14	22.28	36775.77
Natwest Group	238.40	0.40	284.42	196.92	4.40	9.39	32700.54
Prudential	906.60	-7.00	1516.5	782.40	1.30	14.72	26888.04
ReckittB	5640	-98.00	6824	5400	3.10	-24.41	45527.88
RELX	2281	-27.00	2634.82	2056	2.09	30.09	50109.58
RioTinto	5044	14.00	6343	4354	9.96	5.28	77548.51
RollsRoyce	86.35	1.24	161.91	64.44	-	58.74	1840.93
Shell PLC	2501	-25.50	2557	1534.2	2.42	13.18	131795.43
StandCh	558.00	3.40	641.00	406.20	1.59	12.51	21087.44
Tesco	227.70	4.50	304.10	194.35	4.02	11.59	21371.01
Unilever	4032	-21.50	4178	3267.5	3.59	20.70	56930.94
Vodafone	104.72	-0.04	141.60	97.40	7.39	-234.27	32019.5
WPP	805.60	5.60	1231.5	713.00	3.29	15.34	11692.04
United States of America ($)							
21stC Fox A	29.01	-0.83	44.95	28.02	1.37	13.88	8774.79
3M	123.37	-1.47	186.30	107.07	4.06	14.40	68191.89
AbbottLb	98.84	0.77	142.60	93.25	1.54	29.64	172326.11
Abbvie	146.20	0.92	175.91	115.01	3.01	26.78	258495.71
Accenture	263.34	2.18	417.37	242.95	1.19	31.59	175060.67
Activision Bli.	71.03	-0.93	82.00	56.40	0.56	24.40	55567.24
Adobe	291.65	5.90	699.54	274.73	-	33.90	135588.09
Advanced Micro	61.72	-0.47	164.46	54.57	-	28.37	99509.3
AEP	87.42	-2.15	105.60	80.22	2.90	20.83	44921.96
Aflac	67.24	0.06	68.12	52.07	1.66	12.43	41809.06
AirProd	277.03	0.97	316.39	216.24	1.83	34.38	61444.97
Allstate	128.27	-0.85	144.46	106.11	2.14	8.93	34018.43
Alphabet	87.34	0.76	151.55	83.34	-	0.92	521681.82
Altria	45.71	0.21	57.05	40.35	6.52	40.31	81920.21
Amazon	89.34	-1.64	188.11	88.04	-	1.63	911415.78
AmerAir	13.87	-0.24	22.35	11.65	-	-4.38	9014.13
AmerExpr	144.64	-0.08	199.55	130.65	1.09	16.60	108079.89
AmerIntGrp	58.37	0.45	65.73	47.05	1.86	6.37	43367.74
AmerTower	203.68	-0.24	291.99	178.17	2.16	42.52	94834.55
Amgen	274.96	5.92	276.00	198.64	2.17	31.60	147081.91
Amphenol Corp	75.62	-0.65	88.45	61.67	0.87	35.60	45001.05
Analog Devices	146.14	1.85	191.95	133.48	1.61	57.98	75165.87
Anthem	482.58	12.71	-	-	-	-	-
Aon Cp	282.00	2.29	341.98	246.21	0.60	60.04	58332.53
Apple	136.41	-1.97	182.13	129.04	0.54	26.73	2170026.38
Applied Materi.	93.14	1.44	167.06	71.12	0.86	15.18	80129.22
Aptiv	97.14	-0.49	179.66	77.96	-	59.16	26320.04
ArcherDan	94.98	-0.21	98.88	61.80	1.32	23.43	52175.76
AT&T	18.17	-0.16	21.53	14.46	9.69	7.78	129461.96
Autodesk	194.69	1.00	335.48	163.20	-	101.73	42025.6
AutomData	237.88	1.02	261.59	192.26	1.36	43.51	98679.23
AutoZone	2481.89	16.79	2560.01	1703.32	-	26.50	47109.72
Avago Tech	467.34	2.04	677.76	415.07	2.72	31.18	189273.38
BakerHu	30.39	1.28	39.78	20.42	2.06	83.10	30429.59
Bank of NY	42.44	-0.05	64.63	36.22	2.59	12.11	34295.9
BankAm	36.79	0.00	50.11	29.31	1.79	12.18	295163.73
Baxter	50.73	0.15	89.70	49.83	1.81	23.69	25574.05
BectonDick	220.92	0.08	277.29	215.90	1.29	45.16	63005.3
BerkshHat	437883.62	5883.62	544389.26	393012.25	-	8.70	262696.89
Biogen	286.55	4.73	287.96	187.16	-	32.56	41262.88
BlackRock	663.04	6.89	973.16	503.12	2.11	20.50	99964.95

Stock	Price	Day Chg	52 Week High	52 Week Low	Yld	P/E	MCap m
Boeing	163.43	3.42	233.94	113.02	-	-27.01	97045.97
Booking Holdings	1821.19	-53.21	2715.66	1616.85	-	76.39	70642.85
Bristol-Myers	79.24	0.46	80.59	53.22	2.15	30.01	168476.95
Broadcom	467.34	2.04	677.76	415.07	2.72	31.18	189273.38
Cadence Design	142.45	0.04	194.97	132.32	-	67.33	39076.31
CapOne	102.42	-0.11	160.54	90.27	1.65	4.49	39310.61
CardinalHlth	81.22	1.70	81.54	45.85	2.04	49.72	21280.73
Carnival	8.64	-0.36	25.29	6.11	-	-1.22	9613.79
Caterpillar	225.21	-2.64	237.90	160.60	1.61	22.49	117201.39
Centene Corp	82.48	0.75	98.53	69.51	-	42.74	46702.27
CharlesSch	78.86	-0.20	96.24	59.35	0.77	32.92	143342.16
Charter Comms	345.36	-3.46	706.93	297.66	-	16.68	53762.98
Chevron Corp	185.51	2.09	186.31	110.73	2.42	26.93	358709.29
Chipotle Mexic.	1383.37	-14.20	1895.99	1196.28	-	71.38	38348.55
Chubb	212.14	2.98	218.99	173.78	1.27	13.01	88048.77
Cigna	326.45	4.32	328.60	191.74	1.04	24.52	99806.97
Cintas Corp	413.79	3.15	461.44	343.86	0.74	42.86	42018.44
Cisco	44.47	-0.06	64.29	38.61	2.84	18.65	182699.76
Citigroup	45.37	0.24	69.67	40.01	3.81	5.29	87858.83
CME Grp	169.76	-0.91	256.94	166.58	1.79	27.52	61066.91
Coca-Cola	59.34	0.08	67.20	52.28	2.40	31.16	256594.99
Cognizant	52.75	0.12	93.47	51.33	1.54	15.39	27109.36
ColgtPlm	73.15	-0.04	85.18	67.84	2.07	33.90	61095.92
Comcast	31.22	0.22	54.59	28.39	2.71	12.13	134660.4
ConocPhil	135.40	3.08	138.49	66.06	1.22	26.36	168718.02
Constellation	244.31	-0.52	261.53	207.59	1.06	-1299.80	39388.76
Corning	32.96	0.07	43.47	28.98	2.47	30.42	27873.71
Corteva	66.37	1.00	68.43	43.74	0.68	33.08	48031.97
Corteva	66.37	1.00	68.43	43.74	0.68	33.08	48031.97
Costco	480.50	-5.91	612.27	406.51	0.56	45.32	212671.29
CrownCstl	129.80	-0.26	208.69	121.71	3.56	57.44	56206.33
CSX	29.71	0.08	38.63	25.80	1.11	19.39	62462.56
CVS	101.01	1.45	111.25	86.28	1.68	20.06	132723.8
Danaher	246.83	-0.14	331.69	233.71	0.31	33.28	179683.03
Deere	394.21	-0.89	446.76	283.81	0.85	25.58	118978.81
Delta	32.60	-0.16	46.27	27.20	-	46.23	20902.74
Devon Energy	72.06	0.58	79.40	35.55	2.31	20.32	47105.62
Digital Realty	97.13	0.36	176.53	85.76	4.04	19.32	27915.92
DiscFinServ	99.83	-0.02	129.12	87.64	1.59	6.62	27276.13
Disney	99.16	-0.42	179.25	90.23	-	68.12	180776.78
Dollar General	249.80	1.70	262.21	183.25	0.57	28.75	56347.82
DominRes	61.73	-5.40	88.78	61.70	3.45	22.86	51390.4
DukeEner	91.01	-2.60	116.33	83.76	3.63	21.81	70068.64
DuPont	61.46	-0.48	84.08	49.52	1.65	22.48	30782.93
Eaton	158.18	-0.51	175.72	122.50	1.63	35.00	62908.19
eBay	39.72	-0.36	76.94	35.92	1.53	123.49	21551.71
Ecolab	136.29	1.54	238.93	131.04	1.21	41.19	38841.18
Edwards Lifesc.	69.24	0.70	131.73	67.37	-	34.37	42808.36
Eli Lilly	363.95	6.54	366.94	231.87	0.79	70.27	345817.25
Emerson	90.34	1.25	100.00	72.41	1.90	23.31	53418.04
EOG Res	144.63	2.40	150.88	80.67	0.94	21.39	84954.14
Equinix	612.78	1.69	847.10	494.89	1.59	130.93	55809.05
EquityResTP	59.88	-1.38	94.32	59.32	3.41	20.65	22629.78
Exelon	36.25	-0.93	50.71	29.10	3.57	24.62	36023.15
ExxonMb	113.65	1.34	113.93	57.96	2.60	24.91	468043.22
Fedex	157.84	1.18	260.50	141.92	1.54	10.03	41071.79
Fidelity NIS	60.26	0.09	122.06	56.53	2.19	106.27	36636.79
Fiserv	94.87	0.55	110.94	87.03	-	56.33	60245.11
FordMtr	13.56	0.05	25.87	10.61	0.62	3.60	53537.4
Franklin	22.83	-0.51	36.78	20.24	4.19	7.13	11375
GenDyn	250.50	1.14	254.99	188.64	1.58	25.63	68774.51
GenElectric	81.81	0.74	116.17	59.93	0.33	-29.74	89385.72
GenMills	79.03	-0.03	82.10	61.41	2.21	24.67	46907.12
GenMotors	38.97	-0.03	67.21	30.33	-	6.87	55364.55
GileadSci	81.19	0.85	81.45	57.17	2.96	19.46	101832.06
GoldmSchs	361.17	3.26	414.45	277.84	1.52	7.18	122304.65
Halliburton	39.16	0.68	43.99	20.77	0.57	26.00	35554.57
HCA Hold	211.89	-0.02	279.02	164.47	0.77	11.83	59904.84
Hew-Pack	28.45	0.16	41.47	24.08	2.50	6.06	28613.93
Hilton Worldwi.	127.12	-2.89	167.99	108.41	-	102.88	34380.37
HiltonWwde	127.12	-2.89	167.99	108.41	-	102.88	34380.37
HomeDep	286.07	2.04	420.61	264.51	1.97	21.56	292857.42
Honywell	207.24	-0.61	228.26	166.63	1.54	30.96	139332.06
HumanaInc	554.94	2.89	571.30	363.73	0.43	28.92	70254.95
IBM	137.91	0.95	144.73	114.56	4.02	31.28	124683.55
IDEXX Laborato.	377.73	5.94	664.70	317.06	-	51.90	31282.25
IllinoisTool	214.32	-0.83	248.11	173.52	1.86	29.76	65836.18
Illumina	214.98	-9.38	425.00	173.45	-	50.40	33773.36
Intcntl Exch	97.27	0.65	138.46	88.60	1.15	16.01	54332.77
Intel	27.94	-0.26	55.00	24.59	4.21	6.79	115308.38
Intuit	363.82	2.63	716.86	339.36	0.60	53.83	102549.9
John&John	172.45	0.97	186.69	155.72	2.06	26.09	450854.63
JohnsonCn	63.39	-0.42	81.69	45.52	1.54	34.20	43663.68
JPMrgnCh	131.06	0.38	170.92	101.28	2.45	10.08	384425.83
Kimb-Clark	123.52	1.00	144.53	108.74	3.23	27.39	41687.02
KinderM	18.25	0.08	20.20	15.01	5.15	46.57	41010.05
KLA Corp	331.48	3.45	442.44	250.20	1.00	20.16	46976.79
Kraft Heinz	38.07	0.05	44.87	32.73	3.56	54.86	46635.42
Kroger	46.44	0.04	62.78	40.18	1.44	25.05	33242.05
LasVegasSd	41.06	0.82	48.27	28.88	-	-32.13	31376.67
LibertyGbl	17.92	0.32	29.56	15.22	-	0.90	3079.63

Stock	Price	Day Chg	52 Week High	52 Week Low	Yld	P/E	MCap m
Lilly (E)	363.95	6.54	366.94	231.87	0.79	70.27	345817.25
Linde	310.85	1.92	346.50	262.47	1.15	50.18	153677.88
Lockheed	487.05	5.38	491.16	328.20	1.93	24.71	127643.12
Lowes	184.34	2.19	263.31	170.12	1.39	17.92	114419.94
Lyondell	83.36	-0.30	117.22	71.46	4.51	5.87	27144.05
Marathon Ptl	119.50	1.85	120.98	59.55	1.64	69.90	56004.97
Marsh&M	162.01	1.64	183.14	142.80	1.40	29.44	80358.5
MasterCard	318.87	0.50	399.92	276.87	0.60	43.01	304134.41
McDonald's	275.41	0.79	278.06	217.68	1.61	32.41	202623.89
McKesson	397.53	0.88	401.78	215.27	0.38	53.20	56367.16
Medtronic	85.17	0.52	124.63	79.44	2.48	27.46	113199.33
Merck	99.29	0.09	101.50	71.50	2.25	24.14	251739.47
Meta	196.64	0.99	384.33	169.00	-	15.41	450997.53
Metlife	73.53	-0.09	75.52	57.05	2.19	11.88	57688.17
Microsoft	223.39	2.00	349.67	213.43	0.87	28.11	1665254.76
Mnstr Bvrg	98.03	0.09	100.47	71.78	-	45.07	51650.59
MondelezInt	63.82	0.60	69.47	54.72	1.76	24.80	87146.95
Monsanto	9.99	-	10.01	9.66	-	54.11	249.75
MorganStly	85.39	0.54	109.73	72.05	2.08	12.56	146599.8
Netflix	254.18	-6.61	700.99	162.71	-	26.72	113115.31
NextEraE	76.93	-1.87	92.91	67.22	1.79	119.41	152872.5
Nike	93.54	-2.25	179.10	82.22	1.06	28.89	118202.07
NorfolkS	234.33	0.53	296.87	203.65	1.50	22.86	54250.73
Northrop	532.22	9.45	556.27	345.90	0.98	14.44	81915.13
NXP	153.72	2.66	239.91	132.08	1.24	26.75	39834.21
Occid Pet	75.75	2.48	77.13	26.05	0.04	43.45	70992.22
Oracle	75.63	-0.37	106.34	60.78	1.45	33.79	203911.06
Pepsico	178.97	0.19	183.58	153.37	2.01	38.52	246568.62
Perrigo	39.00	-0.26	47.95	31.32	2.08	-47.02	5250.1
Pfizer	46.83	-0.40	61.71	41.45	2.82	14.08	262798.37
Phillips66	105.28	1.80	111.28	67.08	2.91	41.88	50642.65
PhilMorris	90.83	0.85	112.48	82.85	4.57	18.41	140804.88
PNCFin	156.05	-0.45	214.50	143.52	2.60	14.52	62937.94
PPG Inds	114.68	-0.79	172.78	107.06	1.75	29.73	26951.77
ProctGmbl	135.32	0.88	165.35	122.18	2.24	27.17	322805.79
Prudntl	102.58	-2.48	124.22	85.46	3.80	6.21	37749.44
PublStor	272.13	-5.61	421.76	270.86	2.49	32.58	47795.6
Qualcomm	106.93	0.24	192.68	101.93	2.13	14.47	119868.53
Raytheon	95.68	0.46	106.02	79.00	1.77	43.82	140655.56
Regen Pharm	744.89	4.68	764.59	538.01	-	12.23	79765.64
S&P Global	315.19	-1.21	484.21	279.32	0.83	29.77	102688.9
Salesforce	141.22	1.45	311.75	136.04	-	111.68	141215
Schlmbrg	54.72	1.62	54.99	27.65	0.77	48.98	77585.53
Sempra Energy	149.86	-4.97	176.47	119.56	2.48	44.16	47106
Shrwin-Will	217.40	1.17	354.15	195.24	0.86	36.80	56337.78
SimonProp	115.31	-0.26	171.12	86.02	5.25	19.92	37700.12
SouthCpr	52.82	-0.88	79.32	42.42	5.13	14.22	40833.21
Starbucks	89.77	-2.09	117.47	68.39	1.73	28.67	103002.1
StateSt	75.61	0.16	103.76	58.62	2.44	12.43	27744.34
Stryker	210.42	-0.57	279.28	188.84	1.04	47.72	79627.33
Sychrony Fin	35.49	0.47	51.09	27.22	2.16	5.52	15989.72
T-MobileUS	149.40	0.57	154.38	101.51	-	73.25	185876.63
Target	158.20	-1.43	268.98	137.16	1.71	13.13	72813.64
TE Connect	116.15	-0.53	166.44	104.76	1.44	18.65	37149.3
Tesla Mtrs	198.37	-9.10	413.29	196.66	-	47.83	626403.35
TexasInstr	163.48	0.83	199.90	144.46	2.18	23.38	148366.19
TheTrvelers	183.94	0.88	187.98	145.40	1.67	13.40	43105.88
ThrmoFshr	493.96	-1.59	668.94	475.77	0.18	29.99	193528.08
TJX Cos	70.43	-0.76	76.94	53.69	1.26	30.53	81772.96
Truist Financial Corp	43.59	-0.08	66.10	40.01	3.61	11.52	57827.11
Twitter	53.70	0.35	60.16	31.30	-	-224.30	41093.72
UnionPac	195.65	-1.05	278.94	183.70	2.00	21.36	120285.78
UPS	167.43	1.74	233.72	154.87	2.06	13.48	122193.92
USBancorp	43.03	0.20	61.23	38.39	3.46	9.97	63938.7
UtdHlthcre	543.43	5.26	558.10	436.00	0.87	35.51	507756.21
ValeroEngy	132.13	3.41	146.81	65.13	2.51	68.77	50937.26
Verizon	37.12	-0.13	55.51	34.55	5.78	8.24	155876.22
VertexPharm	300.08	-8.74	318.38	179.96	-	39.35	77027.97
VF Cp	27.96	-0.30	78.91	26.46	5.96	10.83	10862.36
Visa Inc	197.53	0.55	235.85	174.60	0.57	38.64	322964.44
Walgreen	37.98	0.91	53.46	30.39	4.27	6.50	32845.6
WalMartSto	141.63	0.66	160.77	117.27	1.33	34.04	384417.52
Walt Disney	99.16	-0.42	179.25	90.23	-	68.12	180776.78
Waste Manage.	156.70	0.93	175.98	138.58	1.24	43.16	64321.76
WellsFargo	47.07	0.33	60.30	36.54	1.39	11.24	179340.75
Williams Cos	33.87	0.33	37.97	24.86	4.10	32.27	41262.12
Workday	132.81	0.18	307.81	128.72	-	1295.34	26693.81
Yum!Brnds	122.84	1.06	139.85	103.97	1.38	27.86	34953.2
Zoetis	137.27	3.60	249.27	124.15	0.62	37.98	63977.7
Zoom	79.09	1.63	275.64	70.44	-	20.57	19848.37
Venezuela (VEF)							
Bco de Vnzla	1.16	0.01	2.14	0.32	139.33	-	482.73
Bco Provncl	2.82	-0.03	3.30	1.70	-	0.00	120.66

Closing prices and highs & lows are in traded currency (with variations for that country indicated by stock), market capitalisation is in USD. Highs & lows are based on intraday trading over a rolling 52 week period.
♦ ex-dividend
■ ex-capital redistribution
price at time of suspension

FT 500: TOP 20

	Close price	Prev price	Day change	Day change %	Week change	Week change %	Month change %
SandsCh	17.04	16.90	0.14	0.83	3.92	29.9	1.19
ChinaPcIns	15.02	14.80	0.22	1.49	2.74	22.3	-7.64
Tencent	245.40	238.60	6.80	2.85	44.60	22.2	-22.29
HK Exc&Clr	259.60	246.20	13.40	5.44	44.80	20.9	-22.26
Panasonic	1231.50	1258.50	-27.00	-2.15	178.50	17.0	8.13
AIA	67.70	65.55	2.15	3.28	9.75	16.8	-10.21
Naspers N	2210.00	2180.00	30.00	1.38	309.90	16.3	-10.65
JapanTob	2796.00	2795.00	1.00	0.04	366.50	15.1	18.25
Citic Secs	13.72	13.12	0.60	4.57	1.78	14.9	-15.62
Boeing	163.43	160.01	3.42	2.14	20.92	14.7	0.54
Anglo American	2978.00	2951.50	26.50	0.90	369.50	14.2	4.64
ChinaMBank	30.30	29.35	0.95	3.24	3.65	13.7	-25.09
PingAnIns	36.80	34.65	2.15	6.20	4.35	13.4	-15.61
SouthCpr	52.82	53.70	-0.88	-1.64	5.85	12.4	9.19
Prudential	906.60	913.60	-7.00	-0.77	95.80	11.8	-5.83
ING	11.11	10.94	0.17	1.57	1.16	11.6	21.87
RioTinto	5044.00	5030.00	14.00	0.28	507.00	11.2	2.70
CSR	2.71	2.65	0.06	2.26	0.27	11.1	-5.90
Kweichow	1507.11	1516.57	-9.46	-0.62	147.11	10.8	-20.47
Sony	10845.00	10700.00	145.00	1.36	1056.00	10.8	-9.46

Based on the FT Global 500 companies in local currency

FT 500: BOTTOM 20

	Close price	Prev price	Day change	Day change %	Week change	Week change %	Month change %
Fidelity NIS	60.26	60.17	0.09	0.15	-22.73	-27.4	-39.80
Cognizant	52.75	52.63	0.12	0.23	-9.50	-15.3	-22.93
Intuit	363.82	361.19	2.63	0.73	-63.68	-14.9	-21.35
Workday	132.81	132.63	0.18	0.13	-23.02	-14.8	-20.86
Ecolab	136.29	134.75	1.54	1.14	-20.78	-13.2	-20.59
Salesforce	141.22	139.77	1.45	1.03	-21.38	-13.1	-23.05
Netflix	254.18	260.79	-6.61	-2.53	-37.70	-12.9	5.66
Tesla Mtrs	198.37	207.47	-9.10	-4.39	-29.17	-12.8	-33.23
Amazon	89.34	90.98	-1.64	-1.80	-13.10	-12.8	-35.23
Nutrien	98.08	98.79	-0.71	-0.72	-14.01	-12.5	-15.53
PublStor	272.13	277.73	-5.61	-2.02	-37.63	-12.1	-22.43
Petrobras	31.55	31.71	-0.16	-0.50	-4.23	-11.8	-10.82
DominRes	61.73	67.13	-5.40	-8.04	-8.24	-11.8	-27.66
BT	115.20	114.10	1.10	0.96	-14.60	-11.2	-26.80
Apple	136.41	138.38	-1.97	-1.42	-16.93	-11.0	-20.35
Autodesk	194.69	193.69	1.00	0.52	-19.61	-9.2	-12.42
Qualcomm	106.93	106.69	0.24	0.22	-10.73	-9.1	-27.44
Zoetis	137.27	133.67	3.60	2.69	-13.51	-9.0	-18.84
Adobe	291.65	285.75	5.90	2.06	-26.85	-8.4	-31.26
Stryker	210.42	210.98	-0.57	-0.27	-18.83	-8.2	-3.50

Based on the FT Global 500 companies in local currency

BONDS: HIGH YIELD & EMERGING MARKET

Nov 07	Red date	Coupon	Ratings S*	Ratings M*	Ratings F*	Bid price	Bid yield	Day's chge yield	Mth's chge yield	Spread vs US
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	25.98
Emerging US$										
Peru	03/19	7.13	BBB+	A3	BBB+	104.40	2.60	-	-	0.34

BONDS: GLOBAL INVESTMENT GRADE

Nov 07	Red date	Coupon	Ratings S*	Ratings M*	Ratings F*	Bid price	Bid yield	Day's chge yield	Mth's chge yield	Spread vs US
US$										
FleetBoston Financial Corp.	01/28	6.88	BBB+	Baa1	A-	129.00	2.54	-0.01	-0.05	-
The Goldman Sachs Group, Inc.	02/28	5.00	BBB+	A3	A	117.21	2.47	0.00	0.32	-
NationsBank Corp.	03/28	6.80	BBB+	Baa1	A-	127.69	2.72	-0.01	0.06	-
GTE LLC	04/28	6.94	BBB+	Baa2	A-	128.27	2.80	0.00	-0.11	-
United Utilities PLC	08/28	6.88	BBB	Baa1	A-	130.43	2.62	-0.07	-0.22	-
Barclays Bank plc	01/29	4.50	A	A1	A+	96.46	5.02	0.00	0.02	-

INTEREST RATES: OFFICIAL

Nov 07	Rate	Current	Since	Last
US	Fed Funds	3.00-3.25	21-09-2022	2.25-2.5
US	Prime	6.25	22-09-2022	5.50
US	Discount	3.25	22-09-2022	2.50
Euro	Repo	0.53	01-11-2022	0.374
UK	Repo	3.00	02-11-2022	2.25
Japan	O'night Call	0.00-0.10	01-02-2016	0.00
Switzerland	Libor Target	-1.25-0.25	15-01-2015	-0.75–0.25

BOND INDICES

	Index	Day's change	Month's change	Year change	Return 1 month	Return 1 year
Markit IBoxx						
ABF Pan-Asia unhedged	186.93	0.24	-0.14	-14.95	-1.37	-14.16
Corporates(£)	316.32	-0.24	0.28	-20.08	3.55	-20.51
Corporates(€)	204.68	0.02	-0.24	-15.26	-1.50	-15.81
Eurozone Sov(€)	210.58	-0.32	-0.85	-17.23	-2.52	-18.03
Gilts(£)	272.39	-0.67	-0.54	-24.22	3.08	-24.20

INTEREST RATES: MARKET

COMMODITIES

BONDS: INDEX-LINKED

BONDS: TEN YEAR GOVT SPREADS

VOLATILITY INDICES

BONDS: BENCHMARK GOVERNMENT

GILTS: UK CASH MARKET

GILTS: UK FTSE ACTUARIES INDICES

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

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

ARTS

Discreet chronicler of bourgeois life

On show in New York, Alex Katz's paintings quietly celebrate his native city – and the enduring presence of his wife. By Ariella Budick

Clockwise, from above: Alex Katz's 'The Cocktail Party' (1965); 'Blue Umbrella 2' (1972), one of many portraits of his wife, Ada; 'Yellow Tree 1' (2020) — Alex Katz/VAGA at ARS, NY and DACS, London

Alex Katz is a consummate painter of modern life. Like the Impressionists who earned that title before him, he has probed pleasures both urban and urbane, populating his canvases with people who enjoy life's profound superficialities.

Alex Katz: Gathering, the Guggenheim's retrospective of a painter who remains busy and sharp at 95, turns out to be not just scintillating, but consoling too. When all around is vitriol, soul-baring, hyperbole and rage, Katz's muted emotional palette, ranging from quiet optimism to quiet melancholy, comes as an essential balm.

Katz rejected hysteria a long time ago. He parted ways with most of the artists of his generation back in the late 1940s. When they were hurling themselves into abstraction, picking fights, drinking, self-destructing and peacocking, he clung to the power of discretion. When his colleagues agitated and critiqued, Katz just watched and painted, savouring his city's bourgeois splendour.

He has always been a New Yorker through and through, despite his habit of absconding to Maine every summer. His wife, Ada, became the avatar of his art: chic, self-contained, impeccably turned out, a creature of Manhattan even when she deigned to leave it.

Frank O'Hara, the New Yorkiest of the New York poets, wrote: "I can't even enjoy a blade of grass unless I know there's a subway handy, or a record store, or some other sign that people do not totally *regret* life."

Katz, who painted O'Hara, admired his friend's openness to the urban whirl and his lack of inhibition, and praised him in terms that expressed a certain sadness at his own restraint. "I don't have the courage to do what Frank did," he once said. "He's the poet of my time."

Katz's bravery was more understated but no less powerful. He avoided Abstract Expressionism, Pop and Minimalism when each in turn had a monopoly on the art world's attention. Instead, he followed his own ways of seeing, imbuing familiar urban oddments with a distinctive glamour. He was always the grown-up in the gallery.

"The Cocktail Party" is a time-capsule of a 1960s soirée among the creative set. Dapper men in thick-rimmed glasses mingle with neatly coiffed women and you can practically smell the cigarette smoke and hear the ice clink in crystal tumblers. Guests murmur and smile in an atmosphere dense with politeness, while the metropolis swaggers beyond the big sash windows. Across the upper third of the painting, above the celebrants' heads, neon signs hum and office windows blaze like a grid of stars.

> Warmth radiates from Ada's core, penetrating her cool crust and cycling through contentment, ageing and mortality

Katz based the picture on a get-together in his loft near Madison Square Park. It's an update of "Masked Ball at the Opera" (1873), Manet's paean to Paris in which dandies and coquettes join in cosmopolitan self-satisfaction. Katz invited writers, artists and musicians, hoping to record what he called "gestures of his time". If this painting were all you knew of the New York art world in 1965, you would never suspect the scenes of druggy indolence and rebel chaos bubbling nearby. (Andy Warhol's Factory was less than a mile away.)

Katz grew up in the quasi-suburban enclave of St Albans, Queens, to Russian-born parents who cultivated a bohemian atmosphere. His mother Sima acted in the Yiddish theatre on the Lower East Side before settling down with her husband and two boys. "She took piano lessons, speech lessons, read a lot, and she said she would have been a great star if she could sing and dance," he recalled.

He captured her alluring vitality in 1946, just after she returned from a stint as a translator in postwar Europe. (She spoke six languages.) Dressed in red, chin resting in her cupped palms, she gazes at her son with a shrewd half-smile. She's a warmly human presence against a backdrop of nested rectangles, a refuge of tenderness in an implacably orthogonal habitat. He was 19 at the time, commuting from Queens to Cooper Union and sketching subway riders as a daily discipline – and out of determination to make the city his own.

Katz met Ada Del Moro of the Bronx in 1957, and that's when his art snapped into focus. A research biologist at Sloan Kettering, she had the same poise, smarts and allure that come through in the early portrait of his mother. They married and in hundreds of paintings over more than six decades, he transformed his wife from an elegant mortal into a gleaming object of awe.

"Ada in a Black Sweater" (1957) introduces us to a pale woman with pitch dark hair, eyes and brows. Wrapped in an inky cardigan, she folds her arms across her chest in self-protection. Yet she's not forbidding; her full lipsticked mouth offers a slash of colour that alludes to connection and conversation.

She has served less as muse than as alter ego and soul mate; as portrait subject she remains unrevealed. Not one of his pictures plumbs her psychological state or shows her unclothed or unguarded. Year after year, her expression never ranges far from cool nonchalance. And yet his treatment of her is constantly refreshing, mixing elusiveness with familiarity.

"Ours was like an arranged marriage, because our families were so similar," Katz told The New Yorker. "We're Jewish off the boat, and they're Italian off the boat. On Sunday afternoons, both families listened to opera on the radio. No one ever voted for a Republican. But Ada is only liberal in politics – aside from that she's a snob. Ada never makes a social mistake, but I make them all the time."

Ada lent herself to paintings of manners and social observation, as well as compositions that border on abstraction. In some works, she's a creature of flat planes and bold lines, set among thickly painted panels. In others, we see her ensconced in comfort and privilege, enjoying the fact of being her. The deliciously buttery "4 PM" (1959) finds her perched on the bed in a high-ceilinged room suffused in autumnal light. When we see her outdoors, the surroundings are never too wild. Beach and garden allow her to retain the regal casualness of a fashionable lady in her second home.

Katz periodically detours into hushed, bright landscapes or urban nocturnes, all shadows and points of light. But he keeps returning to Ada and through her, offering an opaque but tender chronicle of a life together. Warmth radiates from her core, penetrating her cool crust and cycling through contentment, ageing and mortality. "Departure" (2016) depicts six nearly identical versions of Ada, in a sleeveless top and wide-brimmed straw hat, sauntering upstage like a chorus line, away from the audience and into a borderless expanse of green.

The magic hasn't ended. Just last year, Katz painted "Ada's Back 2", which is titled like the sequel to a sequel and has a valedictory feel. We see her from behind, white hair falling straight like a stand of silver birches on the dark slope of her shoulders. Portrait has merged with landscape: her presence and his gaze have endured together long enough to become intertwined forces of nature.

To February 20, guggenheim.org

Katz's 'Round Hill' (1977) — Alex Katz/VAGA at ARS, NY and DACS, London

FT FUTURE FORUM

FUTURE FORUM WELCOMES CLIFFORD CHANCE TO ITS SEVENTH YEAR OF MEMBERSHIP

The FT Future Forum is an exclusive and authoritative digital community for business leaders to share ideas with like-minded organisations from around the world, build relationships, and develop solutions to future challenges.

To find out how your organisation can get involved, visit forums.ft.com/future-forum

Showcase leaves the audience smiling

DANCE

Northern Ballet: Made in Leeds
Linbury Theatre, Royal Opera House, London
★★★☆☆

Louise Levene

Northern Ballet usually majors in popular full-evening narratives – *Jane Eyre*, *The Great Gatsby*, *Merlin* – but began its new season with *Made in Leeds*, a trio of one-act commissions which are a parting gift from David Nixon, artistic director since 2001, to his successor Federico Bonelli. I doubt any of them will be banked into the permanent repertoire, but all three offered an attractive showcase – and welcome fresh meat – for this talented and versatile company.

South Africa-born, Cape Town-trained Mthuthuzeli November joined Cassa Pancho's Ballet Black in 2015 and has made a string of well-regarded miniatures for that company. *Wailers*, which had its London premiere at the Linbury Theatre, gives him a chance to work with a slightly larger ensemble of 12 which he handles with skill. The 25-minute piece is set to a soundtrack composed by November and is dressed in piece as a contemplation of female resilience in the face of hardship: heartfelt, well crafted, ever so slightly dull.

Stina Quagebeur, first artist and associate choreographer with English National Ballet, has a rare gift for infusing dance with drama. In *Nostalgia* she explores the pleasure and pain to be found in contemplating the recent past to a (taped) score by Jeremy Birchall. A couple in crimson (Minju Kang and Jonathan Hanks) enjoy a fractious exchange until their body doubles (Rachael Gillespie and Gavin McCaig) appear upstage: happy, playful, blissfully unaware of the future. The original couple mimic their own memories and briefly recapture past happiness. It's a simple but hugely effective device. Alastair West's cleverly zoned-down spots highlight the fleeting overlap between past and present.

Dickson Mbi's *Ma Vie Live* expands on a short lockdown film project danced to a soundtrack of maniacal laughter and minimalist strings by Roger Goula, embellished by the grunts, whoops and slaps of the cast. The confused but intriguing piece serves as a footnote to the company's full-length *Casanova* by Kenneth Tindall, focusing on the anti-hero's vexed relationship with the Catholic church.

When we first encounter our hero (the raffish Matthew Topliss), he is beset by hooded, black-clad figures who bully him from place to place in a series of sinister ensembles as if the "invisible" *kuroko* stage managers of kabuki had gone rogue and begun directing the drama. Their leader is played with demented glee by hip-hop guest Jonadette Carpio.

The scene changes and the ladies and gentlemen of Venice, waistcoated and paniered by Northern Ballet's costume department, engage in courtly foreplay under the sinister direction of Carpio, her role as puppet master reinforced by Tim Grabham's projections of huge,

CLIFFORD
CHANCE

quasi-Grecian robes and tunics by Yann Seabra. The women are *en pointe* and Sarah Chun's machine-stitch *pas de bourrée* is tested to destruction, but elsewhere the ballet vocabulary is supplemented by earthier, more percussive footwork led by Aerys Merill as a tribal matriarch. November conceived the

Minju Kang in Dickson Mbi's 'Ma Vie'

controlling hands. Mbi deploys his cast with assurance, dodging baroque bow-and-scrape clichés. The clap-along coda in which cast members showed off their moves felt out of place but left the audience smiling.

roh.org.uk

FT BIG READ. US POLITICS

The party is in a strong position ahead of today's vote despite its embrace of election denialism and other radical views. This fringe appeal illustrates just how fractured the political landscape has become.
By James Politi

Republicans double down on Trump bets

Stepping out of their polling station last week in McDonough, a city of 29,000 in the southern suburbs of Atlanta, conservative voters explained why they had cast early ballots for Herschel Walker and his Trump-backed, scandal-plagued and sometimes messianic bid for a seat in the US Senate.

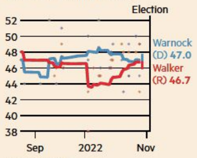
"[We need] a shift in power," said Scott Roman, a 53-year-old podiatrist still wearing his blue scrubs. "Everyone's got skeletons, so I'd rather have him as a Republican, versus a Democrat."

Charles Schubert, a 71-year-old financial adviser, said Walker was not "perfect" but would get back to the "pro-USA, pro-America" policies of the Trump years, with "low inflation, full employment and energy independence".

The former American football star and self-professed "warrior for God" has faced allegations of domestic violence, revelations that he pressured women to have abortions, disclosures of previously unknown children and a public rebuke from one of his sons.

Yet Walker remains in contention to

Polls suggest Georgia's Senate race is neck and neck
Lines represent weighted averages, points represent polls (%)



Latest poll Nov 02
Source: FT poll average based on data from RealClearPolitics

unseat Raphael Warnock, the incumbent Democrat and pastor at Ebenezer Baptist Church in Atlanta, where the late civil rights leader Martin Luther King Jr used to preach.

For Mason, a 23-year-old financial adviser who declined to offer his last name, it was a "tough decision" to support Walker, but he thought a divided government would be better for business. "When nothing can get done, the economy grows," he said.

Just two years after Joe Biden was elected to the White House and Democrats won control of Congress, polls show there is a strong possibility that the Republican party will make a decisive comeback in today's midterm elections.

Republicans are expected win back the House of Representatives, while control of the Senate is in the balance and will come down to the outcome of a handful of key races, including in Pennsylvania, Nevada and Georgia.

"The Senate is still a toss-up, but there are far more avenues for Republicans to win a majority than for Democrats," says Jessica Taylor of the non-partisan Cook Political Report in Washington.

While Democrats are still hoping to mobilise their base of voters to avoid sweeping defeats, even a partial victory for Republicans — probably fuelled by concerns about high prices, crime and immigration — would carry big implications for American politics heading into the next presidential election in 2024.

It would show the extent to which the Republican party remains an acceptable political alternative in the eyes of a sufficiently large group of voters — even though it has lurched further towards Trumpism during the Biden years.

Within its ranks, the tolerance for election denialism, the disdain for federal institutions such as the FBI and the Internal Revenue Service, the relentless demonisation of any liberal politician and the wariness of America's tradi-

Republican Herschel Walker, above left, is facing off against incumbent Democratic senator Raphael Warnock. Vivian and Raesa Waldon at a polling station in McDonough, Georgia, below; workers protest against Walker in Atlanta, bottom right
FT montage/Shutterstock/Getty; James Politi/FT; Erik S Lesser/EPA-EFE/Shutterstock

'There was a period where it seemed like Trump was an exception to the rule, and now it's pure

the upper chamber of Congress, but because it is a fierce and expensive fight to gain the edge in one of America's newest — and most prominent — political battlegrounds. (Under Georgia rules, if neither candidate wins an outright majority this week, there will be a run-off contest in early December.)

In 2020, for the first time in almost three decades, a Democrat carried Georgia in a presidential election when the party captured two Senate seats, including the one Walker is trying to win back with a campaign that is built around culture war issues.

"I'll help make the streets safer for you, I'll help secure that border, I'll lower your taxes, I'll get men out of women's sports, I'll keep your religious freedom," Walker told supporters in the back lot of a Ford dealership in Augusta last week, with his bright red campaign bus as a backdrop. "And I'll make sure Jesus goes to Washington with me."

Washington deadlock

The White House and senior Democrats have known for months that they would be facing a very difficult midterm cycle as a burst in inflation has strained American household finances, leaving the current leadership possibly in line to suffer the same fate as Bill Clinton and Barack Obama, who lost their House

the economic recovery and the war in Ukraine.

They have also turned to highlighting what they describe as Republican extremism, on everything ranging from the party's push for strict abortion restrictions and bans in the wake of the Supreme Court ruling overturning the Roe vs Wade precedent in June, to its continued embrace of Trump's "big lie" that the 2020 election was stolen.

"We can't ignore the impact this is having on our country. It's damaging, it's corrosive, and it's destructive," Biden warned in a speech from Union Station in Washington in one of his final pitches to voters.

The reality that Democrats would be squaring off in this year's midterms against a mostly unreconstructed Republican party has long been apparent: many senior lawmakers downplayed Trump's role in the January 6 attack on the US Capitol and then defended the former president even as he faced a criminal probe for hoarding sensitive documents related to national security at his Mar-a-Lago estate.

But it became much more vivid after so many of Trump's preferred candidates for office prevailed in primary contests across the country, setting them up as their party's standard bearers.

These have included Kari Lake, the former television anchor turned Republican candidate from Arizona, who still refuses to say whether she will concede defeat in her own race if she loses, as well as Doug Mastriano, a former military officer now Republican candidate for governor in Pennsylvania, who was at the rally on the National Mall with Trump that preceded the riot.

Along with Walker in Georgia, the party's controversial candidates for the Senate include political novices Mehmet Oz, the celebrity physician running in Pennsylvania, and JD Vance, the venture capitalist and author competing in Ohio, as well as Blake Masters in Arizona

cal science at the University of Georgia, puts it: "It looks like a growing number of Republicans who were on the fence are deciding to join most Republicans, who operate on the belief that having control of the Senate is more important than anything in Herschel Walker's background or character."

The importance of turnout

Some Democrats remain confident that they will do far better than expected in the midterms. "All the evidence is that voting is going to be at record levels for a midterm, matching or exceeding 2018. And yes, Republicans are turning out in big numbers, but that was also true in 2018 and 2020, and Democrats still won," says Mike Lux, a Democratic political consultant. "There are simply more Democratic voters than Republican voters and when everyone votes in big numbers, we are likely to win."

In Georgia, a victory for Walker would still count as a come-from-behind upset. The state, for decades a bastion of southern conservatism, has moved towards the left over the past decade as the outskirts of Atlanta have grown in population, bringing in more diverse, well-educated voters who typically vote for Democrats. At the same time, local Democrats have built up an imposing turnout machine to galvanise their own supporters in the most populous counties where elections are won and lost.

Stacey Abrams, the Democratic candidate for governor who is trailing behind Republican incumbent Brian Kemp, brushed off concerns that energy among Democrats would be subdued this year. The one wild card was younger voters, whose turnout in early voting was lagging. "Young voters are always going to be the slowest to turn out. But we know that when they do show up, they change the outcomes," Abrams said during a campaign stop at a shopping centre in McDonough.

Sarah Riggs Amico, a logistics executive in Cobb County, north of Atlanta,

'Young voters are always going to be the slowest to turn out. But we know that when they do show up, they change the outcomes'

tor for suburban women, even though some polls show they may be shifting back to Republicans amid economic worries.

"I've got to say women are up in arms about having old white GOP men take away their bodily autonomy," she says. "I think you will see a battle for who shows up on election day," she adds.

In McDonough, Democratic voters bristled at Walker and were determined to re-elect their senator, who has far better favourability ratings as measured by polls.

"Warnock did what he said he was going to do once he got to the Senate. I'm not sure about Herschel Walker. He's so all over the place, you know, with the abortion and domestic violence and so forth, I think it's a bad look for the Senate and for the United States," says Scott Jervis, a 61-year-old retired American football referee.

But Raesa Waldon, a 33-year-old social media consultant at the polls with her mother Vivian, says it is not surprising to see a divisive backlash brewing from the right against Democrats. "We're going to keep enduring these types of politics, these types of talking points, these types of opinions, for as long as we're living," she says.

One reason Republican leaders across the US have grown more confident about their chances is that polls have shown the economy and high inflation rising to the top of voters concerns, eclipsing worries about democracy or reproductive rights. Their response has been to close ranks behind key candidates in vulnerable positions — including in Georgia — with late endorsements and fundraising.

Mitch McConnell, the Senate minority leader, has continued to funnel cash, including $23mn in October, to Walker's campaign through his Senate leadership fund. "We're going to take it all the way to the end," McConnell said last month when questioned about the Georgia race. Rick Allen, the Republican House tional alliances have only grown — as has the willingness to allow for personal hypocrisy and fringe candidates like Walker.

"Donald Trump eliminated any pretence that character counts, and that used to be at the core of how Republicans pitched themselves," says Sarah Longwell, a Republican strategist who runs focus groups with swing voters and has bristled at the former president's stranglehold on the party.

"There was a period where it seemed like Trump was an exception to the rule, and now it's pure nihilism, nothing matters," she says.

The Senate race in Georgia is a particularly important contest, not just because it could determine control of

nihilism, nothing matters'

majorities in 1994 and 2010.

Such a result would grind Biden's legislative ambitions to a halt while Republicans are likely to pursue a series of investigations aimed at all levels of his administration, and possibly even his son Hunter. Biden will have much less flexibility to respond to any big new economic and foreign policy shock should one occur and may face hurdles in delivering funding for Ukraine. He will also probably face a high-stakes clash over raising the US debt ceiling to avoid a default.

Hampered by Biden's low approval ratings, Democrats have tried to make the case that their policies have been largely successful in light of the huge challenges they faced with Covid,

and Don Bolduc in New Hampshire. But while the Trumpian capture of the party's Senate nominees was considered a weakness for Republicans just a few weeks ago, it is seen as less of a risk now.

"If Republicans were a bit more 'generic', we'd be arguing between a red wave versus a red tsunami," Beacon Policy Advisors, a consultancy in Washington, told clients this week.

"Republicans are underperforming the fundamentals. But the fundamentals are so good, it doesn't matter in the House. The last couple of weeks seems like the underperformance doesn't matter as much in the Senate as well," they added.

Walker is benefiting from this shift.

As Charles Bullock, a professor of politi-

who has run for office as a Democrat in Georgia, says the gutting of the right to an abortion is still a big motivating fac-

member representing Augusta, introduced Walker at the bus tour stop in his district last week. "I feel an undercurrent out there," Allen said. "America's waking up, and it's about time."

Longwell warns that a Republican capture of Congress, and particularly the Senate, would further embolden Trump to run for a second term as president.

"It would tell us that you do not suffer a penalty for being a party that attempted a coup — there's no penalty for election deniers," she says. "To the extent that Trump handpicked Walker and handpicked Oz, it puts him in a springboard position for the Republican primary in 2024."

Additional reporting by Caitlin Gilbert in New York

The FT View

FINANCIAL TIMES
'Without fear and without favour'

ft.com/opinion

America's chip controls on China will carry a heavy cost

Washington should provide clarity over semiconductor export measures

It was less a decoupling and more a rupture. At a stroke last month, Joe Biden did potentially more to sever trade ties between the US and China than Donald Trump ever managed, despite the ex-president's bombast. Controls barring US companies from exporting critical semiconductor manufacturing tools to China mark a further junking of the theory that the US could tame Beijing's geopolitical ambitions through closer trade ties. They are a significant gamble.

The measures were unveiled days before China's party congress, when attention was focused on the coronation of Xi Jinping as essentially ruler-for-life of an increasingly authoritarian Fortress China. No matter the intention, it is hard to see how Beijing would view the controls as anything but a provocation, even if Washington is trying to play down fears of a tech cold war.

The White House has framed the measures as an attempt to curb Chinese military use of high-end chips. It is understandable that the US wants to blunt the military ambitions of an increasingly assertive and nationalistic rival. Russia's invasion of Ukraine, and the economic woes that rippled across the world as a result of soaring energy prices, have prompted a rethink over the wisdom of dependence on regimes that are potential adversaries. But the dual-use nature and ubiquity of chips in daily life — not for nothing are semiconductors dubbed the new oil — means the implications of this action run wider.

The sweeping controls extend not only to the export of US semiconductor chips but also to any advanced chips made with US equipment. They target "US persons", meaning not just citizens but green-card holders too. As a result, companies from Taiwan to South Korea to the Netherlands are now trying to quantify their exposure, let alone those in the US and China. More precision over the scope of the measures — particularly around US persons — is needed.

As they currently stand, such measures carry real risks. One is retaliation in kind by China, perhaps over rare metals vital to the modern technology-dependent economy. China processes 65 per cent of the world's lithium, for instance.

The US sanctions would be the least of the world's concerns if China ever decides to use force to reunify with Taiwan, which dominates global advanced semiconductor manufacturing. The US Navy chief has warned that China could invade the island state before 2024. Quite apart from the misery of war imposed on Taiwan, losing access to Taiwanese chips would affect the supply and price of everything from computers to cars. A Chinese invasion would also trigger a wave of sanctions that would, in turn, hit interconnected economies. This would be an order of magnitude bigger than disruption unleashed by the war in Ukraine. The hope must be that Russia's botched invasion, and the west's response, has given China pause for thought.

One risk is retaliation in kind by Beijing, perhaps over rare metals vital to the modern technology-dependent economy

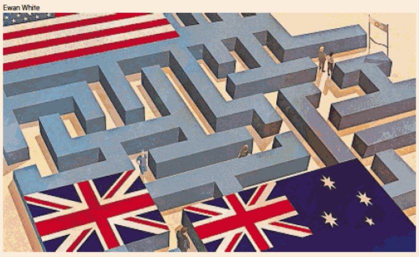
The US semiconductor measures come as other economies, and the business world, are trying to calibrate relations with China. Bankers, says the chair of UBS, are "all very pro-China". Olaf Scholz, Germany's chancellor, met Xi in Beijing on Friday in a sign of Germany's persistent dependence on China and its failure to learn from the mercantilism that has made it hard to shrug off Russia's bearhug.

The US, too, will need to be able to back up its "Made in America" bravado. It may have already spent billions of dollars in setting up domestic chip fabrication plants but analysts estimate it will require as much as $1.2tn in upfront costs, then another $125bn a year, to create fully localised supply chains at 2019 levels of production. The bill for decoupling China and America's economies will carry a heavy cost.

Opinion Society

What is an ethnic minority anyway?

Ewan White



Stephen Bush

Rishi Sunak confuses people. They struggle with how exactly to quantify his place in British and global history. Some, forgetting Benjamin Disraeli, dub him the UK's first "ethnic minority" prime minister. Others, who remember Disraeli, but don't want to break up the flow of their sentence, call him the UK's first "non-white" prime minister.

It's a funny definition, "non-white". Almost everyone is "non-white": with the exception of a very few, the lightest-skinned person you will meet will only be about as pale as, say, a tin of "natural calico" Dulux paint. What we really mean is that there is some quantifiable difference between the experience of "white" people, regardless of whether they are part of an ethnic and social minority, as Disraeli was, and that of "non-white" people.

The self-declared status of individuals ultimately proves secondary to how states identify them

Is this right? Not necessarily. In the UK, according to the government's race disparity audit, the ethnicity that currently has the worst outcomes in employment, life expectancy and access to basic goods and services are

to combat what Ulysses S Grant described as the "evil" of "the importation of Chinese women . . . few of whom are brought to our shores to pursue honorable or useful occupations". This was targeted at "visible" minorities. But by the 1920s, US immigration legislation extended to include purportedly "invisible" minorities from southern and eastern Europe.

"White Australia" policies, which the historian Andrew Rosenberg dubs "the world's most racist immigration policies" in *Undesirable Immigrants*, were broadly welcoming to European immigrants at the expense of non-European ones. Speaking against the measures in 1901, the politician King O'Malley warned that the bill's educational test "will not shut out the Indian 'toff' who becomes a human parasite preying upon the people of the country", or the "intellectual Afghan".

The rationale in both countries had a shared reasoning: in the US, Italian and Jewish immigrants were *excluded* in order to "keep America white" while in Australia, the same groups were included in order to maintain Australia's whiteness.

The reality, revealed most starkly by immigration policy but which is equally true in a workplace or a playground, is that your minority status is largely something that is done to you rather than how you feel yourself. Many Italian immigrants who found themselves barred from the US by the 1924 Act would have felt a shared "race" with the Americans who excluded them, and not much in common with the Jewish immigrants they were excluded alongside. (And indeed, vice versa.) But the self-declared ethnic status of these individuals ultimately proved secondary

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

Pension fund liquidity issue has not gone away

Apollo Global, the US-based private capital group, now owns $1.1bn in assets purchased from UK pension funds as opportunity struck in the wake of the liability-driven investments crisis (Report, November 3).

The need for cash to address rising variation margin calls forced pension funds to sell off assets at a discounted rate as the value of sterling plummeted. The question now is — is the shortage in liquidity resolved?

What the recent fire sale in pension fund assets has exposed is that the LDI strategies that have become so popular with the sector can lead to serious liquidity issues in periods of market volatility. So much so that these types of funds could be required to permanently increase liquidity buffers, pre-empting the anticipated recommendations by the G20's Financial Stability Board this week.

UK pension funds need to address the underlying issue here — that they haven't historically been equipped to predict and optimise their margin calls in spiky markets.

If they are committed to pursuing highly leveraged fixed-income investing strategies, they need to ensure they can identify liquidity requirements in a more timely fashion.

That way, they will be less likely to have to sell off their assets at a discounted price to raise capital at such short notice.

Joe Midmore
Chief Commercial Officer, OpenGamma
London EC4, UK

Follow the ad money to know Republican choices

While it certainly is pertinent to know that at least 22 Republican nominees for governor, secretary of state or attorney-general have denied the results of the 2020 election ("Biden pins midterm hopes on Capitol Hill speech", Report, November 2), the Financial Times does a disservice in failing to mention what may have contributed to this situation.

During the 2022 Republican primaries, in which Republicans faced off against each other to win the party's nomination for the general election, Democrats spent a significant amount of money supporting Republican candidates with the more extreme views.

In Pennsylvania alone, Democratic gubernatorial candidate Josh Shapiro spent $840,000 on TV advertisements boosting the stances of Republican candidate Doug Mastriano during the Republican primary.

This was more than double what Mastriano spent on his own ad buys. Similar stories occurred in Illinois, California, Colorado and Maryland, not all with success. FT readers should know that Democratic money may have affected the democratic process of nominating candidates who now pose the greatest "threats to democracy".

Robert Altieri
Garden City, NY, US

"I STILL GET NOSTALGIC FOR THE POINT OF NO RETURN"

Biden camp overstates the existential threat

I find your implication that Democratic party rule in the US is the only way to assure the survival of the country's democracy (FT View, November 5) patently offensive to the average American.

The Democratic party should be looking in the mirror when they make claims that there is a real and present threat to democracy in the US. Democracy is alive and well in our country, and we are about to see it in action.

The Republican party believes that it is offering a more attractive alternative vision for the country, and the people are about to speak. Strikes me that this is how democracy is supposed to work. So let's stop with these spurious insinuations about how a Republican majority will govern. If the Republicans win and fail to deliver on their promises, the Democrats will have another chance in 2024, and then maybe, just maybe, they will have learnt their lesson.

Anthony F Giobbi
Ridgefield, CT, US

If UK is relishing Pelosi's ouster, it must think again

Your opinion piece by Lauren Fedor (Person in the News, November 5) clearly outlined the political history of the person tipped to replace Nancy Pelosi as Speaker of the House, Republican Kevin McCarthy.

Those UK officials who recall Pelosi's hard stance on opposing British change to the Good Friday Agreement, via the "protocol" legislation, and her threat to prevent a UK-US trade deal, might be tempted to breathe a sigh of relief.

Don't relax yet. I'd happily wager that 19th-century archives and emigrant ship manifests are being officially examined right now to establish the Irish origin of McCarthy's grandparents, in preparation for March 17 next and the presentation of a "green jersey".

Liam Pluck
Enniskerry, County Wicklow, Ireland

I know which view on Beijing I subscribe to

In "China has thrown out a challenge to European policymakers" (Inside Business, November 3) Peggy Hollinger writes: "The old trade bargain that allowed European companies to access China's vast market while still retaining control of the most innovative technologies is changing . . . Germany's carmakers . . . have substantially stepped up research and development investment there."

Her opinion is at odds with what Guntram Wolff, your guest columnist, wrote on October 31 ("Scholz should send an explicit message on his visit to Beijing"). According to Wolff "China is increasingly making technology transfer a condition for market access". I think Hollinger's view is more up to date.

Tony SK Li
Hong Kong

OUTLOOK

AMERICA

Trump's future looms over the US

He's back.

Twenty-one months after flying off into the Florida sunset, Donald Trump has re-emerged on the scene, as if his recent absence was only a blip.

In the final days before the US midterm elections, the former president has been hightailing it from one political rally to the next, lobbing insults at any Republican who stands in his way and publicly

Axios, Trump is now looking at November 14 for a formal declaration — the post-midterms, pre-Thanksgiving news-vacuum sweet spot.

The calculus for this announcement is simple. Final polls indicate that a very good night for Republicans is likely today, with the GOP poised to take back one if not both chambers. Who better to ride on the party's success than Trump?

Twenty-one months, a Capitol uprising and countless legal troubles later, the former president appears all but unchanged. The question is: are the voters?

When Trump left the White House nearly two years ago, he had been banned from Twitter, his allies were under siege and his party's leadership was anxious to be done with him. Now, a year and a half later, the world may once again have tipped back in his favour.

access to basic goods and services, are those from a Gypsy Roma or Traveller background: a group that we would, for the most part, class as "white".

The reason why this matters is that how a state defines the ethnicity (or lack thereof) of its people is intimately linked to its ability to provide adequate services and to identify its own shortcomings. In Canada, the state created the term "visible minority": those the state defines as "visible" minorities can benefit from affirmative action policies, alongside indigenous Canadians, women and people with disabilities. Anyone who falls outside those groups can't.

Part of the problem is obvious: who defines what a "visible" minority is or isn't? A Jewish-Canadian may or may not be a "visible" minority for the purposes of the Canadian government, while being all too "visible" as far as an anti-Semitic employer is concerned.

The long and disreputable history of immigration policy shows us that what states and people class as "visible" or "non-white" is continually in flux. One of the first bits of border control legislation in the US, in 1875, was designed

viduals ultimately proved secondary to how states chose to identify them.

The action of past governments matters in the present. You probably owe at least some of your successes or failures to what happened to your parents and indeed your grandparents. In assessing current outcomes, we are almost certainly missing social problems if we ignore how governments acted in the recent past.

So how should states measure diversity and difference? This is one area where the UK has roughly the right approach: instead of dividing people into "visible" minorities or not, the essence of UK equalities law is that "protected characteristics" apply to everyone. It is illegal to discriminate against these, whether based on age with a worker in their twenties or sixties, or based on race against someone who is "white" or "non-white". Equally importantly, the law allows measures like affirmative action and recruitment to be flexible rather than stuck with a 1920s, 1970s or even 2000s conception of who is being held back.

stephen.bush@ft.com

over the US midterms

by Courtney Weaver

who stands in his way and publicly speculating about making another bid for the White House, for old times' sake.

Top Republicans urged Trump to wait until after the midterm vote. The concern was that he might detract from their roster of Senate and House of Representatives candidates poised to deliver a shellacking to Joe Biden and the Democrats, fuelled by a sluggish economy, bad inflation and post-pandemic malaise.

Trump agreed to wait until after the vote today to officially pull the trigger. But by last Thursday, he was in Iowa announcing he would "very, very, very probably do it again. OK?" By Saturday, the campaign tease had progressed to full-on reveal, with Trump admitting he would "like to do" the announcement right there and then — but was holding back, out of respect for the two Pennsylvania Republicans he was meant to be stumping for.

According to the US news outlet

than Trump?

Over the course of the 2022 election cycle, Trump has doled out a whopping 200-plus endorsements to Republicans across the country. For some candidates who had been struggling in their primaries, the Trump seal of approval has a Midas effect, helping dozens claim the nominations. Come January, many of them are likely to be sitting members of Congress.

The endorsements have been matched by a late — but not insignificant — disbursement of cash from Trump's Make America Great Again super Pac, which has given out more than $16mn, while saving most of the cash for a 2024 run.

On the campaign trail this past weekend, Trump seemed close to his old self, bestowing a new nickname upon his former protégé turned potential Republican rival Ron DeSantis ("Ron DeSanctimonious") and touting polls that showed the former president leading the race for the Republican nomination with 71 per cent support.

his favour.

As he prepares his expected announcement, Twitter's new titan — Elon Musk — is in the process of moulding the social network back into the kind of virtual public square Trump thrived on, free of an army of content moderators hired to block the dissemination of fake news. Musk has floated the possibility of allowing the former president back on the platform.

Whether or not Trump decides to run is really besides the point. Even pre-announcement, he has seeped back into the public consciousness and public arena.

It is hard not to think of the other former leaders who have re-emerged victorious in recent weeks, from Luiz Inácio Lula da Silva in Brazil to Benjamin Netanyahu in Israel. In the tailwinds of a global pandemic, economic convulsions, energy supply shocks and a war in Europe, we can't seem to quit the shadows of our past.

courtney.weaver@ft.com

Opinion

Decoupling is not the answer to the climate crisis

Ngozi Okonjo-Iweala

Climate change is an existential threat. Left unabated, we will see more scenes of desolation like in Pakistan, where recent flooding left a third of the country under water and put food and economic security at risk.

Tackling this crisis is an inescapably global issue requiring urgent and bold leadership. Despite forces threatening to pull apart the world community, we simply cannot fragment, decouple economies and create separate trade blocs. At the COP27 UN climate summit this week, I will ask leaders to join forces in creating a trade-related agenda for a just and ambitious response to climate change.

The message is clear: the multilateral trading system has much to contribute. But this cannot be delivered without co-operation between countries. At the WTO's Ministerial Conference in June, nations on opposite sides of deep divisions were able to come together and agree on several trade issues. Most notably, WTO members agreed to curb harmful fisheries subsidies that led to over-exploitation of our oceans. This agreement demonstrated that multilateral co-operation is possible when emphasis is placed on saving our global commons. It must stay that way.

Last year's COP produced serious reflection on the trade community's contribution to the climate transition. This year, the 2022 World Trade Report on trade and climate change confirms that the cost and disruption inflicted by climate shocks on global commerce are high and rising. For example, the increasing heat pattern in the Horn of Africa has caused crop damage and profound food insecurity. Similarly, low water levels in major rivers are making it difficult to ship goods, from the Danube to the Yangtze and beyond.

Ramped-up financing will also be indispensable to a successful response to climate change. Developing countries need the long-promised $100bn of annual climate financing to ensure a just transition to a clean energy future.

But even this will not be sufficient. To meet the challenge of moving to net zero emissions by mid-century, we need open and predictable global markets to ensure access to technologies at affordable prices. Expanded trade will also promote sustainable global food systems and resilient supply chains.

> The message is clear: the multilateral trading system has much to contribute but countries must co-operate

Fragmentation and decoupling would do just the opposite.

The sustainability benefits of an open trading system are clear. Just about 40 per cent of the sharp decline in the price of solar panel systems since 2001 was made possible due to scale economies generated by international trade, competition and global supply chains. By lowering tariff and regulatory barriers to trade in environmental goods and services, we can further drive costs down and accelerate even broader clean energy deployment.

Likewise, the potential for exports expands the incentives for private companies to invest in renewable power innovation and all of the other cleantech breakthroughs needed to shift the global economy on to a sustainable trajectory. We must trigger a virtuous circle of expanding green trade, investment and innovation. The International Energy Agency estimates that the shift to clean energy could generate 14mn new jobs in renewable power and energy efficiency and 16mn in related sectors globally by 2030.

Finally, I call on leaders to join the WTO in laying out a trade road map for a just and ambitious global response to climate change. Building on work that is already under way, we envision a menu of trade actions for countries to draw upon when revising their national climate targets (or nationally determined contributions) — in line with their different levels of development.

The menu might include concrete actions to help facilitate trade in environmental goods and services, put a price on greenhouse gas emissions, decarbonise supply chains and make them more resilient to climate shocks, scale up circular business models and promote secure and sustainable food systems.

At the WTO, we can transform our Aid-for-Trade initiative into a programme that expands opportunities for sustainable trade, especially in places that have not seen the full benefits of international commerce.

COP27 offers an opportunity for us all to commit to a unified response to climate change and to bring the power of the trading system behind the global efforts to reduce emissions and deliver sustainable livelihoods. In the face of the overarching threats posed to the human species, I see no other path forward.

The writer is the director-general of the World Trade Organization

Black Sea Grain initiative cannot ignore seafarer misery

Guy Platten

The world breathed a sigh of relief when Russia reversed its recent decision to suspend its involvement in the Black Sea grain initiative. But it was a reminder of just how delicate the situation still is, and how quickly people's lives can be impacted by a change in policy. As we approach 120 days of the grain corridor being in place, there are still questions which need to be answered about its future. One of the most urgent is how it can support the rescue of hundreds of people who have become de facto prisoners of war in Ukrainian ports.

Four hundred seafarers are sheltering on board ships across the Black Sea and the Sea of Azov, in ports such as Chornomorsk, Odesa and Pivdennyi. The grain corridor has been a great success and should continue, but it has so far been unable to address their needs. They are trapped by logistical issues, the danger of crossing through an active conflict zone, even sometimes the need to stay on ship as skeleton crews. Naturally, concerns over a global food crisis, which the deal has sought to address, should be top of everyone's agenda. But we cannot afford to ignore a separate humanitarian crisis in the Black Sea that has so far gone largely unnoticed.

The question urgently needs to be asked: what is to become of the seafarers trapped in these ports? Some 1,600 have been evacuated already, but hundreds remain, many of whom have been stuck there since March. Some ships are running low on supplies and clean water, some seafarers need prompt medical attention. These non-grain carriers, such as container ships, often have crews from dozens of different countries on board. Yet as it stands, the grain corridor is not authorised for the use of evacuating ships stuck at port.

> They have kept supply chains going and their silent suffering should not be collateral damage

Events beyond their control have kept individuals on more than 60 ships away from their families and friends since the beginning of the conflict, far beyond a normal tour of duty. Seafarers are the building blocks of trade around the world. They have kept supply chains going not just during this conflict, but during enormous global challenges such as the Covid-19 pandemic. Their silent suffering cannot be seen as acceptable collateral damage.

In the coming months, there should be a provision to evacuate these seafarers from the conflict zone as soon as possible. The alternative is no way to treat the people who keep the global flow of trade moving. Stranded seafarers can no longer be left simply to languish with no indication of when they might leave.

The first world summit of the second cold war

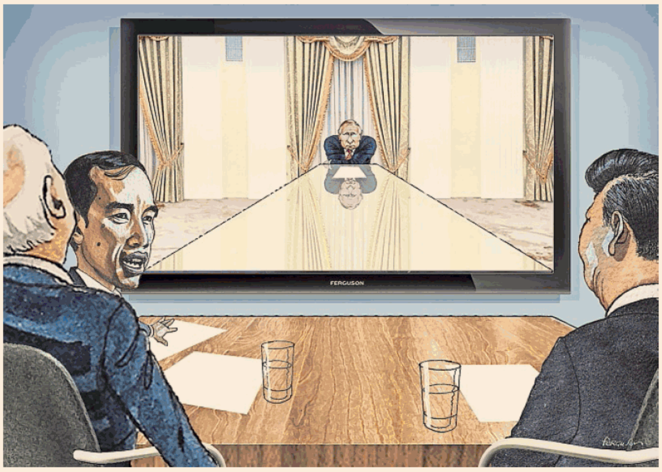
GLOBAL AFFAIRS

Gideon Rachman

"We refuse to be a pawn in a new cold war," says Joko Widodo, the president of Indonesia. Jokowi, as he is known, is speaking in an interview at the presidential palace in Jakarta. It is a surprisingly tough message from a leader known for his conciliatory style.

Next week the Indonesian president will host what feels like the first global summit of a second cold war — the G20 leaders' meeting in Bali. This will be the first G20 summit to take place since Russia's invasion of Ukraine in February. It is also the first since the surge in US-China tensions that followed the visit by Nancy Pelosi, the speaker of the US House of Representatives, to Taiwan in August.

Widodo has been president of Indonesia, the world's fourth most populous nation, since 2014. But he presents a stark contrast to strongman leaders such as Xi Jinping or Vladimir Putin. Dressed in a white shirt, black trousers and Indonesian-made trainers, he says his main aim at the G20 is to encourage dialogue. "We're very worried about escalating tensions between the major powers."



Indonesia played a key role in the foundation of the non-aligned movement at the Bandung conference of 1955 during the first cold war. The underlying instinct of Indonesia and many other non-western nations that will assemble in Bali remains the same — to navigate the tensions between superpowers and to avoid signing up to either camp.

Much pre-summit chat has focused on Putin and Biden sitting in the same conference room. But Widodo says that, based on a conversation with Putin last week, it is his strong impression that the Russian leader will not attend the Bali summit. There is some talk that Putin may choose to make a virtual appearance at the G20. But Widodo shrugs when this idea is put to him (and the Americans would doubtless strive to keep Putin on mute).

For the US, the bigger focus is Xi, who is definitely coming to Bali. The current assumption is that the Chinese leader will hold a direct meeting with Biden. Some senior US officials see this as an opportunity "to put a floor under the relationship". But it is also distinctly possible that a direct meeting would be acrimonious and unsuccessful.

Unlike other US-China summits in recent decades, which took place after months of preparation, a Biden-Xi meeting in Bali would be pulled together at the last moment, without carefully pre-packaged announcements to give an impression of progress. One leading US policymaker compares it with the

For Indonesia and other countries of south-east Asia, the stakes are also very high. They have prospered greatly from decades of peace and prosperity in the region, underpinned by a stable security environment and strong economic growth in China. That formula is still working for Indonesia, which is projected to grow at well over 5 per cent this year — which Widodo thinks will make his country the fastest growing economy in the G20.

The desire for continuing geopolitical stability, which will allow for economic growth, also colours his attitude to the Ukraine war. As president of the G20, he has travelled to both Kyiv and Moscow. But, for the Indonesians, the Ukraine war is not the all-consuming preoccupation that it is for western leaders. A lot of

> In trying to stay neutral in an emerging superpower

Widodo's attention is on the second-order economic effects of the war and the impact it has on driving up global food prices. He describes the recent Russian threat (now withdrawn) to once again stop exports of grain through the Black Sea as "very provoking".

Based on his recent conversations with Putin and Ukrainian president Volodymyr Zelenskyy, Widodo sees little immediate prospect of a peace settlement. Instead Indonesia is throwing its diplomatic energy into trying to solve a conflict in its own backyard — the civil war in Myanmar, which has also cost thousands of lives and turned hundreds of thousands into refugees.

As a leader Widodo has some similarities to Luiz Inácio Lula da Silva, recently re-elected president of Brazil. Both have risen from humble origins and are proud of their connections with ordinary people. Both want good relations with the US, while retaining an innate scepticism about American motives, grounded in

trade and investment are key to the development of the Indonesian economy. But he also knows that there are domestic critics — including Jusuf Kalla, his own former vice-president — who claim that China has too much influence inside Indonesia. Widodo waves that idea away, by pointing to the high number of jobs for Indonesians created by Chinese investment.

In geopolitical terms, Indonesia remains something of a sleeping giant. Despite the country's huge size and geographical expanse (it spans four time zones), Widodo betrays no hint of an aspiration to be a superpower — or even the regional south-east Asian hegemon. He prefers instead to emphasise his country's commitment to the Association of Southeast Asian Nations.

In an era of strongman politics and aggressive great-power nationalism, the Indonesian leader's modesty and multilateralism make a refreshing change. It would be good if some of that spirit

In trying to stay neutral in an emerging superpower conflict, Indonesia is reaching back to an older tradition. It

US-Soviet summits of the first cold war — high-stakes meetings, which took place on neutral ground.

conflict, Indonesia is reaching back to tradition

their own countries' histories.

Widodo performs a similar balancing act on China. He knows that Chinese

rubbed off on other leaders at the G20.

gideon.rachman@ft.com

US-UK security co-operation is unparalleled — and must remain so

Jane Hartley

It's an important time for the United Kingdom, which means it's an important time for the United States and the relationship between our two countries. As Prime Minister Rishi Sunak gets started in No 10, President Joe Biden and I send America's congratulations.

Now begins the next chapter of our partnership. The US and UK face significant and shared global challenges, from mounting economic pressures to the climate crisis and threats from state and non-state actors alike. We confront these challenges together, driven by our common values and desire to build a brighter future for our citizens.

First, we must look to the economy. The task in front of us is to address present economic challenges, while making the global economy stronger and more resilient for years to come. The US and the UK share the world's largest bilateral foreign direct investment relationship, topping $1.5tn. This stable flow of transatlantic investment brings enormous benefits to both of our countries, and we must look to capitalise on it. The Biden administration is particularly focused on sustainable, inclusive growth that creates jobs and opportunities for communities that haven't traditionally prospered from international trade.

Indeed, the US recently made the largest investment to fight climate change in our nation's history — $370bn — with the aim of supercharging our potential to drive clean growth, bringing down costs for families and giving rise to high-quality jobs for years to come.

This legislation proves how committed we are to accelerating the global clean energy economy and will serve as a platform for our work over the next two weeks at COP27 and beyond. As a diplomat and businesswoman, it is a priority of mine to broaden and deepen our collaboration with the UK on climate change.

Second, our security co-operation should remain unparalleled. The US and the UK have worked in close partnership to support Ukraine in response to Russia's unprovoked aggression, providing critical security assistance and economic support to Ukraine while holding Russia accountable through sanctions and export controls.

America urges all parties to keep Northern Ireland's best interests at heart

As the war moves into winter, we will continue to work in lockstep with our UK partners to support Ukraine's heroic defence against Putin's war of aggression. Through bilateral security co-operation, as well as through Nato and Aukus, we will defend the rules-based international order and the principles we hold dear: freedom, democracy, universal rights and the rule of law.

Third, the US believes that the EU and UK must work constructively and quickly to resolve the challenges over the implementation of the Northern Ireland protocol.

I recently visited Belfast, where leaders from several industries told me a stable and predictable political climate is essential for the future growth of their businesses and communities. Northern Ireland is poised to attract new investment, but companies require certainty and clarity. A prolonged stalemate or an agreement with convoluted and burdensome regulations risks sapping the region of its great potential.

Next spring, we will mark the 25th anniversary of the Belfast/Good Friday Agreement. It remains a stunning achievement to this day, and a reminder of the economic and social progress that only peace and stability can deliver. We recognise that there are differences of opinion over the implementation of the protocol, but we also know that an agreement is possible if all sides bring renewed energy to the task. The US urges all parties to continue negotiating in good faith and keep Northern Ireland's best interests at heart.

The US has no closer ally than the UK. Our militaries train together, our businesses innovate and grow together, our scientists make discoveries together. Students from all corners of the UK learn at our universities and vice versa. We celebrate each other's victories because we know our prosperity is linked. That's what makes our special relationship so special.

We will face challenges ahead, but throughout our long alliance, the foundation of our success has always been the result of close co-operation and friendship. More than anything else, deepening the bond between our countries will be my greatest priority.

The writer is US ambassador to the Court of St James

The future of the grain corridor deal must allow them to return to their homes, and to resume their careers. Charities, seafarer unions and industry bodies are doing their utmost on the ground to support crews and to get them back where possible. Now they need the support of all parties to the ongoing deal to recognise the scale of this issue and commit to a practical evacuation solution.

Agreement across the board on what this might look like will of course need delicate handling and precise negotiations. When the initiative first began in July, ships that were stuck in participating ports but were fit to carry grain were allowed to join and make their way back. Now any remaining seagoing vessels should also be allowed to leave. Parties may see potential for the corridor to be expanded, or for evacuations from mutually agreed locations as an alternative option.

The Black Sea grain initiative has been a significant joint success between Russia, Ukraine, Turkey and the UN. Part of this success is that it has not just alleviated global concerns about food security, but that it has given participating ships and those on board assurances about their safety when carrying out necessary jobs in the region. Almost 120 days in, there is now the opportunity to go one step further and facilitate the rescue of hundreds from their confinement in the conflict zone.

The writer is secretary-general of the International Chamber of Shipping

Lex.

Twitter: @FTLex

COP27/Kerry plan: credit due

US climate envoy John Kerry has two big challenges. First, developing nations still burn a lot of fossil fuel for electricity. Second — as UK taxpayers may soon find out — governments do not have a lot of money going spare.

Kerry is set to propose a voluntary scheme for big companies to fund the decarbonisation of power systems in the developing world. That would make political and economic sense.

There is a cost curve to global emissions. Phasing out coal or increasing renewables in countries that are sunny is cheaper per tonne of CO_2 than adding more solar to cloudy Germany's power grid. And that is before we get on to the really costly stuff, like installing heat pumps.

Suppose a €1bn investment buys you roughly 1GW of solar panels. In Algeria these will run for 2,200 hours a year versus 1,000 in Germany. The resulting renewable electricity will cost roughly half as much. Land costs would be lower. Integration expenses should also be more affordable, for the reason that the local grid would not have a lot of intermittent renewables in it already.

Companies can already try to finance decarbonisation schemes via "voluntary" offsets. However, they have struggled to find credible projects. An example would be "safeguarded" forests subject to little threat of logging. The Kerry plan could help by targeting big energy infrastructure schemes via the governments of recipient countries.

The pitfall is that multinationals may feel little compulsion to spend shareholders' money on decarbonising power grids in developing countries. It is not really their responsibility. Under current "science-based" rules for emissions targets, they would not get any credit for doing so.

That may yet change. There is talk of allowing companies to count emissions reduction credits to offset a small part of their own footprint. This smacks of a conceptual fudge. But it might jump start the market. There are other reasons companies might choose to voluntarily tax themselves — including the kudos of joining the Kerry club.

But the cleanest solution would be for developed countries to impose a tax. They could direct receipts into long-term infrastructure projects at home and abroad. That would spur private investment made voluntarily.

More than anything else, the Kerry plan points to the need for a multilateral transition plan for capital allocators to work to.

Foxconn/Apple: fencing lessons

Newscasts showing Chinese workers scaling fences to escape the world's biggest iPhone factory have proved to be a leading business indicator. Apple has warned that shipments of its latest smartphone models will miss forecasts.

The difficulties facing Apple and its manufacturer Foxconn are just the start of industrial ill-effects from China's drastic zero-Covid policy.

Chaos has reigned inside a Zhengzhou plant run by main supplier Hon Hai — the name under which Foxconn is listed in Taiwan. Employees fled harsh living conditions. Some reportedly walked 25 miles to get away from the campus where 200,000 people live and work. Global shipments of the high-end iPhone 14 Pro and iPhone 14 Pro Max will be delayed. Analysts had not accounted fully for this in their forecasts. They already expected iPhone production to fall by as much as 30 per cent last month at the Foxconn plant due to lockdowns.

Now, even when lockdowns ease, a lack of workers could mean prolonged disruption. Foxconn, which accounts for 70 per cent of global iPhone shipments, has increased the bonuses for employees that work without taking leave by up to ten times the previous figure. It has offered as much as 75 per cent increase on base salaries.

That will be unsustainable for a business with razor-thin operating margins — less than 2.5 per cent last year. The fourth quarter is a crucial period for sales. Apple will receive a smaller boost than typically follows the launch of new models.

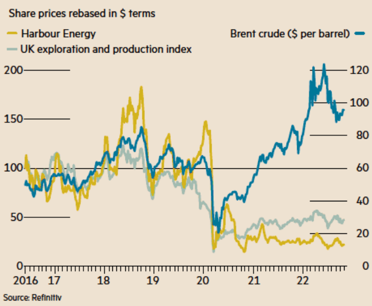
It is not just Apple and Foxconn that will suffer. All Chinese-based manufacturers and their customers are exposed. China's exports and imports unexpectedly fell in October, the first such decline since 2020. Exports dropped 0.3 per cent, missing market expectations of a 4.3 per cent increase.

Beijing's tough line on containing Covid is unlikely to soften to please businesses in the US and Europe with which it is at loggerheads. The economic damage can only worsen.

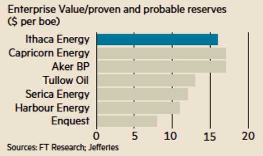
Ithaca: isles play

Valuations for UK exploration and production companies have decoupled from their historical correlation with the oil price. North Sea producer Ithaca Energy is nonetheless listing in London at a multiple towards the top end of its out-of-favour peer group.

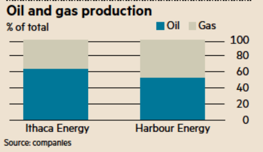
UK exploration and production groups are out of favour



Reserves valuations



Oil and gas production



If investors have learnt one thing from the Ukraine war, it is that energy security merits a premium. But the premium accorded to Ithaca Energy is still less than its owners had hoped for.

The North Sea oil and gas producer is pricing its UK initial public offering at the lower end of the range. That would give it a market capitalisation of up to £2.7bn ($3.1bn). Despite high oil and gas prices, the market remains down on companies that get hydrocarbons out of the ground.

Even as recessionary fears in the west grow, Brent crude remains at almost $100 per barrel. The market is still grappling with lower forecast supply from Russia and Opec.

But capital markets remain fixated on the longer-term reality that fossil fuels are on the way out. This is reflected in record low valuations for UK E&P groups, which are also facing windfall taxes. The sizeable dividend promised by Ithaca was supposed to help investors look past that.

Israeli E&P Delek acquired Ithaca from the London market in 2017. It has since been as a North Sea consolidator, acquiring Chevron's assets there for $1.7bn in 2019. Ithaca completed a $1.5bn acquisition, including a majority in the Cambo field, with private equity groups Blackstone and Bluewater this year. Total production might hit 80,000 barrels daily of oil equivalent next year, with a target of 100,000 expected in the medium term.

Even so, on a reserves basis, its shares look fully valued. An enterprise value of $4bn equates to $16 per BOE that is proven or probable. Its UK peers are a third cheaper on average. Harbour Energy, the UK's largest explorer producing mostly gas, trades at around $11.

Ithaca does expect lucrative cash flows; dividends of $400mn are slated for next year. A yield of 14 per cent is double the current forward yield for the UK sector.

But financing remains key. Equity investors are not the only ones that have gone cold on oil and gas. Ithaca must refinance $625mn of 2026 notes to free itself of payout restrictions. With financial conditions tightening globally, that task will make tapping oil wells look like the easy bit.

MoviePass/DoJ: puffer fishing

For failed founders, the worst consequences used to be ignominy and poverty. The Biden administration is keen to add prison time to that list. The US Department of Justice has charged two former executives of failed start-up MoviePass with securities fraud.

The ethos of so-called "hustle culture" was celebrated in the go-go noughties with such zingers as "fake it till you make it" and "move fast and break things". The collapse of the easy-money economy and the advent of a more aggressive administration in Washington means business moguls suddenly need to watch their mouths.

The government alleged MoviePass knew that offering all-you-can-watch cinema films for $9.95 per month was not viable, but gave a different impression in interviews, press releases and securities filings. Lawyers for one defendant, Ted Farnsworth, said he was confident he acted in good faith and would be vindicated.

The charges follow the convictions of Trevor Milton of Nikola and Elizabeth Holmes of Theranos. The pair founded a hydrogen truckmaker and a blood test company respectively. Both were charged with lying to investors about business prospects. Criminal securities fraud is, however, very hard to prove.

Prosecutors must show that executives knew they were making false claims and that investors relied on the information. A common defence is that courts have not criminalised "puffery", that executives can be optimistic about their businesses in ways that should not mislead investors.

The DoJ will allege that MoviePass executives made precise statements about the company's business model, revenue streams, and capabilities that were categorically untrue. These were relied upon by public market investors, it will say. It would be wrong to second-guess US courts. But all bubbles appear obvious with hindsight. In a bull market, investors should ponder how weak business models and management promises may appear in the cold light of a correction.

Walgreens: Summit of its ambitions

Americans with minor ailments are not the only ones seeking treatment from walk-in urgent care centres. Walgreens Boots Alliance is hoping the sector, a fast-growing segment of US healthcare, can provide a salve for its own aches and pains. Its Village MD division is buying Summit Health-CityMD, in a deal worth $8.9bn, including debt.

It is not a straightforward purchase. Walgreens had hoped to use proceeds from the sale of its struggling Boots chain in the UK to fund its push into healthcare services. Having shelved disposal plans earlier this summer, it now needs to get creative.

Under the terms of deal, parent Walgreens will put $3.5bn into the takeover in a mix of debt and equity. Cigna's healthcare unit Evernorth is also investing, and will become a minority owner of VillageMD. Walgreens will remain the majority shareholder with a 53 per cent stake.

Village MD is paying the equivalent of 19 times Summit's estimated adjusted ebitda for the current year, the companies said. That is hardly a bargain considering Walgreens itself is trading on just 8 times.

But it does not have much of a choice. Owning physical drugstores is not the cash cow it once was. Rival CVS has built a more diversified business. This includes a large pharmacy benefit management business and a leading health insurance division. Walgreens remains overly dependent on its nearly 9,000 stores in the US.

Competition for healthcare assets has also become fierce. Amazon and CVS have struck multibillion-dollar deals in the sector in recent months.

Summit Health has more than 370 primary, speciality and urgent care clinics in the US. Growth has been driven by demand from newly insured Americans and others frustrated by long waits at emergency rooms.

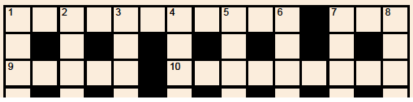
Walgreens said the deal would be accretive to adjusted earnings from next year. It raised its revenue goals for fiscal 2025 by a third. Sometimes a bitter pill is best swallowed with a smile.

FT **Lex on the web** For notes on today's stories go to **www.ft.com/lex**

NIKKEI Asia The voice of the Asian century

CROSSWORD

No 17,246 Set by MOO



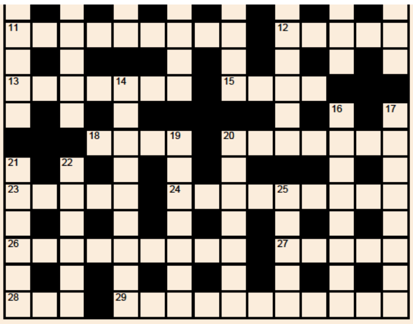
ACROSS

1 Lifeguards caught cavorting? Outrageous! (11)

7 Cockney's shock appearance (3)

9 Rees-Mogg is such a woolly individual (5)

IPA Incorporated by Royal Charter FT FINANCIAL TIMES



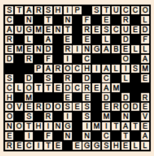
10 Keeping form of punishment new head introduced (9)
11 What might follow university? It's a problem (9)
12 Teacher back in Casualty in spring (5)
13 Reportedly the first person to use Ray-Bans? (7)
15 Third son's name registered in Somerset House (4)
18 Sound of river provoking cries of wonder (4)
20 Biased and incomplete (7)
23 Chap from Middle East retiring very soon (5)
24 S for pioneer? (9)
26 One's patrons tell niece off (9)
27 Stop patient swallowing a drug (5)
28 Royal couple go astray (3)
29 Group piloted an aircraft once (3,8)

DOWN

1 Gloomy Democrat given the boot (8)
2 Philosopher needing help to collect old banger (8)
3 Heretic's dance entertaining bishop (5)
4 Who will investigate if singer gets run down? (7)
5 Priests who've not been celibate? (7)
6 Alec's rant upset royal house (9)
7 Bitter investigators in US agency sent north (6)
8 Guide had a word with Charles's mum (6)
14 A moonlit scene ultimately making you sentimental (9)
16 Sack everyone blocking women's online protection (8)
17 Bachelor lounged about in club (8)
19 Exclude contrary American while away (7)
20 Introduce Penny to shrink (7)
21 Shifty-looking yob briefly taking heroin in church (6)
22 Sex with American in limo? It'll cost you (6)
25 Run over MP, losing head at last (5)

JOTTER PAD

Solution 17,245



Get the business insights you need to succeed in Asia
Visit asia.nikkei.com

Come back in a year and tell us if cutting your budget was a good idea

Brands can help in a cost of living crisis by cutting their marketing budgets. Wrong. We have more than 40 years of evidence that a short-term reaction is never as effective as long-term investment. For brands or the economy as a whole. Find out more at **ipa.co.uk/eff-works #EffWorks**

FT SPECIAL REPORT

Managing Climate Change

Tuesday November 8 2022 **www.ft.com/reports**

'Loss and damage' set to dominate UN talks

Extreme weather takes hold: people wade through a flooded area after heavy monsoon rainfall in Pakistan's Punjab province in August — Abdul Majeed/Getty Images

COP27 The question of who pays to help poorer countries cope with rising temperatures will be high on the agenda, writes *Camilla Hodgson*

World leaders attending this month's UN climate summit are gearing up for a renewed battle over whether rich countries should provide financial support to developing nations, to help them cope with the consequences of rising global temperatures.

The question of so-called "loss and damage" funding for developing nations has been contentious for years, with rich countries reluctant to accept financial responsibility for climate change caused by industrial activity and offer compensation to poorer countries.

But many developing countries, such as the low-lying Pacific island states vulnerable to sea level rise, are stepping up their demands. They want to see the creation of an international loss and damage finance facility — a type of fund — at November's COP27 UN summit, hosted by Egypt.

"Wealthier countries bear a moral responsibility" to help poorer nations recover, adapt and build resilience to disasters, said António Guterres, UN secretary-general in October. "Let's not forget that 80 per cent of emissions driving this type of climate destruction are from the G20."

Alex Scott, an analyst at environmental think-tank E3G, says the UN summit will be a test of how willing governments are to grasp what's needed to address growing climate impacts — particularly after the recent devastating floods in Pakistan.

Without some movement on the subject of paying for loss and damage, "the legitimacy of [the UN process] will be

Continued on page 2

Bridgestone is evolving into a sustainable solutions company toward 2050.

Born of our enduring Bridgestone values, we are committed to supporting the realisation of a sustainable society.

Energy Committed to the realisation of a carbon neutral mobility society

Ecology Committed to advancing sustainable tyre technologies and solutions that preserve the environment for future generations

Efficiency Committed to maximising productivity through the advancement of mobility

Extension Committed to non-stop mobility and innovation that keeps people and the world moving ahead

Economy Committed to maximising the economic value of mobility and business operations

Emotion Committed to inspiring excitement and spreading joy to the world of mobility

Ease Committed to bringing comfort and peace of mind to mobility life

Empowerment Committed to contributing to a society that ensures accessibility and dignity for all

Bridgestone E8 Commitment to Our Future

For the sake of the Earth, which future generations have entrusted in our care. Together with you.

BRIDGESTONE
Solutions for your journey

'Loss and damage' debate set to dominate COP27

Continued from page 1
challenged," argues Laurence Tubiana, chief executive of the European Climate Foundation.

While last year's COP26 summit in Glasgow attracted much fanfare, and was attended by political and business leaders from around the world, the conference in Sharm el-Sheikh is expected to be a more procedural and low-key event.

The Egyptian presidency wants to place the focus on the implementation of the wide range of promises made since the 2015 Paris accord, which broadly divide into efforts to reduce emissions, adapt to climate change, and provide money to help the most vulnerable countries do both.

"The number one priority is implementation," says Wael Aboulmagd, Egypt's COP27 ambassador. "Everyone has to be part of the conversation."

However, only a handful of countries had updated their emissions reduction plans by the end of October, despite pledging in the COP26 agreement to "revisit and strengthen" them by the end of 2022.

Current pledges by nations that have signed the agreement put the world on track for a temperature rise of between 2.4C and 2.6C by 2100, the UN Environment Programme said in October, which is above the Paris Agreement's redline target of 2C. Ideally, warming would be limited to 1.5C, though temperatures have already risen by at least 1.1C since pre-industrial times.

Aboulmagd said in a recent briefing that the Egyptian team had been "working the telephones" to encourage countries to upgrade their pledges.

Rich nations had promised to mobilise $100bn a year in support of poorer countries by 2020. But research shows they fell short, at $83.3bn. Most recent estimates by US climate envoy John Kerry suggest the figure may have since reached $90bn. But, in addition to subscribing to the full amount, signatories need to agree on a new target for climate-related financial aid to be delivered from 2025.

Meanwhile, China and the so-called Group of 77 — a coalition of developing nations at the UN — will propose that loss and damage financing be included as an important topic for discussion on the official COP27 agenda, which is due to be finalised at the start of the summit.


Damage control: a family in Madagascar faces challenge of drought — Charlie Bibby/FT

In Glasgow last year, rich nations rejected a proposal for a loss and damage finance facility, although countries agreed to start a "dialogue" on the issue.

While the calls for the creation of such a facility have grown increasingly loud in the run-up to the talks in Egypt, anything included in the final COP27 agreement will require the unanimous approval of more than 190 parties to the Paris Agreement.

Nevertheless, the Egyptian hosts say they are committed to making progress on the issue, and have appointed ministers from Chile and Germany — including Jennifer Morgan, the former executive director of Greenpeace who is now Germany's climate envoy — to co-ordinate discussions on the subject at COP27.

Vulnerable countries will be hoping these talks are fruitful, as they did not leave Glasgow with "any amount of satisfaction" on loss and damage, says Aboulmagd. "We all have a collective obligation to ensure that this issue is addressed, and particularly the funding side of it."

Conrod Hunte, deputy chair and lead climate negotiator for the Alliance of Small Island Developing States, says it is important that any agreement on loss and damage includes a financing element. "We're reaching our breaking point, our limit, both literally and figuratively," he says.

However, during New York climate week, in September, Kerry pushed back on the need for financing specifically for loss and damage, arguing the focus should instead be on so-called mitigation projects. He has since said the US is prepared to discuss loss and damage financing at COP27. The EU is expected to resist the idea of creating a fund.

> Rich nations had promised to mobilise $100bn a year to support poorer countries by 2020. But research shows they fell short

Reaching a unanimous agreement — let alone one that includes a decision on compensation — is always a challenge at the COP, but it is likely to be particularly difficult this year given the geopolitical context.

Russia's invasion of Ukraine has fuelled energy, food price and wider inflation crises, while US-China relations are fractured.

Poorer populous nations, such as India, have stressed the need for financial support if they are to transform their energy systems and economies to limit greenhouse gas emissions, while richer nations are now also scrambling to provide support to their own citizens amid a worsening cost of living crisis, with their budgets already depleted by pandemic support measures.

Yet scientists and international bodies such as the IMF have outlined the grave cost to all countries of backsliding on decarbonisation and climate change commitments, and said rich nations must provide support for the most vulnerable. Climate justice is expected to be an especially prominent topic at an African-hosted COP, as a result.

Speaking at the Africa Adaptation summit in September, Moussa Faki Mahamat, chair of the African Union Commission, said there was "a strong imbalance between Africa's responsibility [for climate change] and the volume of resources it receives" for mitigating and adapting to the crisis. "This is where one of the most shocking injustices towards our continent resides."

E3G's Scott says the world is at "a multi-crisis moment" — but COP27 must demonstrate progress and co-operation among leaders on climate finance, reducing emissions and transforming the real economy.

"It's possible that it will be very disappointing and then the story out of COP27 is one of failure and lack of coming to grips with the scale of the challenge," she warns. That would only pile the pressure on to next year, when it is likely that geopolitical events and energy crises "still won't have let up".

Inside

ADVERTISEMENT

Project Envisioning the Future of Private Equity

Using the Power of Investment to Foster a Sustainable Society

日経 NIKKEI SDGs FESTIVAL OTEMACHI MARUNOUCHI YURAKUCHO

There are more opportunities to capitalize on private equity (PE) funds as the world more greatly emphasizes initiatives to improve corporate value and realize a sustainable society. Many experts took the stage for the Project Envisioning the Future of Private Equity held at the Nikkei SDGs Festival on September 15, 2022 to discuss the role and significance of PE funds in encouraging a behavioral change of investees toward Environmental, Social, and Governance (ESG) standpoints as well as the challenges in fostering growth.

Influencing a Behavioral Change in Management

<Remote Presentation>
Michiko Ashizawa
Associate Professor, Yokohama City University
Visiting Scholar, Stanford University

Michiko Ashizawa

The power of investors can incite a behavioral change in companies and contribute to realizing a sustainable society. As a means to this end, the United Nations has been advocating the Principles for Responsible Investment (PRI) since 2006. Every PRI signatory must determine where to invest by fully considering all three ESG viewpoints.

Therein, the United Nations has designated PE funds as one structure in line with the PRI. PE funds not only raise the money from investors to make investments but also participate in the management of an organization receiving that investment. By improving corporate value, these PE funds also increase returns to their investors. This immense influence over investors and corporate management becomes the driving force to realize a sustainable society.

As a result, PE funds are actively engaging in ESG initiatives. Advantage Partners recognizes sustainability as a tremendous future business opportunity. Its PE funds undertake a five-step ESG evaluation process of companies receiving an investment starting before the investment through the equity sale.

Polaris Capital also focuses on ESG topics outside the issue of climate change. For example, this firm sees the social issue of diversity as a future growth opportunity in addition to a risk factor.

Let's take a look at four challenges PE Funds will face in the future. The first is establishing an ecosystem. Experts from a wide variety of fields are necessary to overcome the obstacles toward sustainability from those in natural sciences and engineering to others in business, law, the social sciences and humanities. My hope is for PE funds to present a vision that brings together all these players in a leadership role to build this ecosystem.

The second challenge is the pursuit of ESG by the PE funds themselves. For example, PE funds in Japan have an extremely low ratio of women in management. We first need to start with issues like this that are right at our doorstep.

The third challenge is the debate I hope to see about the potential of impact investments in the private equity field.

The fourth challenge is for PE funds to work to realize strategic rulemaking through government agencies. The reason California is able to promote the standardization of electric vehicles is the fact that the state has no internal combustion engine vehicle industry. Japan is no different. I want PE to take on the challenge of introducing a sustainability perspective and creating disruptive innovation in areas where Japan is lagging behind.

Improving Corporate Value by Bolstering Strength

Atsushi Abe
Chairman of the Board and Nomination Committee
Chair of Fujitsu Limited,
Board Member and Audit Committee member of ON Semiconductor Inc.,
and Managing Partner of Advanced Solutions, Inc

<Interviewer>
Koichi Sakai
Nikkei ESG Publisher

Atsushi Abe

Sakai: Would you mind telling us about why you become involved with PE funds along with a bit about your background?

Abe: I began working as an investment banker in Silicon Valley in 1993 after a stint at a trading company. I primarily worked on capital markets transactions and M&As [mergers and acquisitions] for emerging growth companies, primarily in the IT [information technology] industry. Through this work, I began to wonder if large Japanese electronic conglomerates would be able to sustain their competitiveness.

They all held cookie-cutter business portfolio structures that included semiconductors, personal computers, IT services, or appliances. Although the consolidated scale was quite large, each business segment was relatively small, only finding themselves sub-scale players in their respective business segments globally. As a way to enhance their competitiveness, I proposed focusing on certain business segments and building scale through consolidation. Management at these companies agreed with the concept as being a logical one, but none took action.

I left investment banking to join a PE fund in 2004 with a hope to facilitate such consolidation through the use of capital and help restore competitiveness.

Sakai: Most people do not know very much about the role PE funds play outside financial institutions. Would you mind giving us some insight?

Abe: A lot of people in Japan have a negative impression of PE funds as having a short-term, quick-money orientation, with their operations run by financially oriented professionals with no clue about the underlying business. However, PE funds work with multi-year plans to build corporate value and form a management team comprising highly qualified experts for each investment. De-listing often allows them to take bold action based on a long-term vision without the need to deal with public shareholders.

Meanwhile, listed companies in Japan are pressured to deliver quarterly results, making it difficult for them to embark on fundamental business reforms if they accompany losses; changes may take multiple years to accomplish.

Sakai: Why is ESG so important?

Abe: As millennials come to occupy the majority of the workforce, companies will need to align their purpose and behavior to the core values of millennials. Millennials are known to regard companies that don't make the greater good of society their priority as disposable. Having a well-defined ESG policy and conduct will thus become increasingly important in attracting a high-quality workforce. As we all know, people are the most critical resource in building corporate value.

Sakai: What expectations do you have for PE funds?

Abe: I want to see many PE funds show examples of success. With a successful track record, I know Japan can regain its competitive edge through PE funds.

Sponsors

EQT INTEGRAL J-STAR NSSK 日本産業推進機構 NHC New Horizon Capital Partners Group POLARIS UNISON CAPITAL

Organized by: Nikkei Inc. and Nikkei Business Publications, Inc. Media partner: The Financial Times Limited
Special Sponsor: Mitsubishi Estate Co., Ltd.

US faces challenges in bid to hit Paris goals

Clean energy Joe Biden has committed $369bn to green initiatives, but more may be needed, says *Aime Williams*

Joe Biden's flagship economic legislation represents the largest single US investment in climate and clean energy programmes in the country's history. But even more work is needed if the world's leading economy is to meet its Paris climate goals, analysts say.

The US has committed to reducing its greenhouse gas emissions by 50 to 52 per cent below 2005 levels by 2030. When all the effects of the recent legislation, called the Inflation Reduction Act, are factored in, research from Rhodium Group suggests that the country is on track for a 31 to 44 per cent reduction.

So, to make up the shortfall, Rhodium reckons the US will need more federal regulation to limit power plants' emissions and decrease those from cars and trucks. Also required will be more climate-friendly infrastructure and transport policies from states, and the faster retirement of coal- and gas-fired power stations.

In modelling how the US could halve its emissions by 2030, the researchers assumed that all power companies that promised to transition to becoming 100 per cent clean moved their targets forward to 2035.

"We should not minimise the extent to which this [ambition] is a huge lift across not just the federal government, but across all state governments, to get to this," says Ben King, an associate director at Rhodium's energy and climate practice.

The Inflation Reduction Act seeks to enable this with some of the most significant legislation to mitigate climate

Transformed: wind turbines installed on the site of an exhausted coal mine in Oakland, Maryland — Chip Somodevilla/Getty Images

of dollars of tax credits designed to supercharge development of a US clean energy industry and speed the adoption of electric vehicles across the country.

About $30bn in grants and loans are available to utilities to help their transition to clean energy, while $6bn in grants and tax credits are available to help some of the worst polluters in industrial manufacturing — including chemical, steel and cement plants — to lower their emissions.

A further $27bn is aimed at supporting the rollout of nascent technologies that reduce emissions and $20bn for rural communities to invest in climate-friendly agricultural practices, forest restoration and land conservation.

Tax credits are also available to prospective buyers of electric cars and to poorer people who want to switch from oil or gas heating of their homes or install green technologies, such as heat pumps and solar panels.

The longer-term hope, says Tucker, is that the incentives contained in the legislation will encourage the rapid growth of the green industry across the US, in turn making it a potent political force.

"What the IRA does is begin to level the playing field by giving green capital as much or closer to the power of the incumbent fossil fuel industry," he says. "You actually want to redraw the lines of influence, so that policymakers are being responsive to the new green capi-

reach the Paris goal, including a recent ruling by the Supreme Court that curtailed the power of the US's top environmental regulator.

In July, the court's conservative majority struck down an obsolete Obama-era plan to shift power generation away from coal-fired plants and towards renewable sources across the American energy grid.

The justices, invoking a legal principle known as the "major questions" doc-

drawn political attention to the increase in US petrol prices, and forced Biden both to cut federal fuel taxes and release millions of barrels of oil from strategic reserves.

Climate advocates have also criticised the Biden administration for backing the expansion of infrastructure for liquefied natural gas imports across Europe, and for meeting Japanese officials earlier this month to discuss US LNG exports to the country.

Jennifer Hensley, a director at climate advocacy group the Sierra Club, says the positions on LNG expansion and the release of strategic reserves are "unfortunate" and that building out LNG infrastructure in the US or Europe would "not address the [energy] crisis now".

"Expanding LNG terminals — that is going to take a couple of years for that gas to actually hit the market," says Hensley. "And, at that point, we have built infrastructure and we're going to hear the industry saying 'these are stranded assets, we can't possibly retire them'. So, yes, from that perspective, that's disappointing."

Collin Rees, of environmental campaign group Oil Change International, says that while the IRA moved the US towards significantly reducing its emissions, the US is not doing enough to reduce emissions globally.

"It's really a question of how are you setting both the US and the world up to get those final parts of emissions, and that's where something like the LNG build-up becomes really concerning."

FT Climate Capital

change enacted in the US, committing $369bn to environmental and clean energy initiatives. It passed in August, though Congress may block further proposals by the Biden administration if the Republicans win a majority in either the Senate or House of Representatives in today's midterm US elections.

Central to the programme are billions

'The Inflation Reduction Act marks a clear pivot away from decades of more neoliberal-oriented policy'

Todd Tucker of the Roosevelt Institute, a think-tank, says the legislation represents a "big shift" in US thinking: "It marks a clear pivot away from decades of more neoliberal-oriented policy . . . we're going to actually see a proper role for the government and for the public sector in directing the industrial future of the country."

tal and green labour."

Biden's approach contrasts sharply with that of his predecessor, Donald Trump, who announced in 2017 that he would withdraw the US from the Paris accord, struck in 2015. The US left in 2020, then rejoined under Biden.

But the current administration has suffered setbacks to its ambitions to

trine, said that they expected Congress to legislate more clearly for "how much coal-based generation" there should be across the US power grid.

The ruling throws the regulatory power of the Environmental Protection Agency into doubt.

Meanwhile, Russia's war in Ukraine has prompted a European energy crisis,

READ MORE ON FT.COM

For COP27 coverage and all the latest climate change news in one place, visit: ft.com/climate

Australia takes steps to catch up on climate action

Climate policy

The business community is encouraged by targets set so far, writes *Nic Fildes*

Anote Tong, the former president of the Pacific island nation Kiribati, has high expectations of his larger neighbours.

"I have looked to Australia to be a leader in climate change," he says. But the country's climate policies over the past decade have been mostly disappointing for Pacific island leaders.

"Climate change is always made out to be a Pacific islands problem," Tong notes. "It is not. It is a global problem. It is an Australian problem."

He was speaking on a trip to Sydney following the May election of Australia's first Labor prime minister in almost a decade, Anthony Albanese.

The result swept aside Scott Morrison, who once brandished a lump of coal in parliament to demonstrate his party's commitment to the fossil fuel industry and whose policies had earned the country a global reputation as a climate change laggard.

The Greens and independent pro-climate "Teal" candidates also did well in the election, the latter gaining affluent seats in Sydney and Melbourne.

It therefore promises a new era for the country, after years in which climate has been a divisive political issue. Australians — who have endured devastating bushfires and floods in recent years — have seemingly voted for change.

Already, the new government has passed a bill to bind the country to reducing greenhouse gas emissions by 43 per cent from 2005 levels by 2030. The bill also enshrined a commitment to net zero by 2050, which Albanese said would put the country on the "right side of history". It coincided with a government decision to block a new open pit coal mine located 10km from the Great Barrier Reef.

David Thodey, who chairs software company Xero, says the business community has been encouraged by these decisions for being on the "practical end of the spectrum".

Thodey is also chair of the Climate Leaders Coalition, a forum of nearly 50 top businesses in the country including BHP, Rio Tinto and Qantas, which formed last year to compare decarbonisation strategies.

"In the absence of political leadership, historically, we have just decided to get on with it," says Thodey.

He says many chief executives were already under pressure from shareholders and their own employees to tackle climate change, and believes companies should share their experiences of switching to renewables and reducing "Scope 3" emissions — the greenhouse gases emitted across a supply chain and in the use of their products. That way, they can learn from each other and work out best practices.

"We need to avoid greenwashing and put reality on the table," he suggests. "Most people have a commitment to decarbonisation but [they] have questions as well."

The country's critical minerals sector should benefit from decarbonisation as it supplies the nickel, lithium and rare earths needed by battery makers, electric vehicle manufacturers and renewable energy companies.

Meanwhile, the domestic energy transition — bolstered by government support of renewable projects and a new A$20bn fund unveiled in the budget — is also seen as an opportunity.

'In the absence of political leadership historically we have just decided to get on with it'

Star of the South, backed by the Cbus superannuation fund and international investors, plans to construct Australia's first offshore wind project off the south coast by 2030, and chief executive Charles Rattray says government decisions have helped advance the project.

"By setting targets and committing to clean energy — including offshore wind — Australia has become a vibrant place to invest," he says.

Labor leader: Anthony Albanese

Yet Australia's climate policies are still not ambitious enough for some. Albanese and his ministers have stressed how tough the 2030 target is but have refused demands from the Greens for a moratorium for new fossil fuel projects — including coal — as it would have a devastating impact on Australia's economy and workforce.

The Greens have called for amendments to environmental laws to at least stop projects that would emit more than 100,000 tonnes of carbon a year.

Euan Ritchie, an ecology professor with Deakin University in Victoria, says much more needs to be done, pointing out that a number of species in Australia are under severe threat of extinction due to climate change.

The plight of the Bramble Cay melomys — a small mammal that was the first to be declared extinct due to climate change as rising ocean levels wiped out its habitat — emphasises the risk of inaction, says Ritchie.

"Political commitments appear wafer thin when the same politicians continue to approve the destruction of the homes critically endangered species depend upon," he says.

"Greenhouse gas emissions reduction targets are far below what climate scientists say are essential."

For Pacific islanders, who also face the threat of a rising ocean, the Australian government's policies hit close to home.

Albanese was quick to visit the region after the election to stress the renewed focus on net zero, and subsequently increased development aid and relief — such as funds to Kiribati for drought assistance — to the region.

But some are holding back judgment. "The main frustration is the gap between what is said and what is done," says Tommy Remengesau, a former president of Micronesian country Palau. "We're hoping that this time around it is a different story."

Food and energy crises threaten to distract from climate talks

Energy

Global shocks have pushed nations to look inwards, but some hope COP will refocus attention on the climate crisis, writes *Jessica Rawnsley*

Delegates will arrive at COP27 in Egypt this week preoccupied. The UN climate summit comes at a time of international tumult, with Russia's weaponisation of gas supplies as part of its war in Ukraine, and the ensuing food and energy shocks, triggering worldwide price hikes and economic woe.

Some fear the gas and food crises could derail negotiations on carbon emissions, stalling the world's clean energy transition at a critical juncture.

"So far this year, the geopolitical situation has completely sapped momentum," says Tom Evans, a policy adviser at climate think-tank E3G. As inflation bites and living standards are squeezed, firefighting at home has distracted governments from the fiercer blaze on the horizon.

Food and energy shocks have caused nations to turn inwards, to shore up domestic energy supplies and protect grain stocks. Evans says the situation is different from that of COP26 last year, when the circumstances of the pandemic fostered a more co-operative spirit. "Back then, we had a much more open geopolitical space."

Now, war in Ukraine has brought geopolitical divisions and battered a global food system already weakened by Covid. Developing nations in Asia and Africa find themselves at the centre of these shocks, compounded by extreme weather that has seen drought ravage crops and pushed communities in the Horn of Africa and elsewhere to the brink of famine.

But others hope this collision of crises could spur change at COP27. "The fact that this summit is going to take place on the front lines of the convergent climate, food and energy crises in Africa offers an opportunity like never before," argues Mohamed Adow, director of energy and climate think-tank Power Shift Africa. "This COP is not just a climate conference. It's a conference to help the world address all these intersecting crises."

Food has finally been dragged up the agenda, says Agnes Kalibata, president of the Alliance for a Green Revolution in Africa, having been "the missing piece in climate negotiations for far too long". This year, a coalition of international food organisations is hosting the summit's first pavilion dedicated to food system change.

However, while the energy crisis has exposed the fragility of relying on fossil fuels from potentially hostile neighbours and the better longer-term economics of renewables, the immediate reaction of most governments has been to build up fossil fuel resources.

At COP26 last year, the summit's president Alok Sharma said countries were turning their backs on coal. But he was

'This COP is not just a climate conference. It's to help the world address all these intersecting crises'

almost moved to tears by the failure to convince China and India to agree to a phaseout of coal in the final agreement stage of the Glasgow talks.

Some leaders are still not willing to let fossil fuels go. The UK recently tried to lift a moratorium on fracking. President Joe Biden was seen fist-bumping Mohammed bin Salman, Saudi Arabia's crown prince, in July, in a plea for more oil. Germany's chancellor Olaf Scholz

Well connected: a Ugandan oil facility

also visited the Gulf state in September to secure energy imports. From Japan to the Netherlands, nations are building, reopening or delaying the closure of coal power stations while investing in oil and gas development abroad. Even the UN's Race to Zero initiative has removed an explicit ban on financing new coal projects from its guidelines. It is unlikely that the words "phaseout" will appear in any COP27 texts.

Although some of these moves may be short-term, they still take countries further from their net zero emissions targets. And the pledges and nationally determined contributions (NDCs) — legally binding targets to reduce greenhouse gas emissions — put forward at COP26 will not be enough to limit global warming to the redline target of 2C from the Paris agreement, even if met in full.

Only a small number of governments have strengthened their NDCs since then, so negotiations are more likely to focus on getting countries back on track with reductions and implementing plans to turn those pledges into concrete action.

Energy will be one of many faultlines between developed and developing nations, and these divisions will set the tone of all talks. In Glasgow, developing countries argued they should not be denied the opportunity to boost growth by exploiting their natural gas and oil reserves. Now, some western countries, having historically blocked the investment of development funds in these sectors, are trying to establish new sources of fossil fuels in low-income countries, sparking accusations of hypocrisy.

"Due to the current crises, we're seeing a dash for gas in Africa, effectively turning Africa into Europe's gas station and hooking us on the dirty stuff," says Adow. "And we have African leaders who will want to grab that opportunity, particularly given the rise in fossil fuel prices."

With "together for implementation" as this year's motto, Adow and others are optimistic that the climate summit will compel global leaders to look beyond domestic concerns and geopolitical rivalries — to refocus on the huge task of reaching net zero.

"In a divided world, where we're seeing what's happening with Russia and Ukraine, and between the US, Europe and China. Climate is the thing that may help build the kind of global co-operation we need," Adow says.

Amazon woes overshadow Brazil's farming advances

Agriculture

Brazil's agribusiness sector is pushing to be part of the solution, writes *Michael Stott*

Brazilian agriculture is increasingly a tale of two regions: competitive high-tech farming in the developed southern and central parts of the country, and soaring deforestation in the Amazon to clear land for soya and beef farming.

Farming has grown dramatically this century in the South American nation, making it the world's biggest exporter of soyabeans and beef, on top of traditional commodities such as coffee, cocoa, cotton, citrus and sugar. Agricultural exports from Brazil totalled $125bn last year and the sector now accounts for nearly 30 per cent of GDP.

Since the 1970s, Brazil has funded research into higher yields and better use of technology in agriculture, and backed the sector by promoting farm exports and favourable credit policies. Yet progress in making farming practices more efficient and sustainable risks being undermined by the destruction of the Amazon rainforest.

Luiz Inácio Lula da Silva's victory in last month's presidential election has sparked hopes of a major shift in policy. Lula committed during the campaign to a target of zero deforestation in Brazil, though he did not give a date, and has vowed to restore funds for environmental enforcement which were slashed under President Jair Bolsonaro.

Many in the agribusiness sector argue that Brazil's success in using technology to boost yields proves it has no need to burn down rainforest.

"The gains in productivity have been very substantial," says Walter Schalka, chief executive of pulp and paper producer Suzano. "We don't need new areas of land to farm."

Brazil still only uses 30 per cent of its total land area for agriculture, according to figures from the Brazilian Confederation of Agriculture and Livestock (CNA), compared with the UK's 71 per cent and 52 per cent in the US. A strict forestry code obliges farmers to set aside at least one-fifth of their land for native vegetation without compensation, and 80 per cent in the Amazon.

Suzano keeps 900,000 hectares of native forest alongside its commercial plantations and has set sustainability targets, including emission reduction and improved water use. "Brazil is always painted as the villain but, in fact, the agricultural sector has made great strides" on sustainability, says Schalka.

But there are also land-grabbers who

Up in smoke: an aerial view of burning forest in the Amazon — Douglas Magno/Getty Images

destroy the rainforest and clear the terrain for farming. Under Bolsonaro, enforcement of Brazil's strict environmental laws has been drastically scaled back and the Amazon has lost a forested area bigger than Belgium.

Deforestation rates have risen, fallen and risen again this century. Overall, though, the agricultural output of the Amazon has been steadily increasing. The country's most recent agricultural census, in 2017, found the region was home to 30 per cent of the nation's cattle and the USDA says 42 per cent of Brazil's soya production is from the Amazon.

Some Amazon farming is legal, but a significant proportion occurs on illegally deforested land. Much rural land is not properly registered, complicating enforcement.

Marina Silva, who pioneered measures to cut deforestation as environment minister from 2003-2008 and is tipped for a major role in Lula's new government, says a small segment of the agribusiness sector does understand sustainability, but needs to be more vocal. Across the rest of the industry, "there is a part which doesn't like to get involved in the debate and there's a reactionary, militant part which tries to dominate," she explains.

The non-governmental organisation Global Witness says 70 per cent of deforested Amazon areas are now populated by cattle. Two of the country's three biggest meatpackers, Marfrig and JBS, have committed to using tracing technology to ensure no beef from newly deforested areas enters their supply chains by 2025 (the third, Minerva, has committed to a 2030 date). But campaigners say the controls are not watertight and do not go far enough down the complex supply chains in Brazilian beef farming, where calves can move farm multiple times before reaching the slaughterhouse.

Stung by years of criticism from Europe, many Brazilian farmers instinctively bat away environmental concerns but Felipe Villela, founder of ReNature, a Dutch-Brazilian sustainable agriculture advisory firm, thinks that is misplaced. "A lot of people in Brazilian agribusiness are very defensive," he says. "Some will protectively claim that Brazilian agribusiness is already sustainable. I don't like that. We still have a long way to go."

Villela grew up in a citrus farming family in São Paulo state, in Southeast Brazil, and saw how poor farming practices were degrading the land. A particular bête noire for ReNature is ploughing, which Villela says damages the microbiology of soil and leads to significant carbon emissions. Instead, he says, "seed drills can now plant directly into unploughed soil".

Brazil's agriculture ministry is also pushing a low-carbon farming initiative. Launched in 2012, the so-called ABC Plan claims to have reduced emissions by encouraging, for example, the recovery of degraded fields, no-plough farming and planting trees alongside cattle pastures. The programme now aims to mitigate 1.1bn tonnes of carbon emissions by 2030.

Guilherme Lobato, from the southern farming state of Rio Grande do Sul, runs a start-up, ConnectFARM, which uses data analysis to offer farmers planting advice specific to their land and crops, such as which variety of seed to use and how to optimise fertiliser use. "Fertilisers amount to 60 per cent of farmers' total costs, so accurate measurement is very important," he says. "We help farmers make better decisions."

Ultimately, though, no matter how much Brazilian farmers clean up their act, it will count for little if the country's president cannot get a grip on deforestation. Lula says he will take on this challenge. "Brazil will fight for a living Amazon; a standing tree is worth more than thousands of logs," he said in his victory speech. "That is why we will . . . promote sustainable development."

Alok Sharma Host of last year's Glasgow summit is determined to follow through on role as 'green growth climate warrior', writes *Philippa Nuttall*

UK's COP26 chief 'fully invested' in continued climate champion role

Alok Sharma: COP26 appointment was 'the only time my children have been vaguely excited about my job'
David Levenson/Getty Images

Alok Sharma likes to think of himself as a "green growth climate warrior" after nearly three years as president-designate, and then full-time president, of COP26.

In a world of high emotion, he won a reputation as a calm and effective influence ahead of last year's COP summit in Glasgow, and has retained it ever since.

"Sharma was not known as a political heavyweight but he was willing to put in the countless hours, and air miles required to build the understanding and trust necessary to broker ambitious international agreements," said Tom Burke, founder of the climate think-tank E3G, in the aftermath of the Glasgow event.

This month, Sharma finally concludes his formal role as head of COP by handing over to current president-designate Sameh Shoukry, Egypt's foreign minister, who will become president until the next event in Dubai in November 2023.

How Sharma will use his skills once the COP27 summit concludes this month remains to be seen, but he insisted ahead of the event that managing climate change will be at the heart of his next career move.

His future destiny in UK politics is unclear. A fortnight ago, incoming UK prime minister Rishi Sunak dropped Sharma from cabinet but retained him as the UK's representative and negotiator at Sharm el-Sheikh.

Sharma's unexpected appointment as president-designate of COP26 is well known. It followed the abrupt sacking of his predecessor Claire O'Neill, the original choice of the UK's then-prime minister Boris Johnson, in January 2020. Sharma took over, while still in his role as UK business secretary, before concentrating full-time on organising last November's delayed world summit, and keeping a seat in cabinet, from January 2021.

He readily admits there was no shortage of scepticism about his appointment. "A lot of people said, 'Alok Who?'," Sharma says. "I arrived in my role knowing about COPs but not really understanding the process."

However, the challenges of tackling climate change and environmental damage were not totally alien to him. He cites his wife, daughters and former US vice-president Al Gore as contributors to his "gradual awakening".

Born in India, the Conservative MP for Reading West has spent most of his childhood and working life in the UK.

But spells spent abroad in Germany and Sweden, during an early career in financial services, made Sharma aware there might be less environmentally harmful ways to live. When he moved back to the UK in the late 1990s with his Swedish wife, she was horrified that "we literally chucked everything in one black bin bag".

Some years later, Sharma watched Gore's documentary film *An Inconvenient Truth*.

"It was the only time in my life that I watched a film from start to finish on a plane and then literally turned it back on and watched it again," he says. "I wouldn't say it was a eureka moment — but it was one of those times when you think about the future."

Fatherhood also helped focus his attention. "When you have kids, you obviously think a lot more about this." His youngest daughter, Charlotta, was already something of an environmentalist when he took on the COP presidency.

Sharma's appointment "is the only time my children have been vaguely excited about my job," he says. Charlotta sent her dad a congratulatory text before asking: "What are you going to do?" His daughter, a vegan, also persuaded Sharma to give up meat as his first step to cutting his own emissions.

Sharma is quick to insist that such a move "isn't for everyone". What can benefit everyone, though, is "green growth," he argues. The business and finance communities "absolutely grasp" the climate change challenge, he says. "Net zero and green growth are in their bloodstream."

Government leaders, "even in G20 countries", have "moved very positively on climate change because business leaders are telling them to", he argues.

The Glasgow accord that emerged from the delayed COP26 in the shadow of the Covid pandemic was not viewed as a universal success. Sharma himself choked up after conceding ground to India and China, by watering down a proposed wording from a "phase out" to a "phase down" of coal use, saying he was "deeply sorry" for how the event had concluded.

> 'The cost of inaction is absolutely enormous relative to tackling this issue now'

Nevertheless, the FT pointed to some progress in an editorial, concluding COP26 had "achieved more than expected but less than hoped".

Sharma is passionate about the need to continue pressing for "system change" across the world's leading financial institutions. The mandates of the World Bank and the IMF contain "lots of great stuff", but they were set up decades ago and they contain no mention of climate change, he says.

Alongside the COP process, he wants to see "a Bretton Woods II spirit" — akin to the 1944 international currencies agreement — to "embed the objectives of Paris in the mandates of every part of the global [financial] system".

Multilateral development banks, private banks, central banks and credit rating agencies must all "recognise the systemic risk of climate change and that the cost of inaction is absolutely enormous relative to tackling this issue now and seeing growth and jobs being created", he says.

Despite months of cabinet turmoil under departed prime ministers Boris Johnson and Liz Truss, until last month he remained a cabinet minister of state. It is a period in which the strength of the government's own commitment to cutting the UK's carbon emissions was called into question.

In September, he contradicted Liz Truss by backing the attendance of King Charles at the COP27 summit despite the objections of the recently-installed prime minister. Her attempts to reverse a UK ban on fracking was abandoned by Sunak when he took over from Truss.

Now outside cabinet, Sharma's immediate focus is the climate summit where, while no longer acting as COP president, he will negotiate on behalf of the UK. "We will negotiate as a sovereign nation in a constructive way and help to build consensus," he says. "This is Egypt's COP, but if we are asked to support them, we will."

As the outgoing president of COP26, Sharma will not be drawn on what his future holds after this month's summit.

If circumstances allow — and as advised by former US president Barack Obama — he would at least like to rest and take a holiday with his wife.

Beyond that, his future in domestic politics and as a figure in global leadership on climate change remains unclear — and perhaps not entirely under his control. But, whatever he does next, it will involve "furthering climate action and green growth", insists Sharma. "This is not something I can let go of. I am fully invested."

Watchdogs call for funds to come clean on green finance claims

Sustainable investing

Asset managers face stricter rules on disclosure, says *Patrick Temple-West*

Financial regulators are toughening their stance against so-called 'greenwashing' to ensure climate-conscious investing delivers on its promises.

The energy crisis that has followed Russia's invasion of Ukraine, and the growing threat of global recession, have not dented support for sustainable investing as feared.

Instead, investment has flowed into environmental, social and governance (ESG) funds every month this year, according to Bank of America figures up to August. Meanwhile, conventional funds have faced outflows in some months of this year, the bank said.

So, with the viability of sustainable investing seemingly secured, regulators are pushing to ensure the sector achieves its environmental ambitions.

In October, the UK's Financial Conduct Authority proposed rule changes to tackle greenwashing and rein in the use of terms such as "green" and "ESG" in investment fund marketing. It has recommended establishing three categories of "green" funds and putting a greater burden on asset managers to validate any sustainability claims their funds make in marketing materials.

But the FCA and its overseas counterparts face a challenge in combining their anti-greenwashing rules into an effective global effort to promote environmentally friendly investment products, says Richard Weighell, partner at accounting firm BDO.

"These new rules will need to align closely with other developing international standards," Weighell says. "If there is too great a divergence, this could prove a big regulatory headache for financial services firms operating internationally."

Greenwash police: FCA offices in UK

The EU has led the way in writing rules for this sector. Its Sustainable Finance Disclosure Regulation (SFDR) now categorises investment funds into three categories: conventional; green; and pure green.

Funds in the conventional category do not consider any ESG criteria. Green funds can take a middle-of-the-road approach by considering ESG concerns in their investment strategies. But pure green funds must incorporate sustainable investing into their overall strategies. Half of all assets in European funds are now held in the green and greenest fund categories, according to Morningstar, the investment research group.

Building on the EU's initial SFDR rules, European asset managers will next year also have to disclose certain greenhouse gas emissions and carbon footprints that come from their investments. The aim is to prevent funds from marketing themselves misleadingly as green without changing underlying investment strategies.

In the US, Democrats are fighting to push through ESG rules and climate disclosures under the administration of President Joe Biden. The Securities and Exchange Commission has at least three proposals in the works that would result in significant changes for leading companies and asset managers. Earlier this year, the agency put forward changes that would require Scope 3 emissions — which come from a company's suppliers and customers — to be revealed and would require certain emissions disclosures to be audited.

But the disclosure proposals are opposed by some companies that argue they would drive up costs and expose them to litigation risks. The SEC seems determined to finalise the rules, though — possibly before the end of the year.

"We are going to wind up with a climate disclosure rule for public companies," predicts George Raine, partner at law firm Ropes & Gray. "But that rule will get challenged in court. What we have been advising companies is that you have to have a game plan."

Separately, the SEC has proposed rules determining how asset managers can add ESG and other green terms to their fund names. The agency has also recommended ESG disclosure rules for investment advisers.

Raine fears differing transatlantic ESG disclosure rules could have "enough similarities to be confusing and enough differences to be tricky". Common rules accepted across major jurisdictions would help. But "there is not much of an expectation that the regulators are going to get together and align their frameworks," he warns.

There is one plan for harmonisation, however. The International Financial Reporting Standards Foundation — the global standards-setter for accounting — has set up an independent unit to focus on climate disclosures.

Called the International Sustainability Standards Board, it was launched in 2021 to draw up standards for ESG reporting and is chaired by former Danone chief executive Emmanuel Faber. The body is now designing rules to set a baseline for sustainability disclosures, globally. In October, it announced Scope 3 emissions would be required as part of its disclosures.

But Lauren Anderson, a senior vice-president at the Bank Policy Institute, a US lobbying group, says the proposed Scope 3 requirements will "create an overly aggressive international baseline that many nations would unlikely follow, leading to less convergence".

European crisis risks climate action reputation

OPINION

Nick Butler

The events of the past year have radically altered Europe's energy policy. The goal of achieving net zero before 2050, confirmed 12 months ago at the COP26 meeting in Glasgow, is still in place. But the immediate priority across Europe, now, is to secure energy supplies for the

Southern agenda at 'the African COP'

Room with a view: solar cells on the rooftop of a hotel in Sharm el-Sheikh
Mohamed Abd El Ghany/Reuters

Miles of newly planted palm trees adorn the main avenues of Sharm el-Sheikh, the Egyptian Red Sea resort hosting the UN global climate conference known as COP27, which started on Sunday.

Sharm el-Sheikh is a sprawling town made up almost entirely of hotels built for mass tourism and serviced by cheap charter flights. But the authorities have tried to shore up its green credentials ahead of the gathering — one of biggest events on the international calendar, drawing dozens of world leaders and thousands of politicians, bankers, climate scientists and activists.

A new solar energy plant was inaugurated in the resort in October, and a fleet of electric buses has been launched.

For Egypt, a country grappling with a faltering economy and facing frequent criticism over its human rights record, hosting COP27 is an opportunity to project influence, attract investment, and promote itself as a regional leader.

While the government eyes political and economic gains, Egyptian environmental activists, who operate under restrictive laws that govern civil society, are also hoping the event will help "mainstream" climate concerns and convince the authorities to allow them more space.

The conference has been described by its Egyptian hosts as "the African COP" — and one focused on implementation. The Cairo government will preside over crucial international negotiations and has made clear it will stress the interests of Africa and of the developing world.

It wants the focus to be on promises made since the 2015 Paris accord — and on securing the funds needed to help the most vulnerable countries reduce emissions and adapt to climate change.

"Egypt has a leadership position in the African continent and the Arab world," said Sameh Shoukry, the foreign minister and president of COP27 ahead of the meeting. "We've been focused on implementation, and we've geared our message to implementation. Paris and Glasgow [COP26] finalised the road map of ambition, but it is Sharm el-Sheikh which should be the implementation of all those commitments."

He points out that rich countries, which account for most carbon emissions, have been slow at fulfilling pledges to fund adaptation measures in poor countries, where the damaging impact of climate change is already being felt.

"Adaptation has never been taken as seriously as it should," argues Mahmoud Mohieldin, a former Egyptian investment minister chosen by Cairo to be its UN high-level champion for climate action. A former senior vice-president of the World Bank and previously Egyptian investment minister, he is charged with marshalling support from businesses and other non-governmental actors to tackle and help remedy climate change.

Mohieldin says: "I have a very simple — call it naive — metric. Does it have financial funding or not? OK, you can talk about it, you can have conferences about it, you can write volumes about it, but it doesn't have adequate funding."

He notes that the $100bn a year pledged by the developing world to help poorer countries adapt to climate change has never been paid in full. Even if this were delivered, "this is not going to be covering more than 3 per cent of the total gap of funding for climate action," he points out.

Cairo also wants to attract investment to a set of green projects in renewable energy, water and food that it will promote at the conference. Rania al-Mashat, minister of international co-operation, says the country has made climate action a central "part of the conversation" with donors and businesses.

The aim, she says, is to mobilise funding and expertise from a range of sources, including multilateral organisations and to "crowd in private sector finance".

The projects include $10bn of investment to replace fossil fuel power stations with renewable energy, about $3.5bn in schemes to help small farmers deal with soil salinity, desertification and rising temperatures, and a further $1.5bn committed to other desalination and irrigation schemes. The UN said last month that, along with partner organisations, it would provide Egypt $2bn in loans to boost food security.

Egyptian environmentalists hope the attention surrounding the conference will help place climate concerns on the national agenda and raise public awareness. Ragia Elgerzawy, environmental researcher at the Egyptian Initiative for Personal Rights, a human rights group, says environmental concerns need to be "mainstreamed". She points to massive road widening projects in Cairo which relieve congestion but lead to more traffic and frequently involve the destruction of scarce green space.

> 'I have a very simple — call it naive — metric. Does it have financial funding or not?'

"Solutions to environmental issues need the participation of all stakeholders, not just experts," she says. "The environmental dimension is not yet among the priorities when projects are being decided. Environmental concerns should be seen as equal to economic returns."

Authorities welcome activists who work on repairing environmental damage, she notes. But she says there is less co-operation with those who wanted to be part of "decision making, drawing up policies, establishing rules and representing affected people".

However, hosting COP27 has encouraged more engagement between environmentalists and the government. Mohamed Kamal, co-director of Greenish, a Cairo-based environmental campaign group, says: "Stakeholders with whom we have never been able to have a discussion are now willing to sit at the table with us. I'm talking about every single level of authority in Egypt and the public sector."

COP, he adds, is an opportunity to reach out to potential partners.

"We want to showcase our work with vulnerable communities, the type of support they need and the funding they need," he says.

Egypt's climate activists fear consequences of protest

Civil society

Activists are concerned about strict controls to limit the chances of embarrassing demonstrations at COP27, writes *Peter Schwartzstein*

Global climate conferences have almost always been accompanied by a big, vocal activist presence. But this month's COP27, in Sharm el-Sheikh, is set to look and sound rather different.

Over the past decade, Egypt has all but banned protest and cracked down on independent civil society as it has become increasingly autocratic. This has led to scepticism among international and local campaign groups about whether they will be able to participate in discussions, let alone effectively influence proceedings.

Senior Egyptian officials have promised that, in this instance at least, protest will be permitted. In May, foreign minister Sameh Shoukry pledged to have "a facility adjacent to the conference centre that will provide [activists] the full opportunity of participation, of activism, of demonstration, of voicing that opinion". However, while some Egyptian activists say government engagement in the run-up to COP has been better than they have ever experienced, many feel it is still insufficient and has mostly come from less powerful parts of government.

Few environmentalists seem wholly convinced by official assurances. Campaigners say they are wary of organising unsanctioned demonstrations for fear of getting activists from the global south into trouble. Those activists are uncertain whether they will even make it to Egypt. Many are battling some of the same struggles to secure visas that they frequently had ahead of European and North American events.

Online groups focused on environmentalism in Sub-Saharan Africa have voiced complaints about Egyptian embassy paperwork demands and the cost of accommodation in Sharm el-Sheikh. Some hotel operators have raised prices up to 10 times beyond their usual levels, threatening to compromise a conference that was billed as a more accessible than COP26 in Glasgow. "You need to win the lottery," said one COP-bound Jordanian activist on Facebook.

SOS: a school climate strike placard

Wariest of all are independent Egyptian environmentalists. As documented in a recent Human Rights Watch (HRW) report, they have been stifled by severe restrictions on funding, NGO registration and research permits. Many anticipate a serious backlash were they to do anything that authorities perceive as embarrassing while the eyes of the world are upon them.

"When COP ends, they might start looking to see who is doing what," a longtime activist told HRW. "The security apparatuses will probably, now more than ever before, focus on environmental civil society."

Omar Elmawi, co-ordinator for Stop EACOP, an East African environmental group, and member of the COP27 Coalition, says: "We are still looking at possibilities but we might have to settle for actions inside the COP [main convention centre] and not outside, as we are a bit worried about the security outside. We hope there would not be reprisals after international activists have left COP and local organisations end up being targeted."

Recent events suggest that he has good reason to be sceptical about Cairo's promises. Egyptian campaigners say authorities are training state-affiliated NGOs to protest about "safe" subjects this month and deliver the impression of a bustling local civil society.

Meanwhile, some local human rights organisations, such as the Egyptian Commission for Rights and Freedoms (ECRF), have been denied COP accreditation. And, less than 60 miles from the COP convention centre, the state is ignoring objections of local activists and developing the area around St Catherine's Monastery on Mount Sinai, a Unesco world heritage site of historic and environmental significance.

For the relatives of activists who are languishing in prison because of their work, the award to Egypt of the world's marquee climate event is an enduring injustice.

"It's tragic that the [President Abdel Fattah al-Sisi] regime is able to greenwash environmental and human rights violations documented by the UN itself," says Mohamed Amasha, a PhD student at Yale in the US and son of Ahmed Abdelsattar Amasha, a longtime environmental and human rights advocate. Amasha senior has been imprisoned without charge in Egypt for more than two years.

"The regime is deliberately cutting environmentalist attendees from the harsh environmental reality that most Egyptians endure on a daily basis," his son says.

Even so, most activists and NGOs in Egypt and across the Middle East welcome the decision to hold the COP locally, despite the possible pitfalls. COP28 will be held in Dubai next year.

They see this as an opportunity to mobilise authorities that have so far been slow to engage on environmental problems. Egypt is already suffering from devastating climate shocks that include more intense heatwaves, fiercer sandstorms, and a rising sea level along the Mediterranean coast.

It is also a chance to secure much-needed climate adaptation funding for themselves and their global south peers, and in a political environment that might be more conducive than some recent COPs. But, with war in Ukraine distracting attention from climate action, Egyptian and international campaigners have expressed doubts about how much can be achieved in Sharm el-Sheikh unless organisers allow them the freedom to fully participate.

At past COPs, some argue that strong and relatively uninhibited civil society participation helped pressure state and business delegates into more meaningful commitments. "We need more climate activism, not less," says Richard Pearshouse, director of environment and human rights at HRW. "We need activists and protests, environmental journalists, independent courts. Absent those, we're not going to come close to the climate policies we need."

ADVERTISEMENT

The 9th Innovation for Cool Earth Forum, ICEF2022

TOKYO

ICEF Innovation for Cool Earth Forum

Low-Carbon Innovation in a Time of Crises

GX WEEK

The ninth annual meeting of the Innovation for Cool Earth Forum was held in Tokyo on October 5 and 6, co-hosted by Japan's Ministry of Economy, Trade and Industry (METI) and New Energy and Industrial Technology Development Organization (NEDO) with a hybrid online/in-person model. As one of ten conferences held during METI's Tokyo GX Week, ICEF2022 hosted discussions about policy and technological innovation between participants from governments, NGOs, academia, and industry around the world. This year's theme was the role of innovation in overcoming the current global crises.

Yasutoshi Nishimura, Minister of Economy, Trade and Industry

Hiroaki Ishizuka, Chairman, New Energy and Industrial Technology Development Organization (NEDO)

KEYNOTE

The global energy crisis is accelerating clean and secure energy technologies

from left: **Fatih Birol**, Executive Director, International Energy Agency (IEA); **Nobuo Tanaka**, Chair, Innovation for Cool Earth Forum (ICEF) Steering Committee; Former Executive Director, International Energy Agency (IEA)

We are in the middle of the world's first true energy crisis. Unlike the oil crisis of the 1970s, it involves oil, gas, coal and electricity and it affects the entire world. There is currently an uptick in the use of polluting energy sources like coal, but this will not last more than a couple of years. Many governments are now putting real money on the table to accelerate clean and secure energy technologies in a bid to achieve energy security and a clean energy future. The US has passed the Inflation Reduction Act with incentives for EVs, electrolyzers and nuclear power. Japan has its "green transformation" focused on hydrogen and nuclear power. The US, EU, China and Japan will compete to secure first-mover advantage in the next chapter of energy technology and competition brings prices down. Reaching our targets will be difficult, but the crisis will give additional impetus to help us address climate challenges.

Progress by innovation: New applications for green hydrogen

Gerd Müller, Director General, United Nations Industrial Development Organization (UNIDO)

UNIDO's motto is "Progress by Innovation." To create low-carbon, climate-resilient economies, the world needs innovation in technology, financing, and policy frameworks. Innovation creates green jobs and improves productivity across the industrial value chain.

UNIDO has launched a global partnership program to foster the application of green hydrogen in industry. Hydrogen has potential for power generation, transportation, industrial process, and heating, as well as in fuel cells. Our program supports countries' efforts to reap these benefits by developing local industry, enhancing food and energy security, and supplying energy to remote areas.

Green hydrogen could revolutionize traditional energy systems, making them cleaner and more sustainable, but many challenges remain to using it at scale. Innovation is needed to bridge the gaps in hydrogen value chains. The private sector will play a critical role in financing, unlocking trillions of dollars to scale up climate action, but governments must create a stable framework for investment. ICEF brings stakeholders together for these necessary discussions.

Africa and Asia can forge a path to renewable energy

from left: **Nobuo Tanaka**, Chair, Innovation for Cool Earth Forum (ICEF) Steering Committee; Former Executive Director, International Energy Agency (IEA); **Francesco La Camera**, Director-General of International Renewable Energy Agency (IRENA)

Renewable energy is not only good for the environment, GDP, and job creation, it's also good for resilience and energy independence. The current crisis will accelerate the path to renewables. The EU and the US are wealthy enough to stand a chance of decarbonizing at speed, but what about emerging markets? How can the rich world help emerging markets with technological transfer and financing new technologies? We need to strengthen international cooperation to get results. The Paris Agreement is not at stake in the developed world, it is at stake in Africa and Asia. Africa has great potential for renewable energy, so why not leapfrog to a new energy system there? Decarbonization is challenging in Asia, because of its coal- and gas-dependent heavy industry sector, but as green hydrogen becomes competitive it will play a key role. We need specific, concrete results by 2030, or climate change will become unstoppable. The key is to move beyond political negotiations and take an action-oriented approach.

Nuclear power is essential for energy security

Rahm Emanuel, Ambassador Extraordinary and Plenipotentiary of the United States of America to Japan

I compliment Prime Minister Kishida, his administration, and Japan as a whole for their commitments on climate change, energy, and security, even before the war. Going forward, energy security will be as valuable as market access was over the last 20 years. The United States has no more valuable partner than Japan both for national security and for energy security. Both countries are leaders in small modular reactor (SMR) technology, with Japanese companies being major investors in the Oregon-based company that is commercializing SMRs. The two countries should collaborate on working out how to dispose of nuclear waste safely and how to extend the life of existing plants beyond the current 40-year span. Nuclear power will play an essential role in accelerating the achievement of climate goals between 2030 and 2050. There was talk of phasing out nuclear power, but if we are to achieve our climate and energy-security goals, it must be part of the solution. Japan and the US can also partner in areas like hydrogen, storage batteries and LNG.

PLENARY SESSIONS

Innovating policy as well as technology

The fragmenting global order and energy transition reinforce one another, making the world more dangerous and the energy transformation more difficult. The fact that energy security is identified with national security has created enthusiasm for the energy transition even in the politically polarized United States. With its novel approach of focusing more on incentives than penalties, President Biden's Inflation Reduction Act may well motivate other countries.

Globally, policymakers will need to address multiple issues ranging from justice—the welfare of coal-mining communities in emerging markets or protections for miners of critical minerals—to the financing of transition assets and upgrades for transmission systems. While competition boosts affordability and innovation, collaboration, especially with China and India, is also crucial.

Energy transition leaving nobody behind

The key elements of a just and orderly energy transition include social welfare, labor protections, inclusive decision-making, and equity in cost distribution. The role of national governments is as a pivot between international and local concerns. They should delegate power downward, taking their priorities from the communities they answer to, but at the same time they must also reach upward to the global level, promoting standards and international consensus with fairness in mind. Decarbonization will be a greater challenge for developing countries where energy use is yet to peak, but could represent a chance to leapfrog to green infrastructure. In all cases, change must be people-centric, developed organically with communities. Only inclusive processes can deliver distributively just outcomes.

Lessons from ICEF2022: Summary and reflections

Geopolitical tensions were a recurring theme throughout ICEF2022's discussions. Climate change requires a global strategy. However, as the situation in Ukraine has shown, when conflict arises multilateral agreements are abandoned. Peace is an essential condition for net zero. Panelists also agreed that food and agriculture deserve more attention from ICEF. These sectors produce a third of total greenhouse gas equivalent emissions, yet 800 million people still go hungry, and 30% of production is wasted. Genetic engineering and other new technologies could reduce these impacts.

Looking ahead to the future of ICEF, panelists called for early-career colleagues to be given even more central roles in future forums. Social media outreach could also bring ICEF's ideas to new generations.

TECHNOLOGY SESSIONS

Demand-driven energy transformation

Lifestyle changes by empowered consumers will increase energy efficiency and expand use of renewable sources. With flexible infrastructure, DX, and honest communication, societies can create sustainable "sufficiency corridors" where everyone has enough and the planet's richness and beauty are preserved.

Carbon-neutral heat and transport with hydrogen and e-fuels

Hydrogen and e-fuels synthesized from carbon dioxide will be vital in hard-to-abate sectors like heat and transport. Industrial furnaces, representing 74% of heat demand, can be fueled by hydrogen, ammonia, and biofuels. Innovation and political support are needed to bridge price gaps.

Carbon dioxide removal: A key technology

Carbon dioxide removal is a key technology for meeting the Paris Agreement goals, but going from zero to 5 gigatons of carbon dioxide removal in just three decades will be a major challenge. The United States' Bipartisan Infrastructure Law included $2.5 billion for geologic storage and $3.5 billion for direct air capture (DAC). DAC plants are already scaling up dramatically, with their capacity rising by three orders of magnitude in a short period. Nature-based solutions involving forests and oceans also look promising and climate smart agriculture could transform the food and agriculture sector from a major emitter to major absorber of carbon. It is important to invest in a suite of technologies, since we don't know which will be cost-efficient and scale best.

Sustainable nuclear systems

Nuclear power can support energy security and reduce carbon dioxide emissions. To be truly sustainable, four conditions need to be met: a reduced risk of accidents; clear plans for the disposal of waste; proliferation-resistant technology; and meaningful engagement with communities.

Critical minerals for sustainable and resilient value chains

"No minerals, no clean energy transition": this slogan encapsulates the need for a stable supply of rare earth and other metals in order to deploy the technology needed for the clean energy revolution. Earth's resources are sufficient, but we must accelerate and diversify production to mitigate risk. Challenges include geographical concentration and the geopolitical complications this brings, long mining project timelines, and the negative image of mining itself. Education will be needed to show the younger generation how today's mines operate with more consideration for communities and the environment and train new innovators and professionals to sustainably procure the resources the world needs. Expectations are also high for alternative sources of needed minerals, such as deep-sea mud rich in rare earth elements.

CONVERSATION BETWEEN ICEF STEERING COMMITTEE MEMBERS AND YOUTH EXPERTS

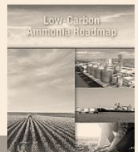
ICEF steering committee members and younger attendees met to exchange opinions on topics ranging from green entrepreneurship to the potential of social media.

CLOSING SESSION

Accelerating our efforts in the face of crises

ICEF has diversity and inclusiveness in its DNA by design, as Kenji Yamaji of the ICEF steering committee noted in his announcement of the "Statement" from the steering committee, and diversified approaches are exactly what the world needs to overcome the many crises unfolding as we speak. With carbon dioxide emissions rebounding after a temporary decrease in 2020, action must be accelerated, and government support will be vital.

ICEF Chair Nobuo Tanaka reiterated this theme, noting that competition between great powers may accelerate the green transformation, but that no country will emerge from this competition a winner without ambitious goals and the political will to embrace entirely new energy paradigms.



A draft of the ICEF Low-Carbon Ammonia Roadmap was released at ICEF2022.

This year's ICEF infographic shows diversified, action-oriented innovation based on existing opportunities as a means of promoting green transformation and overcoming the surrounding crises.

Hosts

METI Ministry of Economy, Trade and Industry

NEDO New Energy and Industrial Technology Development Organization JAPAN

For on-demand streaming video of all ICEF sessions, visit **https://www.youtube.com/channel/UC7ouNL9NbvDomDTfiubi8iw** or scan this QR code.

'Loss and damage' stalemate is at breaking point

OPINION

Pilita Clark

It is often hard to predict what will happen at the huge annual UN talks that, since 1995, have been held to thrash out global climate change agreements.

But not this year. Much of the November COP27 meeting in the Egyptian resort city of Sharm el-Sheikh will be consumed by one of the most protracted, divisive and confusing issues ever to arise in these negotiations: "loss and damage".

With luck, the COP27 conference will finally start to resolve this festering problem. Actually, make that: with a lot of luck.

The idea of climate loss and damage first emerged more than 30 years ago in small island countries — the places where lives and livelihoods were most at risk from rising sea levels and vicious storms. In the early 1990s, these nations began to call for measures, such as an international insurance system or a global fund, bankrolled by richer countries, to help cover such losses.

However, the UN climate talks ended up producing two different types of funding. "Adaptation" financing was supposed to help countries adapt to the effects of climate change, by funding projects such as flood barriers or hurricane early warning systems. "Mitigation" funds were aimed at helping poorer countries decarbonise by building, say, electric bus services or solar farms.

The idea of directing money towards irrecoverable losses and costly damages did not take off. Instead, it became a flashpoint in talks that have long divided countries: those that grew rich by burning fossil fuels on one side; and, on the other, poor nations that did almost nothing to warm the planet yet suffer some of the worst effects of climate change.

"For many small island countries and developing nations, loss and damage is a euphemism for liability and compensation — one way to extract money and support from wealthy countries most responsible for climate change," says Lisa Vanhala, a political-science professor at University College London who has spent years researching loss and damage.

"But the US, European Union and many other countries have been correspondingly nervous about legally admitting liability for climate damages or opening themselves up to potentially bottomless compensation claims."

This stalemate continued, even as the physical evidence of climate change became harder to ignore, until 2013. More than 6,000 people died that year when Typhoon Haiyan, one of the most powerful tropical cyclones on record, tore through the Philippines — just a year after Typhoon Bopha claimed more than 1,000 lives in the same country. Adaptation money was no match for such destruction.

At the 2013 COP19 climate conference in Warsaw, Poland — where the Philippines' chief negotiator wept as he spoke of the "hell storm" battering his country — loss and damage finally received institutional recognition.

In the clunky words of the UN, a "Warsaw International Mechanism" was set up to expand understanding of the loss and damage concept and boost efforts to address it. But progress was glacial. Successive COPs produced more promises of dialogue and study, but rich countries continued to resist demands for concrete loss and damage funding.

Meanwhile, researchers estimated developing countries could face up to $580bn in annual climate damages by 2030, and more than $1tn by 2050.

Anger over this stand-off has reached a critical stage in the run-up to COP27.

'Hell storm': typhoon damage to a Philippine coastal town
Erik De Castro/Reuters

> 'With luck, COP27 will finally start to resolve this festering problem'

Many negotiators will arrive from developing countries battling food, fuel and debt crises as they struggle to recover from the pandemic.

Some, like Pakistan, also embody loss and damage: it suffered horrific floods this year that killed more than 1,400 people and caused an estimated $40bn of damages and a 2.2 per cent hit to GDP.

Pakistan is the current chair of "the G77 and China", a powerful coalition of more than 100 developing countries that often negotiate as a unit at the UN talks. That group is expected to back a plan that has long been advocated by another negotiating group, the Alliance of Small Island States, or AOSIS, to set up a dedicated loss and damage response fund.

Michai Robertson, lead negotiator on climate finance for AOSIS, says the fund would in no way amount to climate reparations or open-ended compensation. "Funding would be mobilised primarily from voluntary sources, and allocated specifically for activities to respond to climate losses and damage," he says.

Where would the money come from? A range of ideas have been raised, including taxes on the super-rich, or fossil fuel companies and flights. Some wealthy countries now recognise the need for more concrete action. Denmark this year became the first nation to offer loss and damage funding, with a pledge of around $13mn.

But other rich nations are backing alternative plans, such as subsidised insurance systems, which they argue would deliver funding faster to countries most in need. That is important, says Robertson.

They do not, however, begin to address non-economic damage such as the permanent loss of territory, culture and ecosystems. Also, he says, as climate impacts become more frequent and intense, many assets will become uninsurable.

Can a compromise be reached in Sharm el-Sheikh? If history is a guide, it's a long shot. But so is the idea that some sort of loss and damage funding can again be pushed down the road for yet another year.

Pilita Clark is an FT business columnist

Freetown mayor battles urban disaster threat to slums

Adaptation

Sierra Leone's capital is attempting to reverse deforestation to reduce flooding risk, write *Murray Withers* and *Aanu Adeoye*

Across West Africa, the damage wrought by the rainy season increases every year.

In Nigeria, officials blame a lethal combination of heavier rainfall caused by climate change and poor planning for floods last month that killed 600 people and displaced more than a million.

In Freetown, Sierra Leone's capital, the effects of climate change are aggravated by rampant and unplanned development. Deforested hillsides and clogged-up waterways suffer regular mudslides and floods.

Slum dwellings — often erected on land reclaimed from the sea and built without permits using cheap materials such as corrugated metal sheets — offer Freetonians scant protection from higher temperatures, stronger storms, and rising sea levels. Climate change is a financial burden, too: Sierra Leone estimates it will need to spend $90mn a year on adaptation or about 2.3 per cent of its GDP.

But Yvonne Aki-Sawyerr, the city's mayor since 2018, is determined to lead the way in climate mitigation by reforesting the hills around the capital and calling for an overhaul of land planning laws.

"We are facing disaster after disaster," says Aki-Sawyerr. "There is a significant interface between climate-related events and how we build, where we build, and what we build."

Heavy rainfall hit Sierra Leone between August and September, causing flash floods and mudslides that destroyed thousands of homes in Freetown. "We need to move people out of areas that are literally disaster-prone," she says.

Aki-Sawyerr is calling for the ministry of lands to "engage" in planning, so that the system can become an "effective Aki-Sawyerr puts it, Freetown's challenge "is exacerbated by the fact that construction happens anywhere and everywhere".

The mayor says there are now 74 unauthorised settlements or slums in the city whose ad hoc development is typical of fast-growing African cities.

Migrants from rural areas where some crops now struggle to grow flock to these areas. This has fuelled Freetown's "exponential growth in the last 20 years" to between 1.2mn and 1.5mn, Aki-Sawyerr points out. "That growth has not been planned, it has been done without any sort of environmental considerations, so there's adaptation that needs to be done."

The slums typify the challenge. Mud and silt accumulate with waste in waterways, shacks are built over and sometimes within culverts too; when the rain comes there is nowhere for the water to go.

> 'We need to move people out of areas that are literally disaster-prone'

As a member of the former president's Ebola recovery team, the mayor's decision to run for office was partly based on a lack of action over the continued deforestation — even after the August 2017 mudslides that resulted in the deaths of 1,000 people.

Under Aki-Sawyerr, Freetown has embarked on an innovative tree planting programme to increase the capital's vegetation cover by 50 per cent. Set up with funding from the World Bank and the Global Environment Facility, the #FreetownTheTreetown campaign connects nurseries with workers who plant trees and record their growth and the overall increase in canopy cover, via an app. More than 550 jobs have been created under the scheme, which covers both municipal and private land. Reflecting the wider planning problems, Aki-Sawyerr says there have been some tree losses but "the monitors work hard with communities to protect them and the survival rates have been high".

The target of planting 1mn trees should be achieved by October next year. She hopes the tree planting programme will be the model for urban leaders across the world in adding green lungs to cities.

While Freetown is embracing reforestation and aiming to protect citizens from consistently hotter temperatures — last year the capital was one of three cities to appoint a chief heat officer — establishing a functional planning regime is a bigger challenge. Aki-Sawyerr says the cost is manageable but "the obstacle to bringing in an environmentally sensitive building permits regime is political will".

She belongs to the opposition All People's Congress (APC) and has often clashed with the ruling Sierra Leone People's party. Dozens died in anti-government protests over the rising cost of living in August. As Sierra Leone prepares for an election next June, President Julius Maada Bio accused Aki-Sawyerr's APC of stoking the unrest.

The country is currently on a UN list of least developed nations considered highly vulnerable to economic and environmental shocks, which makes it eligible for enhanced support. But Aki-Sawyerr is frustrated by the lack of aid.

She says that achieving progress "can only be done if you have got the money to do it" — and the task has become harder as international assistance dries up and more governments seek to protect their populations from the cost of living crisis.

urban management tool" that stops buildings being erected without permission or on sites that harm the environment.

"I'm not asking to be in charge of giving out land [but] people need an idea of what can be built," she says. As


Aki-Sawyerr: mayor of Freetown

"Climate change is a global issue but causes local pain," she told a Gates Foundation conference of global leaders in New York in September. "Communities cannot do it on their own. They need help in the form of investment and sponsorship."

ADVERTISEMENT

Nikkei SDGs Forum Symposium

SUSTAINABLE DEVELOPMENT GOALS

The Autumn 2022 Nikkei SDGs Forum Symposium was held in Tokyo on September 12. Also livestreamed on Nikkei Channel, the symposium brought together participants from industry, finance, and academia to discuss challenges and opportunities around the SDGs.

PANEL DISCUSSION

Startups that adopt ESG management early outperform


From left: **Kathy Matsui**, General Partner, MPower Partners; **Rina Akimoto**, CEO, vivid garden; **Katsuhito Mihashi**, CEO, famitra; **Arisa Sakanashi**, CEO, mederi; **Koichi Sakai**, Publisher, *Nikkei ESG*

Moderator **Koichi Sakai** launched the discussion by referring to a recent report which showed that over 90% of startups benefit from ESG integration. **Kathy Matsui**, a general partner at MPower, the ESG-focused VC fund which coauthored the report with Boston Consulting Group, stressed that an ESG mindset promotes growth by enhancing everything from employee retention to risk reduction. **Rina Akimoto**, who launched Tabe Choku, an online food market connecting farmers and consumers, admitted that her ESG credentials were the more the product of accident than design. "I'm a woman, so there are more women in my company and my business happens to be about conserving a richer environment. As we grow, though, we'll need to become more ESG-conscious and build a foundation," she said.

Katsuhito Mihashi, founder of an "age-tech" company that lowers the cost of setting up trusts for families when an aging parent has dementia, went into the business partly because of its positive social impact. His recent codification of the company's core values was done specifically to equip his employees with both a clear decision-making framework and an "SDG mindset." **Arisa Sakanashi**, whose business provides online consultation and next-day delivery for birth control pills, was very clear that she was helping deliver Goal 3 (Food, health and well-being) and Goal 5 (Gender Equality). Her business is growing organically, as women ask their employers to sign them up as part of their benefit package.

In contrast to large companies which take time to change, smaller companies are more flexible and often more conscious of ESG issues, Matsui said. Entrepreneurs always have passion, but passion alone is not enough. As an investor, she looks for companies that use technology to solve societal challenges and are committed to integrating ESG considerations in areas like diversity, data security, and governance. Ultimately, truly disruptive companies like Amazon or AirBnB not only require good technology, but a sustainable business model as well.

PANEL DISCUSSION

Young leaders combining passion and persistence to change the world


From left: **Taichi Ichikawa**, CEO & Co-Founder, World Road; **Caritta Seppa**, Co-founder & COO, Tespack; **Zubair Junjunia**, Founder, ZNotes; **Aminetou Bilal**, Founder & President, Selfie Mbalite NGO; **Norichika Kanie**, Professor, Graduate School of Media and Governance, Keio University

One Young World is an annual forum for young leaders that welcomes delegates from more than 190 countries each year. Moderator **Taichi Ichikawa** attended as a student and was inspired to produce the book *We Have a Dream*, 70% of whose contributors were fellow attendees. He led a lively discussion between several of these contributors, with **Norichika Kanie** offering another perspective.

Caritta Seppa's company Tespack produces an all-in-one backpack that can power laptops and other equipment to create a "portable digital classroom" where infrastructure is lacking. "When you are passionate about what you do, you can find ways through challenges," she noted. This applies equally to the SDGs.

Education equality is also a focus for **Zubair Junjunia**. His website ZNotes began as a place to share his own notes, but soon developed into a hub for mutual aid between students that has reached almost 4 million students globally. While the language barrier remains a challenge to creating a truly level global playing field, work is underway to address this, and Junjunia and Kanie discussed the possibility of ZNotes working with existing international educational networks.

Aminetou Bilal launched #SelfieMbalite, a social media campaign to clean up Mauritania that has since expanded to tree-planting and Covid-19-related activities. She learned from the success of a similar campaign in another country, but adapted it to Mauritanian needs and cultural norms (*mbalite* means "rubbish" in the local language). "The campaign succeeded because it addresses a real problem that people are aware of," she explained.

In closing, the three panelists were asked to offer a final word of advice. Seppa stressed the importance of persistence in the face of initial scepticism: "Don't give up after you hear the first no." Junjunia's advice was simple: "You have to start now." Even the simplest website can do good than grand ambitions that are never realized. Bilal reiterated Seppa's earlier call to stay passionate, saying, "Without passion, you will not overcome your challenges—and there will always be challenges."

PRIVATE SECTOR

Using the investment chain to advance sustainability


Riyo Azechi, Deputy Head of Corporate Unit, Senior Managing Director, Nomura Asset Management

Countries from the EU to Japan are seeking to both achieve economic growth and address urgent social and environmental problems. Nomura Asset Management is contributing to these twin goals through its activities as an asset manager. By actively engaging with the companies in its investment portfolio and encouraging them to focus more on ESG, Nomura drives enhancements in corporate value that produce higher returns for investors, helping to create social value in a "virtuous cycle of investment." At the micro level, Nomura's efforts to bring the sustainable society closer include boosting financial literacy and contributing to regional revitalisation via targeted investment trusts.

Consulting as a force for sustainability: Build Beyond As One.


Tatsuya Kamoi, President & CEO, ABeam Consulting

ABeam Consulting takes a twofold approach to sustainability. Internally it promotes workstyle innovation for its staff through the ABeam Business Athlete campaign. Staff also work pro bono for international NGOs and NPOs like WaterAid and Room to Read, while the company creates jobs for women in regional Japan via SAP skills training. On the project side, ABeam is using data analytics to give companies more insight into their non-financial information, helping local governments, factories, and business create renewable energy communities, and working with insurance companies to enhance local natural-disaster resilience by analysing satellite images of floods.

Promoting the circular economy and decarbonisation


Toshio Kitamura, Director & Senior Managing Executive Officer, Tokyo Century Corporation

Tokyo Century has set 2040 as its target date for achieving carbon neutrality, a full 10 years ahead of the Japanese government. Leasing can help realise the circular economy by contributing to the 3Rs (reduce, reuse and recycle). CSI Leasing, a Tokyo Century subsidiary specialising in IT equipment, exemplifies this, reusing 90% of its equipment and recycling the remaining 10%. Another way Tokyo Century contributes to the decarbonised society is via participation in the joint credit mechanism (JCM), in which the Japanese government subsidises the installation costs or lease payments for solar-power projects in Asia in return for carbon credits.

We create, we connect: Collaborations for sustainability


Yo Honma, Representative Director, President & CEO, NTT DATA

NTT DATA has two great strengths: the power to create and the power to connect. Combining these to empower stakeholders through growth promotes social and environmental goals both directly and indirectly. As examples, the Kashiwanoha Smart City project uses NTT DATA technology to improve healthcare outcomes and longevity through data-sharing, while the recently launched D-Resilio platform enhances organisational collaboration and data collection to better equip governments, infrastructure, and society to respond to disasters. More broadly, NTT promotes an "Interconnected DX" model, in which digital transformation is used to enhance sharing and collaboration, multiplying its benefits across partner-

Building a safe, sustainable future—together


Shinichi Hirose, President & CEO, Tokio Marine & Nichido Fire Insurance

Tokio Marine is Japan's oldest insurance company, with over 140 years of helping clients weather unexpected storms. Today it offers "risk consulting" to help clients navigate the threat of climate change and support social decarbonisation. This includes insurance for sustainable energy projects to make them feasible for developing economies. Tokio Marine has also acted as a Japanese voice in projects like the Task Force on Climate-Related Financial Disclosures (TCFD), and in April 2022 it co-founded CORE, a disaster prevention and mitigation consortium that will heighten societal resilience through collaboration between industry, government, and individuals, even across national boundaries.

Long-Term Value goes beyond the balance sheet


Tokuya Takizawa, Chief Sustainability Officer, EY Japan

In the past, businesses were judged chiefly on their profitability. Today's consumers and investors increasingly expect businesses to create the kind of Long-Term Value (LTV) that cannot be shown on a traditional balance sheet. The Embankment Project for Inclusive Capitalism (EPIC), created by the Coalition for Inclusive Capitalism and EY, offers new metrics for measuring and communicating this value. This lets businesses broaden their focus beyond the short-term and contribute to initiatives like the SDGs. If the full compass of the SDGs seems daunting, the solution is to start small. Even beginning with a single goal can lead to winning stakeholder trust while building a better working world.

KEYNOTE SPEECHES

Building peace in a time of conflict


Junichi Yamada, Executive Senior Vice President, Japan International Cooperation Agency (JICA)

In promoting the nexus of humanitarianism, development, and peace, JICA is a global supporter of SDGs efforts. This year, with armed conflicts at a record high, Goal 16 was particularly salient: "Peace, justice, and strong institutions."

JICA has long supported developing countries struggling with conflict. In 2022, the agency provided Ukraine with ¥78 billion in emergency funding to maintain government services like healthcare and education during the military invasion. It also helped Moldova give urgent medical care to Ukrainian refugees, sharing lessons learned after Japan's 2011 earthquake and tsunami.

In July, JICA launched its first-ever Peacebuilding Bonds. These will fund projects to promote peace and justice globally by building resilient state and societies in developing countries affected by violent conflict.

The first global energy crisis: A chance for change


Nobuo Tanaka, Chair, Innovation for Cool Earth Forum (ICEF) Steering Committee; Former Executive Director, International Energy Agency (IEA)

The IEA was born of the 1973 oil crisis. Today, we face the first global energy crisis. Germany's current woes show the dangers of overreliance on fossil fuels from a single source. At the same time, current emissions reduction pledges are insufficient to achieve Net Zero by 2050. Part of the solution may be innovations in nuclear power, but we must not dismiss the concerns of those betrayed by past promises of safety. Carbon removal and hydrogen are likely to play key roles, too.

Climate change is neither gender-neutral nor generation-neutral, and young people will have a prominent place at October's Innovation for Cool Earth Forum. Their ideas will be crucial to achieving carbon neutrality in the world they inherit.

Achieving the SDGs through small acts of compassion


From right: **Hello Kitty**, Sanrio character; **Fuku Suzuki**, Actor

©'22 SANRIO®

"I believe in a world where people are smiling and friendly, and I see the SDGs as sharing the same purpose," said **Hello Kitty**. "I began making videos to explain the SDGs in September 2019 at the request of the UN. Each video focuses on a single goal. I've covered midwives in a refugee camp in Bangladesh for Goal 3, 'Good health and well-being,' and Japanese high school girls making straws from barley stalks for Goal 14, 'Life below water.' Everyone's trying to do what they can. With enough small acts of compassion, we can achieve the SDGs." Interviewer **Fuku Suzuki** agreed that compassion was key.

TALK SESSION

What can we learn from Generation Z?


From top: **Malika Sera**, Model, TV Personality, Presenter of "SDGs Corner" on Nikkei News Plus 9: **Kyoko Ozawa**, Adviser, Marui, Former CFO of Euglena; **Takahiro Soma**, Deputy Editor, *Nikkei ESG*

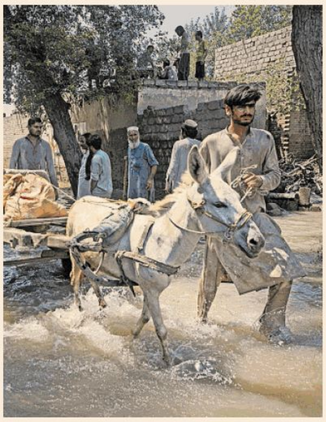
Gen Z and millennials will account for half of Japan's working population by 2025. Supposedly, Gen Z are uniquely conscious of sustainability. "Is that really true? Is sustainability part of your lives?" was moderator **Takahiro Soma**'s opening challenge to the two Gen Z panelists. "Some people take an interest, but plenty of my friends don't even know what the SDGs are," admitted **Malika Sera.** What may make her generation different, she argued, is that they are being presented with choices, such as the option of china cups rather than disposable paper cups at cafés. **Kyoko Ozawa** agreed that it was not so much her generation as the era that had changed. "Despite initial objections, reusable shopping bags and lidless paper cups are now widespread now, while plastic straws are much less seen too. Changes have occurred and people are living more sustainably whether they realise it or not," she said. Both panelists agreed that committing to ESG was a way for companies to be more profitable as businesses while also motivating their staff with the sense that they are ship networks.

contributing to society.

The Nikkei SDGs Forum Symposium is supported by:

SEVEN&i HLDGS. EY Building a better working world TOPPAN Asahi SUNTORY MS&AD INSURANCE GROUP Daiwa Securities Group TOKIO MARINE GROUP Wellnest Home
MUFG meiji NOMURA ABeam Consulting Tokyo Century Marubeni Daiwa House NTT DATA
EPSON EXCEED YOUR VISION MITSUI FUDOSAN MOL Mitsui O.S.K. Lines MITSUBISHI HC CAPITAL RICOH SMBC

With the cooperation of: MITSUBISHI ESTATE



Why act now? Look around you. . .

Natural disasters

This year's crop of extreme weather events has brought home the urgency of tackling climate change, reports *Esan Swan*

Water levels on the Rhine, a critical artery for the German economy, ran so low during this summer's drought that access for cargo ships was severely reduced.

At around the same time, thousands of miles away, a monsoon in Pakistan resulted in one of the worst floods in the country's history, as nearly eight times the average amount of rainfall washed away farmland, livestock and livelihoods.

While climate scientists continue to examine the extent to which rising temperatures influence extreme weather events, the increased frequency and severity of floods, fires and storms is cause for concern.

In 2022 alone, governments have spent billions on protecting their countries against, and dealing with the aftermath of, natural disasters — from wildfires in Spain to the continuing droughts in Ethiopia, Kenya and Somalia.

A report last year from reinsurance group Swiss Re predicted that, by 2050, global warming could cut annual global economic output by as much as 14 per cent, or $23tn.

> Climate change is more than net zero targets, it's about people
>
> Vanessa Nakate, climate activist

As economies suffer, so do millions of people, especially in low-income nations. The drought-stricken Horn of Africa, for instance, is expected to face its fifth consecutive failed rainy season, worsening the hunger crisis.

"The world needs to act now to protect the most vulnerable communities from the threat of widespread famine in the Horn of Africa," says David Beasley, executive director at the UN's World Food Programme. "We must get the resources needed to save lives and stop people plunging into catastrophic levels of hunger and starvation."

The prolonged lack of rainfall has led to at least 1.1mn people being forced from their homes and into crowded humanitarian camps across Ethiopia, Kenya and Somalia.

Historically, farmers and herders across Africa have clashed over territory and natural resources, but scientists say these often violent disagreements are being exacerbated by the changing climate, as both groups struggle to feed their communities.

In the past 50 years, drought-related hazards in the continent have claimed the lives of more than half a million people and led to economic losses of more than $70bn, according to the World Meteorological Organization.

Climate change is about more than statistics, say campaigners. "It's more than data points. It's more than net zero targets. It's about the people . . . who are being impacted right now," says Vanessa Nakate, a 25-year-old activist from Uganda.

In other parts of the world, hurricanes and cyclones are among the most costly disasters caused by weather systems, and the consensus among scientists is that they are becoming stronger and more frequent because of climate change.

Earlier this year, two category four hurricanes — the second most powerful kind in the scale used by meteorologists — pummelled the Caribbean and the south-eastern coast of the US, causing billions of dollars' worth of damage and claiming hundreds of lives.

In the past 22 months, the US has suffered 35 climate-related disasters that have each caused over $1bn of damage. One was a drought and heatwave in the western US, during which water levels in the largest man-made reservoir in the country, Lake Mead, which supplies 25mn people across seven states, reached record lows. In all they have dropped 170ft since 2000, making agricultural production in the area harder.

An international group of scientists concluded in October that the droughts across Europe, China and North America this year were made at least 20 times more likely by human-driven climate change, and that summer droughts are likely to become more intense and more frequent.

In the US, President Joe Biden remarked last month that fires in the west and south-west had burned an area greater than the state of New Jersey. "The reservoirs out west are down to almost zero," he added. "We're in a situation where the Colorado River looks more like a stream."

Across Europe too wildfires blazed, scorching hundreds of thousands of hectares, including farmland. Nearly 300,000 hectares in Spain went up in flames this year — four and a half times the annual average for the previous 15 years and amounting to $2.9bn in damage.

Crisis point: clockwise from top left, the Rhine runs low in Bingen, Germany; floods in Peshawar, Pakistan; a wildfire near Avila, Spain; Lake Mead, US, in July 2000 (top) and July 2022; a girl sits by a river in drought-stricken Gode, Ethiopia; the aftermath of Hurricane Ian in Florida

Wolfgang Rattay/Reuters; Hussain Ali/Getty Images; Cesar Manso/Getty Images; Earth Observatory/Nasa; Eduardo Soteras/Getty Images; Eva Marie Uzcategui/Bloomberg;

And, although wildfires across the Mediterranean are not unusual, with some of them started by human activity, climate scientists say they are becoming more intense because of drier and warmer weather, which creates ideal conditions for still more fires in future.

Further north, the UK experienced record temperatures this summer, reaching a sweltering 40C, which caused fires in London and disrupted roads and railways.

"The sad reality is this is what the future for London and the UK is likely to look like if we don't take strong action now on the climate crisis," said London Mayor Sadiq Khan.

As the shocks pile up and the urgency of cutting carbon emissions becomes more apparent, the world's wealthiest countries face pressure from poorer nations to provide funding for loss and damage caused by climate change.

Activists and campaigners have called for an end to "empty promises" and for more action, emphasising that the costs of climate change go beyond money and physical damage.

"For many of us, reducing and avoiding [carbon emissions] is not enough," Nakate said at COP26 in Glasgow last year. "You cannot adapt to lost cultures, you cannot adapt to lost traditions, you cannot adapt to lost history, you cannot adapt to starvation. You cannot adapt to extinction."

Media have big responsibility in the age of global warming

OPINION

Sarah Gordon

Nobody believes that buying a recycled T-shirt will save the world. But everybody has a responsibility to act in the battle to reach net zero. At present, it is being lost. As the latest UN environment programme report makes clear, the world is on track for global warming of up to 2.8C by the end of the century without implementation of current pledges, after what it described as a "wasted year" of inaction since COP26 last November.

Without concerted action from policymakers, regulators, businesses, financial services firms and individuals, we will continue to speed towards a future of extreme weather, with all the disastrous consequences this implies.

Climate change can still be slowed. Governments can change behaviour through policies; businesses can change behaviour through their operations and investments. However, one of the most important determinants of our success in reaching net zero is the media. Journalists have a huge role to play. So, what does responsible journalism in the age of global warming look like?

The importance of journalists holding companies and governments to account has never been clearer. Alerting the public to promises made but not kept is crucial in an age when business has become fond of slapping a "sustainable" label on products, from clothes to investment funds. In the UK and the US, regulators are catching up with the valuable work done by journalists to expose some of these claims as fallacious.

But, given the existential challenge that we face, journalists' responsibility goes way beyond this narrow remit, and beyond the oft-repeated tropes of climate journalism — that businesses, governments, banks are not living up to their promises, and journalists' only role is to bring that to the public's attention.

Take the example of the Glasgow Financial Alliance for Net Zero (Gfanz), launched in 2021 and led by ex-New York mayor Michael Bloomberg, former Bank of England governor Mark Carney, and former Securities and Exchange Commission chair Mary Schapiro. It acts as a forum for the world's biggest financial institutions to co-ordinate efforts to reduce carbon emissions.

To read much of the press in recent months, Gfanz is in serious trouble, losing members and abandoning its principles. The release of its latest progress report in October, which revealed that Gfanz no longer required its members to sign up to the UN-backed Race to Zero campaign, sparked a round of typical headlines: "Gfanz 'quiet quits' Race to Zero" (ESG Investor), "Carney's financial alliance for climate change at risk" (Investment Week).

But there is more to the story. Gfanz launched in April 2021 with 160 members and now has 550 from 50 jurisdictions. Members' financial assets total \$150tn, up from \$130tn in 2021.

The reporting also misses the bigger picture. To join Gfanz members must still make — and, critically, stick to — commitments to science-based net zero targets across all Scope 1, 2 and 3 emissions by 2050, with interim targets in 2025 or 2030, while also reporting on progress.

Scope 3 captures emissions by clients and portfolio companies that the sector finances through lending and other services. Before Gfanz, at the start of 2021, not a single bank had set a science-based sectoral 2030 target that included its financed emissions. As of October 2022, more than 250 targets had been set across the Alliance. This would not have happened without Gfanz and the efforts of those who lead it.

We desperately need these coalitions and the joint action they drive. No initiative should be allowed to get away with greenwashing, but the negative media coverage is a deterrent to new joiners and not always justified by the facts.

More balanced reporting is needed, but there are other ways for journalism to contribute to solving the climate crisis — such as sharing best practice, reporting on innovation, or driving regulators and policymakers to go further, faster.

Although progress since COP26 may have been disappointing on the world stage, at the company level, there have been exciting developments. One is the joint effort of SSAB, the Swedish steel producer, energy company Vattenfall and iron ore producer LKAB to replace coking coal, traditionally used in steelmaking, with fossil-free electricity and hydrogen. They aim to create the world's first fossil-free steelmaking technology, reducing Sweden's CO_2 emissions by a tenth and Finland's by 7 per cent.

Reporting on innovations such as this does happen, but it doesn't feature prominently enough. Companies bear some responsibility. They must build trusted relationships with the media and ensure this news is amplified. But the primary responsibility for seeking out these developments lies with editors and reporters.

As a former journalist myself, I understand journalists are allergic to advice from the "outside". Resistance to external pressure is laudable and necessary to preserve the independence of the press, and I am not suggesting it should be in any way eroded.

But, without a different approach from the media, initiatives such as Gfanz may not succeed. If they don't, the battle against climate change will not be won. And this is one battle where there are no winners, only losers.

Sarah Gordon is chief executive of the Impact Investing Institute, and a former FT business editor

Change-maker: Mark Carney, co-founder of Gfanz
Andrew Harrer/Bloomberg

> Without a different approach by the media, initiatives such as Gfanz may not succeed

Contributors

Camilla Hodgson
Climate reporter
Aime Williams
Climate reporter, US
Michael Stott
Latin America editor
Patrick Temple-West
Governance reporter
David Pilling
Africa editor
Pilita Clark
Business columnist
Chloe Cornish
Mumbai correspondent
Edward White
China correspondent
Nic Fildes
Australia and Pacific correspondent
Heba Saleh
Cairo correspondent
Harry Dempsey
Commodities correspondent
Chris Campbell
Visual journalist
Murray Withers
World news desk editor
Aanu Adeoye
West Africa correspondent
Nathalie Thomas
Energy correspondent
Clive Cookson
Science editor
Tom Wilson
Energy correspondent
Nick Butler
Visiting professor, Policy Institute, King's College London
Sarah Gordon
Chief executive, Impact Investing Institute
Peter Schwartzstein, Jessica Rawnsley, Philippa Nuttall, Jeremy Grant
Freelance journalists
Amy Bell, Michael Kavanagh
Commissioning editors
Steven Bird
Designer
Esan Swan
Picture editor
For advertising details, contact:
Rebecca Nolimaio,
rebecca.nolimaio@ft.com, or your usual FT representative. All editorial content in this report is produced by the FT. Our advertisers have no influence over or prior sight of the articles.

ADVERTISEMENT

日経 NIKKEI SDGs FESTIVAL OTEMACHI MARUNOUCHI YURAKUCHO

We support the Sustainable Development Goals

The terror of imminent natural catastrophe, disaster protection/prevention measures to preserve traditional housing culture, and building safe, secure nations capable of withstanding the threat of increasingly intense natural disasters. These were all discussed at the Green Architecture Nikkei SDGs Festival held on Sept. 14, 2022. Here, three experts from different fields – Emeritus Professor Nobuo Fukuwa of Nagoya University, Professor Momoyo Gota of the Tokyo University of Science, and Professor Yukari Takamura of the University of Tokyo – considered protecting homes, nations, and corporate activities.

Confronting Difficult Issues Enhances Disaster Measures With New Pathways for Prevention, Mitigation

Over the last few years it feels as though something completely different has been happening. The spread of the new coronavirus, now a constant part of life, led to a shortage of semiconductors, which made it impossible for Japan's automakers to follow production schedules. Oil, energy, and food prices soared following the invasion of Ukraine. As we work toward a sustainable society, it is clear that we must reconsider the risks we now face.

A glance at the chronology of natural disasters and epidemics, as they happened in Japanese and world history, reveals that historic turning points occur during times of overlapping calamities. Take the early 20th century, for example. The so-called "Spanish flu" influenza pandemic began as World War I was drawing to a close, killing some 400,000 people in Japan. In 1923, the Great Kanto Earthquake destroyed much of Tokyo, incurring losses estimated at three times the national budget. After that, major earthquakes occurred in the San'in, Kanto, and Sanriku regions, among others. In 1944, the Nankai Trough Earthquake struck, destroying the military factories concentrated around Nagoya. This was soon followed by the Mikawa Earthquake. Both of these large temblors demolished Japan's ability to continue the war. In spite of this setback, the nation refused to surrender, leading to the firebombing of Tokyo and the Battle of Okinawa.

What about recently? In 2011, Japan suffered the Great Eastern Earthquake and Tsunami, and then there was COVID-19. The probability of a new Nankai Trough Earthquake occurring in the next thirty years is 70–80%, while the chance of a quake directly under Tokyo within the same timeframe is 70%. We may be living during times of great change.

Nobuo Fukuwa
Emeritus Professor, Nagoya University

In July 2022, the Japanese Ministry of Land, Infrastructure, Transport and Tourism (MLIT) released The Interim Report on the National Spatial Strategies. It calls for "co-creation between the public and private sectors to utilize the vitality of the business world," and to nurture developments crossing boundaries of traditional fields of knowledge and administration.

Now is the time for companies to cooperate with citizens to create streams of new businesses aimed at disaster mitigation and damage reduction.

Lessons Fromthrough Fieldwork at World Heritage Sites: Housing Culture and Disaster Prevention

South Africa's green deal on coal power cut fails to ignite

Energy transition

Most money earmarked to aid switch to renewables is unspent, says *David Pilling*

It was billed as one of the biggest achievements of last year's COP26 summit in Glasgow. Western nations agreed to provide \$8.5bn of funds to help speed South Africa's transition from coal to renewable energy.

Under the arrangement, known as the Just Energy Transition Partnership, or JETP, the US, EU, UK, France and Germany pledged to help South Africa shut its coal plants more quickly than scheduled while "supporting an equitable, inclusive transition".

South Africa's electricity grid relies on coal for roughly 85 per cent of its gener- ... announced its plans. According to a leaked draft — described as broadly accurate by one South African official — some \$4.6bn of the \$8.5bn funding is earmarked as concessional loans with much of the rest made up of guarantees. Only \$230mn, less than 3 per cent of the total, is grant money.

"We are concerned that the deal not only adds to our debt burden, but ignores adaptation," says Sibusiso Mazomba, a climate advocate at the South African Institute for International Affairs. International donors, he says, are more interested in funding climate mitigation measures, such as renewable power generation projects, rather than helping upgrade infrastructure, such as the storm resistance of buildings, in response to more extreme climate.

... to politically well-connected entrepreneurs who are reluctant to see a rapid move from coal.

Officials have sought to use the idea of a "just transition" to bring labour unions to the negotiating table. "We know that we cannot do this transition if it is going to unfairly disadvantage workers and communities," says Crispian Olver, executive director of South Africa's Presidential Climate Commission. "We have to do the transition in a socially and economically responsible way that builds new sectors of our economy at a pace that can absorb people as the other sectors downsize."

Another problem is trying to retire coal plants when the grid is teetering on the brink of collapse. Years of mismanagement and corruption mean that Eskom, the state electricity monopoly, has been forced into rolling power cuts, euphemistically known as "load shed-

I research traditional urban dwellings, and today I would like to talk about two places – the Old Town of Lijiang in China and Turkey's Bergama.

The Old Town of Lijiang, located in Yunnan Province, China, is the historical center of that city. It features many small buildings with tiled roofs and is located in a basin some 2,400 meters above sea level, enjoying a mild climate and plenty of water.

An aerial analysis of the area shows homes to be tightly packed, interconnected by a complex network of narrow streets. Two-story houses are focused around central courtyards. The traditional exteriors of these buildings are protected, but interior designs and decorations can be changed. However, there is still the possibility of collapse or fire damage during earthquakes, a fact shown by the considerable destruction caused by the 1996 earthquake.

Since the Old Town was made a World Heritage Site in 1997, tourism has thrived, and the community has undergone major transformation. However, local customs such as drawing water from wells or using fire-fighting hoses to water gardens remain part of daily life. These customs could be adapted to play roles in disaster-mitigation training strategies.

Bergama is in western Turkey, and was registered as a World Heritage Site in 2014 as "Pergamon and its Multi-Layered Cultural Landscape." The location contains the ruins of an acropolis towering above a small city of stone buildings. The traditional architecture dates from the era of Grecian rule, about 100–130 CE.

A variety of disaster-related risks are visible here. The region is an earthquake zone, and is also prone to landslides and floods.

Momoyo Gota
Professor, Faculty of Engineering, Dept. of Architecture
Tokyo University of Science
Director, INTER SPACE Architects

These are two examples, but there are three possible approaches to developing strategies for combining the inheritance of residential culture with disaster prevention. First, is using modern technology to improve disaster resilience. Second, is a financial approach utilizing funds and subsidies from the cultural heritage status to pay for preservation efforts. The third is a community-based approach. For this, it is necessary to create a disaster prevention community to conduct mitigation drills using lifestyle customs such as watering the ancient city of Lijiang.

Simultaneous Resolutions – Climate Change, Disaster Prevention, a New National Spatial Strategy

Climate change is causing more disasters than we could have imagined, and at levels far worse than planned for. In May 2022 a group of British researchers published a paper estimating $23 billion in losses to Japan's economy caused by typhoon Jebi and torrential rains in western Japan in 2018, significantly higher than the $11.2 billion of insurance payouts. Similarly, damages from typhoons Faxai and Hagibis in 2019 were estimated at $25 billion –the largest ever worldwide – against just $14 billion in payouts.

At the 26th Conference of the Parties for the United Nations Climate Change Conference (COP26) in November 2021, a consensus document was adopted stating that efforts be pursued to limit temperature rise to n 1.5°C. Major nations including Japan have begun various initiatives to achieve carbon neutrality by 2050. China, which emits 30% of global greenhouse gas, plans to be carbon neutral by 2060, and India by 2070 at the latest.

Behind the agreement on the 1.5C limit are efforts by private enterprise and the finance industry. In particular, asset-rich insurance companies, financial instrument businesses, pension funds, and institutional investors have set targets for net zero emissions by 2050, and are also requiring the corporations and organizations in which they invest to do the same.

It is crucial that existing technology be fully utilized by society to drive significant emissions reductions by 2030. This must be done at the same time as developing new technologies to ensure carbon neutrality by 2050.

The National Spatial Strategy now under discussion covers a wide range of interrelated issues. A declining population due to aging weakens the ability of rural areas to respond to pressing issues, while centralization in Tokyo increases national vulnerability due to the threat of a large-scale disaster there.

Yukari Takamura
Professor, Institute for Future Initiatives
The University of Tokyo

Transitions to renewable energy must be accelerated. Offshore wind farms are viewed as a key energy source for the future, but it is also essential to resolve issues such as how to build industrial bases nearby to create jobs in rural areas.

Japan already has the technology to build a resilient society.Now is the time to utilize this advanced knowhow to build the infrastructure needed for safe, secure lands across the nation. .

TOKYO TATEMONO

coal for roughly 85 per cent of its generating capacity. That is one reason the country is currently the world's 13th-biggest emitter of carbon dioxide. But it has some of the world's best conditions for solar and wind power, as well as the technological capacity to produce green hydrogen.

So the hope is that, if north-south co-operation can reduce emissions more quickly, similar programmes could be rolled out in other coal-hungry countries, such as Indonesia and Vietnam.

"Going into Glasgow, this was one of the big objectives of the UK and its key partners: how to help phase out coal in big countries," says Amal-Lee Amin, head of climate change at British International Investment, the UK's development finance institution. But the push for an announcement meant not all preparatory work was finalised, she adds. "The JETP was launched as a flagship project but there was very little detail."

Nearly a year on, some details remain sketchy. "I think that we underestimated how complicated it would be," says Barbara Creecy, South Africa's environment minister, referring to the lengths taken to draw up plans about the nature of the funding and exactly how it would be spent. "We had a chicken and egg situation," she says. "The South African government was saying: 'Give us chapter and verse on the money.' And the partners were saying: 'Give us the investments.' After much delay, we agree: 'Let's do both.'"

Still, days before COP27 began in Sharm el-Sheikh, neither side had formally

'The deal not only adds to our debt burden, but ignores adaptation'

The question of how the $8.5bn will be spent is also becoming clearer. South Africa has set three priorities for the money: accelerating the transition from coal; shifting its carmaking industry from petrol to electric vehicles; and starting a green hydrogen industry. It has a $95bn five-year plan in which the $8.5bn is meant to play a catalytic role.

A big problem in phasing out coal is the potential loss of jobs in a country with chronically high levels of unemployment and inequality. The ruling African National Congress has deep roots in the trade union movement, including in the National Union of Mineworkers. The government has allocated coal supply contracts, often as part of black empowerment schemes,

Fork lift: a miner in South Africa

euphemistically known as "load shedding". That has crippled businesses, which are forced to scale back production or invest in expensive back-up generators or provide their own power.

"I do not see us retiring coal for a while," says Ivor Ichikowitz, a South African businessman in defence and aerospace, who said blackouts posed an existential threat to swaths of industry. "Everybody is now looking at how do we survive; just to keep warm and just to keep our industries alive. And we'll worry about climate change later."

One positive point, he says, is that wind and solar power could be added quickly, especially if the government further relaxed regulations. He would like to see Eskom shrink as old coal-fired power stations shut and the energy mix shifts towards renewable energy from private companies.

But that vision has met resistance from an ANC that still has faith in the capacity of the state to improve equality and is reluctant to cede too much ground to the private sector.

"We don't want to just see a repetition of the ownership and concentration patterns of the past," says Olver at the Presidential Climate Commission. "We don't want to just see a ramp-up of privatisation as we transition our energy systems." It is, officials say, a delicate balance of the country's social and energy needs and its climate obligations.

"Is this a good model?" asks environment minister Creecy, referring to the $8.5bn package. "I guess the answer is it's too early to tell."

ADVERTISEMENT

TOKYO GX WEEK

Getting to Where Capitalism Begets Sustainability

TCFD SUMMIT 2022

Japan's Ministry of Economy, Trade and Industry (METI) sponsored the Task Force on Climate-Related Financial Disclosures (TCFD) Summit 2022 on October 5. Sustainable finance will be indispensable in achieving a virtuous cycle of environmental stewardship and economic growth, and METI has sponsored the TCFD Summit annually since October 2019 as a platform for promoting sustainable finance. Cosponsoring the summit are Japan's TCFD Consortium and the World Business Council for Sustainable Development (WBCSD).

WELCOME MESSAGE

Accelerating Green Transformation

Nishimura Yasutoshi, Minister of Economy, Trade and Industry

Japan is aiming to be carbon-neutral by 2050," reaffirmed Nishimura Yasutoshi. "To achieve that goal, we need to shift away from the economic, social, and industrial structure that has prevailed since the industrial revolution and that has depended on fossil fuels to one centered on clean energy, in which reducing emissions leads to economic growth.

"The power of finance is indispensable for accelerating green transformation. Japan has made TCFD disclosure effectively mandatory, which has resulted in more than 1,000 organizations supporting this disclosure. That is the largest number of any nation in the world, and Japan will continue to promote proactive disclosure.

"To improve the quality of disclosure, we have formulated basic guidelines and roadmaps for high-emission industries to serve as operational reference. At last year's TCFD Summit, the participants evoked a shared understanding that working against climate change can spur innovation. I hope that this TCFD Summit will pave the way for new possibilities for the TCFD."

KEYNOTE

Ensuring that All People Live Well within Planetary Boundaries

Peter Bakker, President & CEO, WBCSD

Today, the purpose of business seems to be making problems for the planet and the people," opened Peter Bakker provocatively. "And that is what the TCFD tries to address.

"The C in TCFD stands for climate, and climate is probably the most pressing of our challenges. We all have seen the weather events. A 1.5-degree increase in global temperature over the preindustrial era is no longer an ambition level. It is an absolute hard stop that we need to remain under.

"Business as usual is no longer viable. We need to get back to a regenerative Earth system. We need to get to where capitalism works for rather than against sustainability."

Bridging the Perception Gap

Takegahara Keisuke, Executive Fellow, Research Institute of Capital Formation, Development Bank of Japan

A characteristic of the TCFD membership in Japan," revealed Takegahara Keisuke, "is that 72% of the members are non-financial corporations, compared with just 40% elsewhere. Communication between the non-financial and financial members was awkward in the early days of Japan's TCFD Consortium. The nonfinancial members got the impression that financial institutions focused entirely on downside risk in evaluating scenario analyses. That misunderstanding cleared up, however, through our interchange.

"We are launching three programs to increase the consortium's effectiveness further: a seminar for representatives of companies that are new to TCFD, a seminar for corporate sustainability professionals from companies that are engaged in TCFD, and a senior management forum."

OPENING REMARKS

Pressing Ahead with a Sustainable Finance Agenda

Valdis Dombrovskis, Executive Vice-President, European Commission

"Russia's illegal aggression against Ukraine," cautioned Valdis Dombrovskis, "makes Europe's green transition even more urgent. We rely on adequate finance from the private sector. To start with, investors need the right information to make an informed decision. This is why our sustainable finance strategy focuses on disclosures and sustainability reporting. Here, the TCFD recommendations continue to act as an important reference point."

Making Progress in Adopting the TCFD Recommendations

Mark Carney, Finance Advisor to Prime Minister for COP26, UN Special Envoy for Climate Action and Finance

"The late prime minister Shinzo Abe personally supported the development of the TCFD and climate disclosure," Mark Carney recalled movingly. "We've continued to make progress," he continued, "in providing the international financial system with the 'plumbing' required to manage the risks and opportunities associated with climate change. We have more than 3,400 companies worldwide with a combined market capitalization of over $25 trillion supporting this framework."

Acknowledging the Japanese Role in Promoting TCFD Adoption Worldwide

Mary Schapiro, Head, TCFD Secretariat, Vice Chair for Global Public Policy and Senior Advisor to Founder, Bloomberg

"Japan continues to play a leading role in accelerating TCFD adoption," lauded Mary Schapiro. "With 1,062 backers of the TCFD, Japanese companies account for over 30% of TCFD supporters. Japanese regulators have also contributed significantly to the uptake of TCFD recommendations. The Japan Exchange Group revised Japan's Corporate Governance Code to enhance the quality and quantity of climate-related disclosure based on the TCFD."

Keeping up with a World that Never Rests

Ronald P. O'Hanley, Chairman and Chief Executive Officer, State Street Corporation

"The world never rests," observed Ronald O'Hanley, "and the work the TCFD does has never been more important. I am pleased to note two points of progress in Japan. First, since the TCFD's disclosure requirement began in April, that effort has progressed well and improved the quality of disclosures. And second, the development of a roadmap for Japanese companies to determine their transition strategies, which, in turn, is enabling related financing."

Bringing Together TCFD-Focused Companies and Investors

Ito Kunio, Chair, TCFD Consortium, Director, Hitotsubashi CFO Education and Research Center

"The momentum for TCFD disclosure is increasing," reported Ito Kunio. "The number of supporting organizations worldwide has reached more than 3,640. In Japan, disclosure in accordance with the TCFD has become mandatory for companies listed on the Prime Section of the Tokyo Stock Exchange since April 2022. The TCFD Consortium has brought together companies engaged in disclosure based on the TCFD recommendations and investors that focus on such disclosure."

OPINION EXCHANGE

Positioning the TCFD in the ISSB Framework

Mizuno Hiromichi, Special Envoy of UN Secretary-General on Innovative Finance and Sustainable Investment, **Emmanuel Faber**, Chair, International Sustainability Standards Board (ISSB)

"There's increasing frustration among corporate executives," acknowledged Mizuno Hiromichi, "about receiving dozens of questionnaires from different organizations. They are trying to work with the TCFD, but they struggle with a lot of noise."

"I understand the frustration," replied the ISSB's Emmanuel Faber. "The G20 leaders and several multinational organizations established the ISSB last year to resolve that frustration by consolidating the universe of ESG (environmental, social, governance) language. The idea is to create a global baseline that will enable global investors and global companies to speak together about climate and other ESG issues."

"So do I understand correctly that rather than cre-

initiatives?"

"Yes, and the TCFD is front and center in what we do," Faber responded. "The TCFD is very much involved in what we do. The TCFD is in the DNA of the ISSB." Faber added that the ISSB is "working on the transition pathways description in our disclosures and

PANEL DISCUSSION 1

Illuminating and Assessing Opportunities in Climate Change

Chair **Nagamura Masaaki**, of Tokio Marine Holdings, kicked off the session by asking **Katie Schmitz Eulitt**, of the IFRS (International Financial Reporting Standards) Foundation, about how the convergence of sustainability disclosure standards is proceeding.

"The disclosure frameworks are streamlining rapidly," responded Eulitt, who chairs the ISSB's Investor Advisory Group at the IFRS Foundation. "We are taking a patchwork of standards and frameworks that are aimed at an investor audience and putting them under the umbrella of IFRS."

Ikeda Satoshi, of Japan's Financial Services Agency, commented on the state of discourse on climate-related disclosure in Japan. "We are pretty much ready to adopt the ISSB standards in our corporate disclosure regulatory

the global arena: from voluntary to mandatory."

Yamauchi Toshihiro, of Sumitomo Chemical, discussed how his company is highlighting business opportunities in responding to climate change. "Stock markets are paying attention to efforts to reduce greenhouse gases. We disclose opportunities by highlighting contributions to achieving carbon neutrality."

Yamaga Teppei, of Nomura Asset Management, addressed the question of highlighting opportunities in climate change from an investor perspective. "We need to consider metrics other than greenhouse gas emissions to assess climate-related opportunities more ating a whole new standard," asked Mizuno, "you are integrating and making the best use of existing

on the financed emission part for the banking and insurance and the investor side."

system. That is in line with the trend that we witness in

appropriately."

KEYNOTE

Monitoring Financial and Environmental Policy Worldwide

Miyazono Masataka, President, Government Pension Investment Fund

"Climate change is an important concern for us at the Government Pension Investment Fund," stated Miyazono Masataka, "and we are on record as supporting the TCFD recommendations. Nations that have expressed or are preparing to express a commitment to achieving carbon neutrality account for 99.6% of global GDP. Securing an accurate grasp of changes in financial and environmental policy in different nations is crucial to our work in portfolio management."

Doing Good Disclosure for Good Customer Engagement

Hanzawa Junichi, Chairman, Japanese Bankers Association

"Disclosure is the starting point in achieving net-zero by 2050," emphasized Hanzawa Junichi. "The Japanese Bankers Association has addressed the TCFD Summits since the inaugural one in 2019. Our chairmen have highlighted the importance of proactive customer engagement for banks. And they have highlighted the role of good mutual disclosure as the foundation for that engagement. Banks become green only when their customers become green. We will work hand in hand to shape a carbon-free society."

Mobilizing Transition Technologies While Developing New Ones

Tokura Masakazu, Chairman, Keidanren (Japan Business Federation)

"We at Keidanren," reported Tokura Masakazu, "compiled a policy proposal this May titled 'Towards Green Transformation.' To achieve green transformation, we will need to develop and deploy zero-emission technologies that do not yet exist. Innovation does not happen overnight, so in the interim we need to make the most of the best available technologies. We need to ensure that ample funding flows to those transition technologies and enhances the effectiveness of decarbonization efforts."

Blazing a Policy Path to Carbon-Neutral

Hatakeyama Yojiro, Director-General, Industrial Science and Technology Policy and Environment Bureau, METI

"We at METI are preparing three initiatives for promoting transition finance. The first is to draw up basic guidelines for such necessities as funding in line with internationally agreed principles. The second is to sketch sector-specific roadmaps. We have issued roadmaps for iron and steel, chemicals, electricity, gas, oil, cement, and paper and pulp, and we will issue one for automobiles later this year. The third is to model projects at companies in 12 sectors."

PANEL DISCUSSION 2

Evaluating Corporate Performance in Green Transformation

Chair **Ito Kunio** asked each panelist in the second panel discussion for their perspective on the status of transition finance in Japan.

"We are seeing more issuers using transition finance," related **Reiko Hayashi**, of BofA Securities, "and better understanding of transition finance among investors. We need to develop schemes for encouraging investors to evaluate corporations' green credentials more properly."

"We at banks say, 'Your emission is our emission,' quipped Mitsubishi UFG Financial Group's **Ishikawa Tomohiro**, 'because if we lend you money and you emit, that becomes our Scope 3 emission.' So we have skin in the game when we talk about net-zero."

"For many sectors that we are working with, the transition to low carbon encompasses new business models," observed **Sandrine Eguehard** of Societe Generale, "so we need to come to terms with new value chains."

"We issued straight bonds and ESG bonds at the same time," remarked **Kozawa Hisato**, of Mitsubishi Heavy Industries. "The green bonds were more favorable, both in terms of market demand and issuance conditions."

"In most cases, innovations will not be implemented by the developers but by [companies] that buy and use the technology," observed METI's **Kihara Shinichi**. "So [financial support] needs to cover not only the technology developers but also the implementers."

CLOSING REMARKS

Understanding and Responding to Climate-Related Risks

Peter Bakker, President & CEO, WBCSD

"A lot to be happy about," summarized Peter Bakker. "Today's TCFD Summit has provided a valuable space to build a shared understanding of key priorities and the way forward. I know no other platform where business, banks, investors, and policy makers have such fruitful conversations." Bakker lauded Japan's industry-specific roadmaps for providing "important contexts for meeting emission goals. This directly addresses the transition opportunities and innovation that financial institutions will assess and seek to support."

tcfd-summit.go.jp/resultEn.html

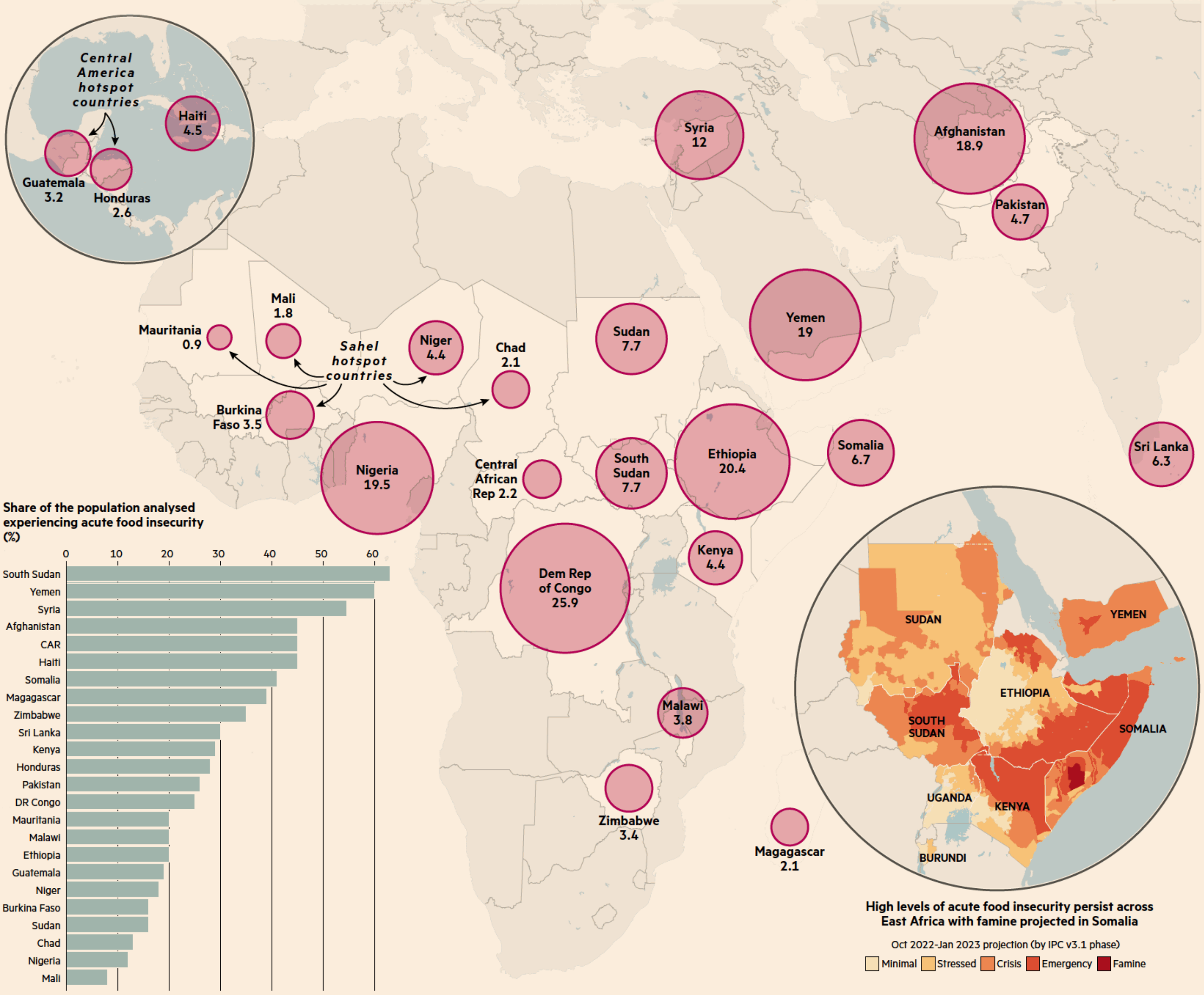
METI Ministry of Economy, Trade and Industry

wbcsd

TCFD Consortium

Conflict and weather extremes drive acute hunger in 'hotspot' countries

Number of people (mn) expected to experience acute food insecurity* in deteriorating hotspots during the period from October 2022 to January 2023



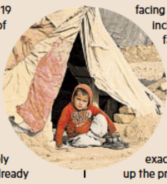
*people in 'crisis' phase or higher Central America 'hotspot' = Guatemala and Honduras. Sahel 'hotspot' = Burkina Faso, Chad, Mali, Mauritania and Niger Sources: FAO-WFP; Fews Net

War and climate put 45mn people at risk of famine

Food insecurity is likely to worsen in 19 "hunger hotspots" in the period from October this year to January 2023, through a combination of increasing conflict and climate change, UN food agencies forecast.

Up to 205mn people are expected to face acute food insecurity and to be in need of urgent assistance in 45 countries, according to the World Food Programme and the UN Food and Agriculture Organization's mid-year update on the global food crisis, published last month.

"Targeted humanitarian action is urgently needed to save lives and livelihoods in the 19 hunger hotspots. Moreover, in six of these hotspots — Afghanistan, Ethiopia, Nigeria, Somalia, South Sudan and Yemen — humanitarian actions are critical in preventing further starvation and death," the report said.



About 45mn people in 37 countries are expected to have so little to eat that they will be severely malnourished, at risk of death or already facing starvation and death. This includes 970,000 people projected to face catastrophic conditions in 2022 if no action is taken.

Conflict and organised violence remain the main drivers of acute hunger, with trends indicating that they both continued to increase in 2022.

The war in Ukraine has also exacerbated the food crisis by driving up the price of agricultural commodities. Russia and Ukraine together account for about 30 per cent of the global wheat trade.

Elevated global prices for hydrocarbons and agricultural commodities continue to cause increases in domestic food and energy costs.

Extreme weather events such as tropical storms, flooding and drought are also significant drivers in some countries and regions. Of particular concern, the drought in the Horn of Africa that has already persisted for two years is highly likely to worsen due to a looming unprecedented fifth relatively dry rainy season.

La Niña, a climate pattern that changes ocean surface currents and brings cooler water up from the depths of the Pacific Ocean, has also exacerbated weather conditions, causing crop and livestock losses, particularly in east and west Africa, central Asia, Central America and the Caribbean.

This is the third year running of La Niña, the first time in more than 20 years that a "triple dip" has occurred, putting countries already affected by floods and drought on alert as further extreme weather conditions are expected.

Debt crisis traps global south in vicious circle

Climate finance Poorer nations need more grants rather than loans to tackle climate change, writes *Jessica Rawnsley*

It was the $100bn question during COP26 last year: would rich countries fulfil their pledge to give that sum to poorer states of the global south, to address climate change. In 2009, they said they would do so by 2020. But the figure was not achieved — falling short at $83.3bn, and Oxfam calculates that most of this was provided as loans, rather than grants.

At COP27 in Egypt this month, discussion will once again be dominated by rifts over climate finance. African ministers have called the failure to provide the promised money "shameful".

And, even if $100bn is delivered, leaders in the global south argue it is insufficient, particularly when most climate-vulnerable countries are already mired in debt and still grappling with the economic fallout from Covid-19.

"Developing countries have to balance between urgent climate needs and paying back debts," says Jessica Omukuti, research fellow at the University of Oxford's Inclusive Net Zero initiative. "If you can't pay back your debts, your credit rating goes down, [and] you compromise your partnerships and your future capacity to get finance."

More than half of the world's poorest countries are either in debt distress or at high risk of it, according to the World Bank. Poorer countries bear the brunt of environmental degradation and are simultaneously unable to meet the cost of low-carbon and climate-resilient development.

Research by the campaigning group Debt Justice found they spend five times more on debt payments than on dealing with climate change, resulting in a vicious circle of climate catastrophe, borrowing, and spiralling debt burdens.

The climate crisis is driving poor countries further into debt distress, says Mary Robinson, founder of the Mary Robinson Foundation-Climate Justice, and former president of Ireland. "As Mia Mottley [Barbados prime minister] said, in many places like the Caribbean, climate and other natural disasters account for 50 per cent of the long increase in public debt there. And that's typical." Pakistan is a recent case in point. Fierce flooding in the summer ravaged the country, displacing 33mn people, killing 2,000, and costing around $40bn in property damage. The IMF approved a bailout loan of more than $1.1bn but, last month, Pakistan's government announced it would need to borrow billions more. The country already has external debt of around $130bn.

Debt crises in poor countries are often triggered by extreme climate events. In 2019, Mozambique took on a $118mn loan from the IMF to deal with the aftermath of cyclone Kenneth and cyclone Idai. Decades earlier, Belize's debt doubled from 47 per cent of GDP in 1999 to 96 per cent by 2003, following devastating storms in 2000 and 2001.

Nearly three-quarters of climate finance still comes in the form of loans, usually with high interest. A 2020 Oxfam report revealed that as much as 80 per cent of funds gathered for the $100bn pot came as loans and, of that, about half was in the form of non-concessional loans: those offered on ungenerous terms.

Increasing climate threats make lending to vulnerable countries more risky, so borrowing becomes more expensive. But, equally, as the intensity and frequency of extreme weather escalates, vulnerable countries desperately need cash for adaptation, yet only a quarter of climate finance in 2019 was spent on adaptation, according to the OECD.

This year's floods in Pakistan displaced 33mn people — Asim Hafeez/Bloomberg

Some in the global south argue that, because they bear little responsibility for the climate chaos wrecking their nations, debts should be cancelled and the global north should pay reparations for the damage it has caused.

Members of V20, a bloc of 20 countries among the most vulnerable to climate change, are considering halting debt payments. Between them, they owe $500bn over the next four years. Leading the charge, Mohamad Nasheed, former president of the Maldives, said poor nations were locked in a Sisyphean trap: borrowing money to ward off storms, only to see climate change destroy the improvements.

There are potential solutions. Thinkers in the Caribbean, Germany and elsewhere have proposed debt-for-adaptation swaps: creditors would forgo debt repayments so that the funds could instead be spent locally on adaptation. This would boost domestic economies, eliminate the search for hard currency to repay loans, and spur climate resilience.

Similar debt swaps have worked in Seychelles, Poland and Argentina. The Bridgetown Initiative, unveiled by Mottley in September, puts forward a number of proposals to transform international financing, including natural disaster clauses in every debt contract, more concessional funding, and expanding the lending capacity of multilateral development banks (MDBs).

"We need all the possibilities," says Robinson. Securing the promised $100bn is important because it has become a trust issue, she says, but there also needs to be "a real pathway to doubling climate adaptation finance" and "debt swaps for adaptation and nature".

"Above all else, we need to work out how to open the coffers of the MDBs. There's so much capital available. It's the political will that's the problem."

ADVERTISEMENT

Words into Action

CARBON NEUTRAL 0

The Nikkei Net-Zero Committee held its second plenary session on September 16. That group is the steering committee of the Nikkei Net-Zero Project, launched in April 2021. The committee comprises corporate executives, academics, and a journalist. It examines decarbonization initiatives in Japan and other nations and advances the cause of decarbonization by debating pertinent issues, proposing bold targets, and conducting public outreach.

Chairing the Nikkei Net-Zero Committee is Professor Yukari Takamura of the University of Tokyo Institute for Future Initiatives. Takamura characterized the Nikkei Net-Zero Project's second year as a time for translating words into action. And she introduced the four subcommittees that are shaping that action. The subcommittees marshal specialized expertise to address issues in biodiversity, finance, energy, and circular economy.

Takamura also reported on the Nikkei Net-Zero Committee's interaction with three networks of university students and other youth engaged in fighting climate change. Representatives of participating corporations meet periodically with representatives of those networks to fortify their approach with youthful input.

Yukari Takamura, Professor, Institute for Future Initiatives, The University of Tokyo

Government Pump Priming

Akihiro Nishimura, Minister of the Environment, Japan

"Decarbonization initiatives," declared Japan's environment minister Akihiro Nishimura in a video greeting to the meeting, "will alleviate the energy crisis and strengthen industrial competitiveness and will thereby stimulate economic growth." He explained that the government had established the GX (Green Transformation) Implementation Council in the Cabinet Secretariat to oversee "ambitious investment in decarbonization." Nishimura suggested that Japanese decarbonization initiatives will require more than ¥150 trillion in public- and private-sector investment over the coming 10 years. And he reported that the council envisions pump priming that investment with government issuances of "GX Economy Transition Bonds."

Japan is promoting decarbonization in emerging economies, Nishimura added, with the Joint Crediting Mechanism (JCM). The JCM allows for bilaterally sharing credits for reductions in greenhouse gas emissions at projects infused with Japanese technology.

The Nikkei Net-Zero Committee

Chairperson

Yukari Takamura	Professor, Institute for Future Initiatives, The University of Tokyo

Members

Takeshi Mizuguchi	President, Takasaki City University of Economics
Michiyo Morisawa	Director, Japan CDP Worldwide
Teruyuki Ohno	Executive Director, Renewable Energy Institute
Takejiro Sueyoshi	Special Advisor, United Nations Environment Program Finance Initiative
Kanako Tanaka	Ph.D. Eng., Senior Sustainability Scientist, Responsible Investment Group, Investment Division, Asset Management One
Kenji Tanaka	Associate Professor, School of Engineering, The University of Tokyo
Mari Yoshitaka	Fellow, Principal Sustainability Strategist, Mitsubishi UFJ Research and Consulting
Kiyoshi Ando	Editorial Writer, Nikkei Inc.

CORPORATE PROJECT MEMBERS

Coca-Cola Japan Miyoko Tanaka, Vice President, Public Affairs, Communications and Sustainability

Energy-Saving Technology in Vending Machines

Reductions in electrical consumption, along with recycling of polyethylene terephthalate (PET) bottles, highlight work at Coca-Cola Japan in reducing greenhouse gas emissions. Company aims to reduce those emissions 30% across entire value chain by 2030, compared with 2015. Coca-Cola Japan has adopted energy-saving technology in about 85% of its some 800,000 vending machines. Technology reduces electrical consumption up to 95% by using electricity for cooling only during off-peak hours of 11 p.m. to 7 a.m. Advanced insulation keeps beverages cool in interim.

Mizuho Financial Group Yasuhiko Ushikubo, Senior Executive Officer, Head of Research and Consulting Unit, Group Chief Sustainability Officer

Sustainability as Epochal Challenge

Impetus for decarbonization is silver lining in cloud of Russia-Ukraine conflict. Transition strategy commands heightened attention. Mizuho Financial Group is harnessing diverse internal capabilities and resources in support of clients' sustainability stratagems. Research and consulting functions, for example, assist clients with technical aspects for carbon-neutral transition, just as financial functions assist with funding for decarbonization initiatives. Group is approaching sustainability undertakings as epocal challenge on order of previous transformations in Japanese history.

Mitsui Sumitomo Insurance Koji Oki, General Manager, Sustainability Section, Corporate Planning Department

Social Resilience and Sustainability

UN Intergovernmental Panel on Climate Change reports that global surface temperature has risen 1.09°C since preindustrial times and cautions that 40% of global population is vulnerable to effects of climate change. Russian aggression in Ukraine, meanwhile, underlines escalating geopolitical risk. Mitsui Sumitomo Insurance works with customers in spirit of creating shared value to identify and minimize risk. That meshes with company's commitment to bolstering social resilience and sustainability through UN Sustainable Development Goals. Planetary health is touchstone for stance articulated as "Net-zero, nature positive."

NGK Insulators Ryo Ishihara, Vice President, General Manager, ESG Management Department

Unique Ceramic Technologies for Carbon Neutrality

NGK is working to eliminate carbon emissions by 2050 and is targeting annual sales of ¥100 billion by 2030 in new business related to carbon neutrality and digital society. Company strengthened marketing oriented toward achieving that target with launch of new organization in April 2022. Efforts include speeding commercialization of products related to carbon neutrality. NGK wields numerous technologies for addressing global issues, such as sub-nano ceramic membranes that are useful for carbon dioxide capture, utilization, and storage.

CO2CO2CO2CO2CO2CO2CO2CO2CO2CO2CO2CO2CO2CO2

Oji Holdings Fumio Shindo, Director, Senior Executive Officer

Twofold Investment

Leading paper manufacturer is investing ¥200 billion to reduce net greenhouse gas emissions 70% by FY 2030, compared with FY 2018. Investment is twofold: half in reducing emissions from operations and half in absorbing carbon dioxide with forestation. Measures for reducing operational

Mitsui Fudosan Chiharu Fujioka, Managing Officer, General Manager, Corporate Communications Department

Group Action Plan

Boom of recent years in real estate market is unlikely to continue, in view of developer Mitsui Fudosan, and anemic yen and surging energy prices are affecting business environment adversely. Mitsui Fudosan is nonetheless

The Nikkei Net-Zero Project Declaration (condensed summary)

Shaping a decarbonized society will entail change for everyone

We, the corporate and individual participants in the Nikkei Net-Zero Project, are determined to bequeath to the next generation a world of natural harmony and sustainability. We aim to shape a fair and just sustainable decarbonized society that honors human rights and offers avenues to the pursuit of happiness for all.

We will promote strengthened and accelerated efforts to achieve interim, 2030 targets for forestalling climate change with an eye to achieving the Paris Agreement's long-term target of capping the rise in average global temperature at 1.5°C over the preindustrial level. We will support a transition to decarbonization in a fair manner that buttresses social sustainability by protecting biodiversity and forests and honoring human rights and that ensures that no individuals or regions are left behind amid industrial and social change.

We realize that shaping a decarbonized society is not a task that we can accomplish alone. We will therefore call on counterparts in Japan and overseas to join us in this quest.

We will urge Japan's national and local governments to move swiftly in formulating and implementing systems and rules for shaping a fair and just sustainable decarbonized society that honors human rights and offers avenues to the pursuit of happiness for all.

Initiatives that we need to tackle now for achieving interim, 2030 targets en route to achieving carbon neutrality by 2050

- We will evoke a decarbonized vision for society and formulate a comprehensive strategy for realizing that vision.
- We will help cap the rise in global temperature at 1.5°C over the preindustrial level by promoting a shift to an efficient, decarbonized energy system that will tap the renewable energy potential of each region and will integrate distributed energy resources for fulfilling demand locally.
- We will undertake decarbonization proactively in new and existing housing and other structures to achieve interim decarbonization targets for 2030 as a step toward achieving carbon neutrality by 2050.
- We will take into consideration the carbon-neutral target for 2050 and the useful life of facilities in deploying and replacing equipment and infrastructure.
- We will promote the absorption of carbon dioxide and help constrain net emissions of the gas by preserving forests and promoting and expanding sustainable forestry and by promoting decarbonized community development that employs forest resources.
- Aiming to shape a decarbonized society, we will render visible the benefits bestowed by nature and the burdens that humans impose on nature and will take those factors, along with climate change, into account in corporate management.
- We will aim to achieve net carbon neutrality overall in investment and loan portfolios by 2050.
- We will allocate ample funding for achieving decarbonization.
- We will develop and supply products and services that contribute to decarbonization and thereby promote a shift to consumption patterns and lifestyles suitable to a decarbonized society.
- We will call on the Japanese government to implement a carbon-pricing framework to help build social momentum for decarbonization initiatives by establishing a visible cost-benefit dynamic for decarbonization and thereby ensure a fair distribution of related burden and responsibility.
- We hereby pledge to press ahead resolutely with measures for achieving carbon neutrality, and we will publicize our commitment and our initiatives broadly in the international community.

Nikkei Net-Zero at COP27

The 27th UN Climate Change Conference of the Parties (COP27) opened in the Egyptian coastal city of Sharm el-Sheikh on November 6 and will continue until November 18. Representatives of corporate members of the Nikkei Net-Zero Project will deliver presentations at the COP27 Japan Pavilion between 1:00 p.m. and 2:30 p.m. (local time) on Monday, November 14. Admission is free, but attendees need to register in advance: https://events.nikkei.co.jp/53342/

emissions include converting coal-fired boilers to gas fuel and increasing weight of renewable sources in energy consumption. Carbon-absorption work will include expanding company's overseas production forests to 400,000 hectares. Oji Holdings is also promoting sustainability through development of eco-friendly paper products, forest-based new materials, and healthcare products.

investing heavily in fulfilling newly adopted Group Action Plan to Realize Decarbonized Society. Company is tackling diverse initiatives to achieve decarbonization goals for 2030 and 2050, but two paramount emphases are developing carbon-neutral buildings and expanding renewable energy projects. Evinces strong sense of urgency about targets looming in 2030.

Miura Daisuke Miyauchi, President and CEO

Commitment and Strategy

Reduction and diversification constitute boiler manufacturer Miura's commitment to sustainability. Company espouses commitment to reducing carbon dioxide emissions incrementally as first step toward elimination. Also espouses commitment to diversifying sources of energy as crucial to ensuring reliable, affordable supplies. Strategy for fulfilling commitment includes such measures as transitioning from fossil fuels to low-carbon fuels, such as ammonia and hydrogen, and developing new processes, such as methanation. Miura is also moving to optimize energy sourcing by diversifying geographical scope of purchasing.

EY Japan Tokuya Takizawa, Chief Sustainability Officer

Long-Term Value

Organization is addressing its purpose, "Building a better working world," to further positive change at clients and internally and is aiming for in-house net-zero emissions by 2025. Active in advising clients on how to manage transition to carbon-free energy portfolios. Emphasizes importance of purchase power agreements (PPAs) in nurturing supply and demand for renewable energies. Japan ranks 8th in attractiveness of overall renewable energy market among 40 nations in EY's Renewable Energy Country Attractiveness Index but only 28th among 40 in PPA market.

CO2CO2CO2CO2CO2CO2CO2CO2CO2CO2CO2CO2CO2CO

Boston Consulting Group Japan Yukimasa Uchida, Co-chairperson of BCG Japan

Aiding Client Initiatives

Firm notes that tectonic changes for companies include lingering pandemic concerns, geopolitical tensions, supply chain disruptions, transformative technologies, "new normal" consumer behavior, and mounting expectations of human resources management, as well as climate change and need for decarbonization. Notes, too, that companies must deal with rising inflation and interest rates, fluctuating exchange rates and uncertain economic outlook. Salutes managements for maintaining their commitment to sustainability despite demands posed by other challenges, and recognizes and supports unwavering corporate commitment to decarbonization. Is official partner at COP27.

Kyushu Electric Power Kazumichi Matsumoto, General Manager, Corporate Strategy Division

New Energy Mix

Company is moving to position renewables as core power source in new energy mix for reconciling decarbonization, reliable access to power, and affordable electricity. Is focusing on optimal chronologies for pursuing targets for components of mix. Notes that wholesale electric power prices are lower in Kyushu than in other regions of Japan and attributes that to extensive adoption of renewable energies and nuclear power and to long-term purchasing contracts for liquefied natural gas. Company is active in collaborative efforts to heighten awareness of need for decarbonization.

Daiwa Securities Group Inc. Keiko Tashiro, Deputy President, Executive Head of Overseas Operations, Head of SDGs and Think Tank

Visual Positive Impact

Group aims to achieve carbon neutrality internally by 2030 and in entire investment and loan portfolio and other categories by 2050. Arranged airline industry's first "transition bond" this year for Japan Airlines. Issuer will use proceeds to advance transition to carbon-free operation. In asset management, assesses environmental and social impact in fund performance reporting, allocates portion of management fees to positive-impact initiatives, and provides customers with investment opportunities in environmentally beneficial enterprises. Headquarters building uses 100% renewable energy from group sources.

JERA Hisashide Okuda, Corporate Vice President, Managing Executive Officer

Geographical Responsiveness

Japan's largest electric power producer, JERA, brings global perspective to challenge of eliminating carbon emissions while ensuring reliable access to electric power. Its efforts toward eliminating carbon dioxide emissions by 2050 span three approaches: securing as many carbon-free energy options as possible, addressing regional needs and circumstances flexibly, and mapping a realistic energy-transition path. Company is on track to increase ammonia proportion of power plant feedstock to 50% by early 2030 and to reduce carbon dioxide emissions at least 60% by 2035, compared with 2013.

UK's green hydrogen plans stuck in the slow lane

Industrial policy Britain trails other countries backing the low-carbon fuel, says *Nathalie Thomas*

Fill her up!: an ITM Power hydrogen refuelling station close to the M4 motorway in England

Twelve months ago, Kwasi Kwarteng, then the UK's business secretary, stood on a site in the English city of Sheffield where stainless steel was manufactured until the 1990s and declared the government's support for a "new British industry . . . that will thrive over the next decade and beyond".

Kwarteng — later appointed chancellor then sacked by UK prime minister Liz Truss before her own departure in October — was, at the time, referring to the production of hydrogen. He was visiting ITM Power, a London-listed company that makes electrolysis equipment in Sheffield to produce "green hydrogen" from water using renewable power.

In recent years, countries and companies around the world have come to view green hydrogen as a critical tool in decarbonising some of the world's most polluting industries, such as chemicals and refining.

And, since the shock of Russia's invasion of Ukraine in February, that interest has only accelerated. Green, or "renewable", hydrogen features heavily in new policies, such as the RePowerEU strategy to diversify the European

Yet, just 12 months on from Kwarteng's visit to ITM's Sheffield factory, there are signs that Britain risks missing out on building a large new manufacturing sector around green hydrogen. ITM announced in September that it was scrapping plans to build a second electrolyser factory in the UK.

"All of our European competitors are being funded to the tune of tens or in some cases hundreds of millions," Graham Cooley, ITM's outgoing chief executive, later told the Financial Times in an interview.

His company had once been something of a stock market darling. At one stage, its market capitalisation rivalled that of established energy suppliers such as British Gas-owner Centrica.

But ITM's shares have dropped by more than a quarter in the past month to trade at 87p last Friday, down 85 per cent since hitting peaks above £5.50 in early 2021, when money was pouring into green stocks.

Some of ITM's woes are down to internal problems. It issued a profit warning at the end of October due to manufacturing delays with its newest product. Cooley agreed to step aside to make way for another leader — still to be named — the decision to scrap its planned second UK factory.

However, others cite insufficient government backing — which leaves Britain at risk of losing out to other countries that are throwing subsidies at the nascent green hydrogen industry. Mistakes have been made before with industries such as offshore wind, where the UK built one of the biggest markets in the world but much of the manufacturing is done abroad.

"It's not really a huge state secret that the British government is not particularly industrially minded, and neither is the investor base in the UK," says Chris Jackson, chief executive and founder of Protium, a UK company that develops, finances and operates green hydrogen and other renewable projects. His customers include the Budweiser Brewing Group, part of global drinks company Anheuser-Busch InBev, a very free market, libertarian . . . and is not a particularly industrial strategy-grounded mindset."

This year, the UK did launch a £240mn net zero hydrogen fund, although critics point out this is a drop in the ocean compared with EU and US incentives. The UK is also, controversially, backing both green hydrogen and so-called blue hydrogen, which is produced from natural gas with the resultant carbon dioxide captured and stored.

By contrast, more than €10bn of public money in the EU is being channelled into two large cross-border hydrogen projects, dubbed Hy2Tech and Hy2Use. That funding will go to companies that can help build up EU member states' capabilities to produce renewable hydrogen. In recent months, competitors to ITM, including Germany's Sunfire, have announced substantial EU funding. Most recently, the EU

hydrogen initiatives in the US to take advantage of the tax credits offered in the Inflation Reduction Act — president Joe Biden's flagship climate, tax and healthcare legislation.

Cooley insists ITM Power is still working towards its annual target of delivering electrolysis equipment with the capacity of handling 5GW of energy — although not by the end of 2024 as it had originally planned. It intends to expand its existing Sheffield plant to have a capacity of 1.5GW a year — up from 1GW — but it will look abroad to fulfil the remainder of its 5GW ambition.

"We're not walking from the UK," Cooley says. But he adds that "around the world, there is very strong engagement to incentivise local manufacturing with funding — and that does not exist in the UK".

The Department for Business, Energy and Industrial Strategy defends its strat-

strategy to diversify the European Union's energy supplies away from imported Russian gas.

The UK also doubled its target for low carbon hydrogen production to 10GW by 2030 in its energy security strategy, which was drawn up following Russia's assault on Ukraine.

for another leader — still to be named — who has more experience in building up manufacturing capabilities, although he intends to continue working with the group in a strategic capacity.

ITM also partly blamed "incredible inflationary pressures" associated with construction projects more broadly for

Anheuser-Busch InBev.

"There is a prevailing attitude . . . [of] why would [we] pay to do it ourselves when we can let others subsidise it and we can buy it cheaper later," suggests Jackson, who is also a former chair of the UK Hydrogen & Fuel Cell Association. "That comes from a mindset that is

funding. Most recently, the EU approved €220mn for a plant in Spain planned by Grupo Cobra.

Mark Hutchinson, the head of Australian billionaire Andrew Forrest's clean energy business Fortescue Future Industries, has also that warned private sector money could flow into green

'The British government is not particularly industrially minded'

and industrial strategy defends its strategy, though. It says: "The UK has a world leading ambition for 10GW of low-carbon hydrogen production capacity by 2030, with at least half from electrolytic hydrogen, which could unlock 12,000 jobs and £9bn in private investment across the country this decade."

Fusion edges from fantasy to reality

Nuclear power

Investors are crowding in on promise of 'unlimited clean energy', reports *Tom Wilson*

Testing times: the JET control room in Oxfordshire, UK — Leon Neal/Getty Images

The promise of producing limitless power by fusing atoms has tantalised scientists for decades — but always seemed just out of reach.

Now, a series of scientific breakthroughs and a rush of private investment is raising hopes that commercial fusion power could yet play a meaningful role in cutting global emissions before 2050.

"There's no point this technology arriving in 2048 because it's too late," says Chris Kelsall, chief executive of Tokamak Energy, which is one of more than 35 private fusion companies worldwide betting they can deliver commercially viable fusion power in the next decade. "We're very focused on delivering demonstration of the technology, net electricity into the grid, in the early-to mid-2030s."

Soviet scientists pioneered the development of the first fusion machine, known as the "tokamak", in the 1950s. The design enabled a plasma of two hydrogen isotopes, deuterium and tritium, to be held in place by powerful magnets and heated to extreme temperatures so that the atomic nuclei fuse, releasing vast amounts of energy.

The same reaction powers the sun but, to this day, no group has been able to achieve fusion while producing more energy than the system consumes — a milestone known in the industry as net energy gain. "That is what we think of as the Wright brothers' moment . . . when the plane actually takes off," says Melanie Windridge, a plasma physicist who runs the consultancy Fusion Energy Insights.

While net energy gain remains elusive, there are several reasons for optimism. Last year, the US government's National Ignition Facility in California came the closest yet to generating net energy by bombarding a tiny pellet of hydrogen plasma with 192 lasers. Six months later, scientists at the government-funded Joint European Torus (JET) facility in Oxford, England, produced a record 59 megajoules from a reaction lasting five seconds — enough energy to boil about 60 kettles.

Although far off the requirements for commercial power, both achievements were heralded as major breakthroughs in the scientific community. However, it is the activity in the private sector that has provoked the most excitement.

In the 12 months to the end of June, private fusion companies raised $2.83bn in investment, mainly in the US but also in the UK, according to the Fusion Industry Association.

The financing — from investors including Bill Gates, Tiger Global Management and Chevron — was more than the total funding raised by the industry up to that point and brought private sector investment to date to almost $4.9bn.

Kelsall says there has been a "palpable inflection" in attitudes to the fusion industry in the past year as investors have begun to take it seriously as potential tool in the fight against climate change.

'There's no point this technology arriving in 2048 because it's too late'

While government-backed facilities like JET and its successor, ITER — currently under construction in France at a cost of more than €20bn — will continue to lead on fusion research, the hope is that smaller, more nimble private sector players can accelerate the path to commercial use.

Nicholas Hawker, chief executive of Oxford-based First Light Fusion, which has been developing an approach called projectile fusion since 2011, says the prospect of "unlimited clean energy" makes fusion's potential too attractive to ignore. "Fusion is, in a sense, the ultimate solution to climate change."

First Light's approach involves firing a projectile at a deuterium-tritium fuel pellet to force the isotopes to fuse. The energy density of the fuel is so great that a pellet one centimetre wide should be able to generate the same amount of energy as a barrel of oil, he says.

Windridge puts it another way: roughly 1 kilogramme of fusion fuel has the potential to produce as much energy as 10mn kilogrammes of fossil fuels.

That makes fusion power particularly attractive for energy-intensive processes — such as repairing the future climate by pulling carbon dioxide from the atmosphere, in a process known as direct air capture.

Accessing the hydrogen isotopes most used in fusion should not be a problem. Deuterium, which can be found in seawater, is widely available, while tritium can be extracted from lithium.

Tritium is mildly radioactive but, unlike nuclear fission where atoms are split, fusion does not produce long-lived radioactive waste.

For that reason, the UK government in June confirmed that future fusion facilities will be regulated by the Environment Agency and the Health and Safety Executive, rather than the Office for Nuclear Regulation, in a boon for the British fusion industry.

Britain has been at the forefront of public fusion research ever since the UK Atomic Energy Authority, established a world-leading fusion laboratory at Culham in Oxfordshire in 1965.

"It's a really exciting time now because we've got the public labs doing important experimental work on the science and, at the same time, we've got the private companies doing important engineering work," says Windridge. "The more that those two can partner together, which is now happening, the faster we're going to get to fusion."

Managing Climate Change New Solutions

Electric vehicle makers face battery squeeze

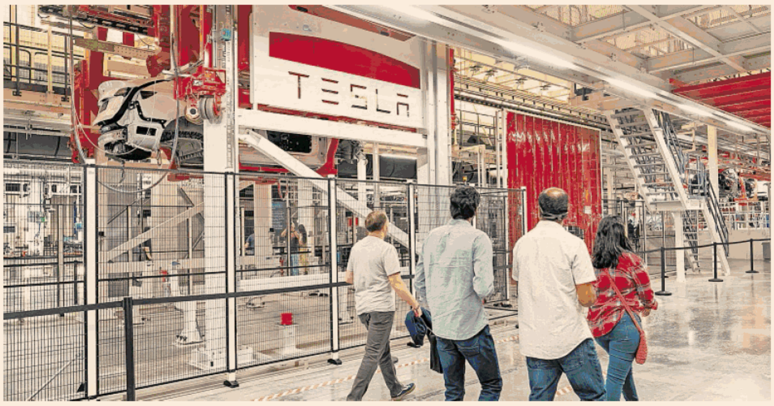
Transport Tesla, Ford, GM and rivals are scrambling to secure raw materials and protect supply chains, writes *Harry Dempsey*

For the first time in more than a decade, the cost of an electric car battery is set to rise this year. Soaring prices for battery raw materials — such as lithium, cobalt and nickel — have led commodities research provider BloombergNEF to predict the reversal of a long-held trend towards cheaper cells, which had seen costs come down from $1,220 per kilowatt-hour in 2010 to $132 per KWH last year.

But a return to more expensive batteries, alongside a supply chain squeeze, calls into question how quickly electric vehicles can become affordable mass-market products — at a time when transport still accounts for a quarter of the carbon dioxide emissions that are a driver of global warming.

Industry analysts forecast that carmakers will experience prolonged production disruptions, akin to those caused by semiconductor shortages over the past two years.

So, faced with constraints on their ability to acquire raw materials, automotive companies are planning to take over the buying of vital inputs them-



Electric dreams: an opening tour of a Tesla 'gigafactory' (left); a geologist holds a lithium-containing rock at an Australian mine (right) Suzanne Cordeiro/Getty Images; Carla Gottgens/Bloomberg

showed the EV maker has applied for tax breaks to build a potential lithium refinery in Texas or Louisiana.

Such a move is seen by many industry observers as necessary to achieve Tesla's ambition of 20mn electric car sales by 2030.

It comes with great risk, though. Lithium refining — a complex chemical process — is a far cry from the carmaker's core expertise of designing vehicles, and relies on the company

— the same level as last year. A cost of $100 per KWH has long been viewed as the level that will make electric cars affordable.

Tesla is the industry frontrunner in securing battery raw materials but some incumbent automakers, frustrated by supply chain disruption, have recently stepped up their own efforts to secure resources by going directly to producers.

General Motors agreed to pre-pay Liv-

says Chris Berry, president of Mountain House Partners, a consultancy.

However, Lukasz Bednarski, principal research analyst at S&P Global Commodity Insights, suggests the doom mongering is overblown.

"The fact that the market is tight is a good enough reason for the automakers to look at their supply chains. Before, they had the mindset: 'we buy batteries but let's leave buying the battery materials to the battery manufacturers'. That

Reduction Act includes tax credits for EVs with a certain percentage of raw materials sourced from the US, or free trade partners, or recycling. This has left automakers and battery cell manufacturers scrambling to rework their supply strategies.

The US legislation also prevents vehicles from accessing those credits if any of the critical materials are extracted, processed or recycled by a "foreign entity of concern".

selves, rather than leaving it to a vast base of suppliers.

"Carmakers are worried about critical mineral access," explains Jon Hykawy, president of research firm Stormcrow Capital. He argues that taking the lead on raw material sourcing is the only option they have.

Tesla was the first carmaker to venture down this path at its landmark Battery Day in 2020, with founder Elon Musk saying the company would intervene directly, where necessary, to supplement the supply of battery materials.

Public evidence of Tesla moving up the supply chain has so far been relatively muted. But filings last month

being able to secure a type of lithium ore known as "spodumene".

Here, availability and cost problems can be serious. Prices of lithium hydroxide, the refined product, have skyrocketed to more than eight times the level of the start of 2021 at almost $70,000 per tonne, close to the record highs hit in March, according to Benchmark Mineral Intelligence.

But, despite the high prices, capital flows into lithium are still meagre relative to the expected soaring demand, says Sam Jaffe, vice-president of battery storage solutions at E Source.

As a result, his consultancy revised up its medium-term forecast for battery costs to $138 per kilowatt-hour in 2024

ent, a lithium mining group, $200mn to secure supplies, while Ford said it would stump up financing for Liontown Resources to develop a lithium mine. Stellantis has even taken a €50mn equity stake in Vulcan Energy Resources, which aims to produce lithium in Germany.

"What we've seen, where car manufacturers have been dabbling in the supply chain, is the very beginning stages of what is going to happen," says Jaffe.

While some see these moves as a much-needed shift in strategy, others say certain deals smack of panic. "It tells you how desperate they are for lithium units — they are willing to do deals with companies that have no production,"

> 'It's still not common for automakers to go out and buy the lithium mine'

is changing slowly."

However, he adds: "It's still not common for automakers to go out and buy the lithium mine. I don't think such a trend will really take place because that would be very unusual."

Higher prices come as western governments commit to industrial policies that will influence where carmakers source their raw materials, by introducing limits and incentives.

"I don't think it's just the pricing environment," says Yayoi Sekine, head of energy storage at BloombergNEF. "The geopolitical environment has created a lot more questions around securing the supply chain."

US President Joe Biden's Inflation

Berry believes economic and geopolitical changes — which also include soaring energy costs because of the Russia-Ukraine conflict and rising interest rates — could turn what would have been a blip in battery prices into something more lasting.

"The entire investment thesis rests on batteries getting cheaper and cheaper every year and getting more energy dense," he says. "Here we are, for the first time ever, where battery pricing has stagnated."

"Given so much change across the battery supply chain . . . industry has to turn on a dime — and that means some of these cost pressures could be structural."

DID YOU KNOW THERE IS A BRAZILIAN BANK THAT IS RECOGNISED AS ONE OF THE INSTITUTIONS MOST COMMITTED TO SUSTAINABILITY IN THE WORLD?

This is BNDES.

A Brazilian development bank that is a global leader in clean energy financing, having assisted Brazil to build one of the cleanest energy grids on the planet.

The bank is committed to supporting Brazil's just transition to a carbon neutral economy, while working with both public and private sectors in structuring and financing projects in diverse areas, like energy and sanitation.

BNDES's actions related to this goal contributed to the institution being rated ESG A1+ by Moody's ESG Solutions, the highest grade in the agency's scale.

For over 40 years, BNDES has been focusing on what is known today as ESG. It is a long journey, and we will continue to invest, finance and believe in a better future.

Scan the QR code and discover our next steps in supporting the climate agenda, as well as investment opportunities in Brazil.

Shall we work together?

BNDES. The Brazilian sustainable development bank.

BNDES

PÁTRIA AMADA BRASIL

ADVANTEST. AIR WATER Amundi ASSET MANAGEMENT Asahi AUCNET INC.

BNP PARIBAS ASSET MANAGEMENT COSMO Daiichi-Sankyo DNP Dai Nippon Printing daiwabo

Deloitte. デロイト トーマツ EDGE International EY Building a better working world Fidelity INTERNATIONAL FURUKAWA ELECTRIC GROUP

Grant Thornton HASEKO ITOCHU IWATSU JPX JAPAN EXCHANGE GROUP

JFE JT kikkoman Joy brings us together KIRIN KOBAYASHI Pharm. Co., Ltd.

KOSÉ KPMG LOTTE Marubeni MEIJI YASUDA
MITSUBISHI CHEMICAL GROUP · Mitsubishi Corporation · MITSUBISHI ESTATE · MITSUBISHI GAS CHEMICAL · MITSUBISHI HC CAPITAL
Mitsui Chemicals · MITSUI FUDOSAN

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Companies and organizations in Japan support the TCFD recommendations.

MIZUHO · MS&AD INSURANCE GROUP
NEC NEC Networks & System Integration Corporation · NAS NIKKEI ADVANCED SYSTEMS
NIKKEI BP · Nipponham
nikko Create the future with n · PILLAR
NOMURA REAL ESTATE HOLDINGS · NTT DATA
OBAYASHI · okamura · OKUMA OPEN POSSIBILITIES · Quick Our Knowledge, Your Value.
R&I · SEKISUI · SEKISUI HOUSE · SEVEN&i HLDGS. · SHIMIZU CORPORATION SHIMZ
Shin-Etsu · SHINKIN CENTRAL BANK · SHIONOGI · SHISEIDO · SOCIETE GENERALE
sojitz · SOMPO HOLDINGS · SUMITOMO CHEMICAL · Sumitomo Corporation Enriching lives and the world · Sumitomo Heavy Industries, Ltd.
Empowering your future SUMITOMO LIFE · SUMITOMO METAL MINING · SMBC · SUMITOMO MITSUI TRUST ASSET MANAGEMENT · SuMi TRUST SUMITOMO MITSUI TRUST BANK
TAISEI For a Lively World · TODA CORPORATION · TOKIO MARINE Tokio Marine Holdings · TOKYO TATEMONO · Building the future on new foundations TOKYU CONSTRUCTION
TOKYU CORPORATION · TOKYU FUDOSAN HOLDINGS · TOPPAN · TORAY · TOSEI TOSEI CORPORATION
TOYO TANSO Inspiration for Innovation · T.RowePrice · TV TOKYO HD · ZEON · NIKKEI

This advertisement has been published with the support of 86 companies/organizations of each company/organization that supports the TCFD recommendations in Japan and overseas.

Charcoal burning threatens 'lungs of Africa'

Deforestation Some businesses are starting to develop alternatives to the cooking fuel, reports *David Pilling*

Fuel from the forest: charcoal for sale at a market in Ambovombe, Madagascar
Charlie Bibby/FT

In the central market of Ambovombe, a provincial capital in southern Madagascar, traders squat on the ground in front of heaps of charcoal. In towns and cities across the island, it is the favoured cooking fuel, valued for its intense heat and slow-burning properties.

And that is why — in what remains of

of carbon emissions. It also endangers rain patterns that are regulated by forest systems and leads to loss of topsoil — as has happened in parts of Madagascar.

Moreover, charcoal is dangerous to those who use it. The ADB estimates that some 300,000 women and 300,000 children die each year from inhaling damaging particles from charcoal, says the forests of Madagascar's drought-prone south, several hours' walk from the denuded landscape next to the main road — people scratch out a living by chopping down trees and burning them to produce charcoal briquettes.

Though much of the trade is illegal, and blamed for the country's rampant deforestation and soil degradation, charcoal is still openly sold by the roadside and in towns and cities. In more rural areas, the preferred cooking fuel is firewood.

The effects on the landscape have been dramatic. "Before we were born, there were forests here when our grandfathers were children," says Tsilahara Monja, surveying the parched red earth that, in years of little rain, struggles to produce a crop. "But they cut them all down back then," he explains — adding that the lack of trees had contributed to the vicious dust storms, known as tiomena, that blight the region.

In cities throughout much of Africa, where nearly half of the rapidly growing population now lives, charcoal is the main cooking fuel. Only the wealthiest people use gas or electricity.

Akinwumi Adesina, president of the African Development Bank, was once surprised when visiting Malawi in east Africa to see bicycle after bicycle and truck after truck loaded with charcoal driving to Lilongwe, the capital. "I asked the minister of energy, how long do you think it's going to take for us to have no forest left in Malawi?" he recalled in a recent interview. "I thought he was gonna say 10 years. He said three."

If deforestation is a regional problem for countries like Malawi and Madagascar, it is a planetary threat in central Africa, home to the Congo Basin rainforest, the world's largest forestry system after the Amazon. Sometimes referred to as the "lungs of Africa", the rainforest, which cover at least 240mn hectares according to the UN Food and Agriculture Organization, forms a carbon sink equivalent to six years of global carbon emissions.

Those forests are relatively well preserved in Gabon, a net absorber of carbon, whose forests sequester about one-third of the carbon each year that France emits. Gabon is relatively wealthy and thinly populated, with a population of 2mn in a country roughly the size of Britain. Unusually, most people use gas to cook, not charcoal, and laws against logging are relatively strict.

But, in the Democratic Republic of Congo — a much bigger and poorer country of 90mn people — the rate of deforestation has reached nearly 500,000 hectares annually, according to Global Forest Watch. In many African countries, including DRC, deforestation rather than energy production for electricity or industry, is the biggest cause of carbon emissions. According to calculations by McKinsey, at least 40 per cent of Africa's carbon emissions are the result of human-induced land use (such as for settlement and agriculture) and changes in land use, to which deforestation is a major contributor.

In a report, McKinsey wrote: "In sub-Saharan Africa, where more than 950mn people rely on wood and charcoal for cooking — a number that is expected to reach 1.7bn by 2050 — and 50 per cent of residential emissions are from cooking, a shift to clean cooking could be transformational."

The destruction of forest for charcoal and firewood is not just a direct source

'What we don't talk about, but should, is avoided emissions'

Akinwumi Adesina, ADB

Adesina.

The ADB is now supporting private equity funds, such as Spark+, that invest in projects to replace charcoal with biomass, biogas, ethanol, and liquid petroleum gas (LPG) cooking fuel. However, Adesina and others complain that western banks, including development finance institutions (DFIs), are reluctant to fund LPG projects because of western government bans on supporting fossil fuel investments. "What we don't talk about, but should talk about, is avoided emissions," he says. "If I am using gas for cooking, I am avoiding having to cut down trees."

A new crop of companies, including Koko Networks and non-profit Stichting Modern Cooking, are seeking to develop alternatives to charcoal. Some, like Kenya-based Burn Manufacturing, have developed stoves that use charcoal but burn it more slowly. Koko's solution is more radical: it supplies ethanol cooking fuel to poor urban households in east Africa, cutting out the need for charcoal use altogether. It makes a profit by selling the resulting carbon credits for avoided emissions.

Lee White, Gabon's environment minister, argues that the gas widely used for cooking in his country may be the most practical solution, at least in the medium term. "Until we have affordable, widely available renewable energy for cooking, then gas is probably the best transition fuel," he says. "It solves the deforestation and the health issues related to charcoal and may result in decreased emissions."

ADVERTISEMENT

Symposium on a Project to Consider the Vision for Asset Management Companies

Search for Ideal ESG Investment

The prolonged Russian invasion of Ukraine, high prices of energy, food, and other commodities, fluctuating exchange rates, and a stock market decline are increasing concerns about an economic depression worldwide. Asset owners, asset management companies, and many other organizations are left asking what asset management strategies to take. This Symposium held by Nikkei, Inc. and Nikkei Business Publications, Inc. examines asset management and other topics through two presentations and one panel discussion.

Keynote Presentation

A Look at Energy Conservation Policies

Naoko Nemoto
Professor,
Graduate School of Business and Finance,
Waseda Business School

The EU has been leading ESG investment worldwide through the EU Taxonomy, the Carbon Border Adjustment Mechanism, and other such policies. Even though the EU will most likely maintain this lead in the future, the Russian invasion of Ukraine is impeding progress. Each country in the EU has its own unique history and geopolitical position, which will surely swing the pendulum between three objectives: mitigating costs, supplying stable energy, and realizing decarbonization.

Anticipation of the midterm elections in the United States is strongly polarizing political positions around an increase in crude oil and natural gas assets. Some States criticize the very concept of ESG investments with restrictions moving to prohibit ESG investments by pension funds and other such measures.

During the first half of 2022, the number of green and other bonds declined due to rising interest rates and market uncertainty. These factors also decreased investment activity into sustainability funds. However, ESG investments have been showing relatively stable performance compared to standard funds in spite of dramatic the market fluctuations. In the face of these economic challenges, the importance of addressing climate change, income disparity, and other ESG issues grows with each passing day. Many corporate and investor strategies already incorporate sustainability. For these reasons, we can expect ESG investments to grow over the medium to long term even with this temporary stagnation.

There are also concerns though about whether investments do actually connect to improving the environment and society. In the future, investments will become more selective in a greater pursuit of specific results. In this way, impact investment will become even more important. Japan still does have a low 0.3% ratio of impact investments worldwide, but the Impact-driven Financing Initiative currently has 34 financial institutions in Japan as signatories. These members are raising expectations about broader future impact investments.

Presentation

Corporate Pension ESG Investments: Current Landscape and Future Challenges

Takamichi Todoroki
Deputy Head of Investment Evaluation Division,
Manager of the Asset Management Consulting Department,
Rating and Investment Information, Inc. (R&I)

R&I is a rating company, but it is also the largest corporate pension consulting firm in Japan, which presently has contracts with 110 corporate pension funds. An R&I survey in 2021 targeting roughly 360 corporate pension funds showed 14% of these associations had investments in ESG products. In contrast, 37% of these funds expressed a high level of interest about investing in ESG products in the future.

There are thought to be three reasons for the relatively low adoption rate of our ESG product offerings. The first is the relationship between ESG and the return. Passive ESG asset management generally originates funds using an index through an ESG evaluation firm. Data from 2015 to date shows a slightly higher return and lower risk than the Tokyo Stock Price Index (TOPIX). On the other hand, active ESG asset management almost never includes non-ESG products as part of the portfolio. ESG products are still a new type of product though with insufficient data illustrating potential returns, which does make pension funds uneasy.

Second is the relationship between ESG and corporate value. The process of improving corporate value through ESG is hard to see and makes it difficult to invest.

Third is the unique ESG attributes. Non-financial information is difficult to quantify and takes time. Analysts have trouble making ESG-related forecasts as well. There is tremendous information asymmetry between those providing and those receiving data. If this problem can be overcome, it is thought the use of ESG funds will broaden greatly.

Personally, I feel the debate about ESG and returns is pointless. A debate about the risks rather than the returns would be more meaningful to future asset management. It is more important to explain the process in which ESG enhances corporate value as a way to make ESG itself seen as corporate value.

Closing Panel Discussion

Toward Enhancing Asset Management and Promoting ESG InvestmentChallenges

Yuri Adachi
Director of Office of Asset Management Business Reform,
Strategy Development Division,
Strategy Development and Management Bureau,Financial Services Agency

Emi Onozuka
Representative Director and CEO.
Eminent Group Ltd.

Moderator:
Satoshi Hanzawa, Staff Editor, Nikkei ESG

Hanzawa: Yuri Adachi, could you please tell us a little about the Progress Report on Enhancing Asset Management Business 2022 published by the Financial Services Agency?

Adachi: The report this year broadly covers product governance issues about product origination, delivery, and monitoring of asset management firms and the challenges of ESG funds. It also examines problems related to the asset management fees of defined contribution pensions (DC) and difficulties in enhancing the asset management of defined benefit corporate pensions (DB).

Some management firms are not only appointing managers with focus on a candidate's practical experience in asset management and increasing the number of independent directors but also reforming personnel performance evaluations and compensation policies, which show how the industry is becoming much more aware of these problems. Yet, there are still a number of examples illustrating product governance issues.

Unlike funds overseas, publicly offered funds in Japan largely offer products with short-term redemption periods of less than five or less than ten years, while mutual funds with monthly distributions are sold towards medium to long-term asset formation. In most cases, the performance after deducting the expenses and the management structure of overseas funds is never considered. ESG funds also face concerns about greenwashing via sustainability or ESG because there is a lack of sufficient information disclosure backing up the ESG claims. In light of the trends at bureaus abroad, putting in place guidelines for supervision in the future will require more comprehensive ESG disclosure and the preparation of ESG systems.

Hanzawa: Emi Onozuka, would you share your thoughts about ESG integration?

Onozuka: The asset management industry will require firms to define their mission according to a corporate philosophy, select strategies to achieve that mission, and set a period for managing assets. Temporary criticism about ESG investment is backlash to its sudden rise in popularity, but now is a great opportunity to review core aspects of ESG investing.

Hanzawa: What about stewardship activities?

Adachi: I hope asset management firms will actively engage in stewardship activities as long as setting a strategy. I want these organizations to clearly communicate their engagement policies and results to investors.

Onozuka: Engagement does involve highly confidential information that cannot always be disclosed, which I feel is also true about announcing results publicly. Leading asset management firms overseas do make proposals to stakeholders or release company names to the public when a shareholder dialogue end with dissatisfaction. The decision about what and what not to disclose is influencing the enhancement of stewardship activities.

Sponsors

AOZORA Investment Management · AllianceBernstein · Amundi Asset Management · Asset Management One · BlackRock · BNP Paribas Asset Management · Capital Group · Daiwa Asset Management · Fidelity International · HSBC · Invesco · J.P.Morgan Asset Management · MUFG Mitsubishi UFJ Trust and Banking · nikko am Nikko Asset Management · Nissay Asset Management · Nomura Asset Management · nuveen A TIAA Company · Pictet · Resona Asset Management · Schroders · SPARX Asset Management · Sumitomo Mitsui DS Asset Management · Sumitomo Mitsui Trust Asset Management

Organized by: Nikkei Inc. and Nikkei Business Publications, Inc.

Managing Climate Change Oceans

UN high seas

UN high seas treaty remains tantalisingly out of reach

Ocean governance Disputes over marine data have helped stall progress, says *Patrick Temple-West*

Despite years of work at the UN, agreement among nations on a comprehensive treaty to protect the world's oceans from unsustainable exploitation remains elusive.

In mid-August, delegates gathered in New York to resume work on a UN conservation treaty for the high seas — the two-thirds of the world's waters that are not within national jurisdictions. Among other objectives, the treaty would have created so-called marine protected areas, where human activity would be tightly restricted, as a means of preserving biodiversity and warding off extinctions. But, after two weeks of talks, the meeting ended on August 26 without an accord.

"Many, myself included, are understandably disappointed that we did not manage to complete our work in August," says Rena Lee, special envoy for Singapore's foreign affairs ministry and ambassador for the oceans and law of the sea issues. "We needed a little more time." She adds that work on the treaty will resume in 2023.

There are 19 organisations that have some governance role concerning oceans, according to the Pew Charitable Trusts, a non-profit that campaigns on conservation. Most are regional, although some, such as the International Whaling Commission, have global reach. What all these organisations lack, however, is a comprehensive mandate to manage and conserve ecosystems on the high seas, Pew says.

"It was ambitious to try to complete the [high seas] treaty in that two-week session," says Liz Karan, director of ocean governance at Pew. "The negotiations came really close. I think it made it that much more disappointing when it did not come together."

The EU quickly blamed China and Russia for the talks breaking down. "Despite all efforts, the international community has failed to reach the finish line, with multilateral efforts often held back by Russia and China determined to derail the negotiations," the European Commission said.

One of the biggest stumbling blocks was how to share the profits from marine genetic resources.

Gathering genetic data from ocean creatures has become big business. Pharmaceutical and cosmetic companies are exploring the potential of novel compounds derived from marine life. Materials and structural design businesses are also attracted to deep-sea organisms that resist predation, crushing pressures, and extremes of heat and cold. But the expeditions required to harvest this information are costly, with the result that developing nations miss out — even though the high seas are, in effect, a global commons.

A similar problem involves the world's small island developing states, or Sids, a grouping of 38 UN member countries mostly situated in the Caribbean and Pacific.

Yoshitaka Ota, director of the Ocean Nexus project at the University of Washington, has been studying ocean governance and how oceans are under threat from climate change. He says that, as climate change hits, fish stocks that lie within some countries' waters may move further out to sea, where the fishing fleets of wealthier countries can outcompete those of the Sids.

"Social equity must be the centre of ocean governance," Ota says. He co-authored a paper this year arguing that "ocean governance continues to suffer from a lack of effective coordinating mechanisms" and that this allows powerful countries or companies to maintain their dominance.

Despite the self-interest of many in keeping the oceans free of regulation, some commercial interests are pushing for the UN's treaty. These include food suppliers and retailers, such as the alliance of UK supermarkets and seafood businesses which has called for governments "to accelerate action" on the treaty. "Our businesses want to source from healthy and sustainable fisheries, which are intrinsically linked to a healthy marine ecosystem," they said.

> 'Despite all efforts, the international community has failed to reach the finish line'

It may be some time before they get their wish, though. There is real concern that momentum for the treaty could slow, Karan says, especially as "other crises like the war in Ukraine" threaten to hinder negotiations.

But work to protect the oceans goes on elsewhere. In December, countries will meet in Montreal for a UN biological diversity summit. One of the goals of this gathering is to sign up countries to conserve at least 30 per cent of the world's oceans by 2030. If that commitment is made, it will bode well for concluding the high seas treaty next year, observers say.

While governments are working at the UN, the financial sector is devising new ways to serve the "blue economy".

In 2018, the Seychelles became the first country to raise funds in the bond market specifically to finance ocean projects. The deal raised $15mn to protect dolphins and other marine life through a 10-year "blue bond" modelled on green-labelled debt. The country received help in designing the bond from the World Bank, which pioneered the use of green bonds.

Net profit: fishermen at work in an Indonesian port Aditya Irawan/Getty Images

Multilateral development banks, which can help fund projects as well as shoulder some risk, have been crucial to financing climate change projects. But family foundations and other philanthropic organisations are also working on ocean conservation.

Pew has partnered with the Minderoo Foundation and others to form the Blue Nature Alliance, which helps to fund conservation projects from the Caribbean to Antarctica. The organisation acts as a co-investor in projects alongside governments, other sources of public money, and philanthropic outfits.

Such financing structures are important because the oceans themselves may be poor investments from a purely profit-seeking perspective, according to Ota.

"The oceans don't really have much return," he says. "You protect the oceans, you spend money to protect an area. [But] it does not really return anything. There is no profit basically apart from beautiful oceans and ecosystems."

Ocean fertilisation revived as climate alarm grows

Geoengineering

Proponents of ocean-based CO_2 removal say adding iron to stimulate marine growth could be a game changer, writes *Clive Cookson*

Next summer, if all goes to plan, shiploads of iron-rich dust will be distributed over the Pacific Ocean off the coast of Alaska, as well as the Atlantic off New England. And it being done for two good reasons: to stimulate the growth of marine life, and pull carbon dioxide out of the atmosphere.

Although this idea of ocean fertilisation — adding iron, a nutrient in short supply across many of the world's seas — dates back more than 30 years, until now, there have been few attempts to put it into practice.

Public, political and financial support has been held back by fears of unanticipated adverse consequences. There is also a more general antipathy to fighting climate change through technical fixes and geoengineering rather than solving the fundamental problem that human activities generate far too much CO_2 and other greenhouse gases.

However, growing alarm about the threat posed by global warming is reviving interest in carbon-removal technologies. Earlier this year, the Intergovernmental Panel on Climate Change report highlighted for the first time the importance of removing CO_2 from the atmosphere, such as by planting trees or carbon capture and storage.

This renewed interest has also given a new lease of life to ocean-based methods of carbon dioxide removal (CDR). While fertilisation to stimulate the growth of green phytoplankton (microscopic algae), which absorb CO_2 in nutrient-poor waters, will be used in the Alaska and New England projects, there are other methods. One is to counter the growing acidity of seawater as it absorbs CO_2 by adding alkaline minerals, enhancing its absorptive capacity.

Earlier this year, a report by the US National Academies of Sciences, Engineering, and Medicine advocated a programme of CDR research, development and evaluation at a cost of many hundreds of millions of dollars from public and private sources.

Russ George, the Alaska-based environmental entrepreneur behind the projects in his state and New England, calls them Ocean Pasture Restoration — to emphasise what he sees as a drive to bring marine ecosystems back to health, as well as to capture millions of tonnes of CO_2 in the sea.

He says climate change and human activities have diminished phytoplankton populations — the base of many natural food chains — across many oceans through nutrient depletion. One factor, he says, is that less iron-rich dust is being blown off the Earth's landmasses into the seas.

George points to a small-scale experiment in 2012 when iron dust was spread over 5,000 square miles of the Gulf of Alaska. "Our work produced the largest catches of salmon in Alaskan history over the following four years," he says,

> 'Many countries still say "don't even think about messing up the ocean"'

though others suggest natural factors, rather than the fertilisation, were responsible for the blossoming of marine life then.

Opponents worry that ocean fertilisation might feed too much algal growth, leading to toxic blooms. The National Academies report said there was little data to support this concern, but did not entirely dismiss the possibility.

But proponents of the technology respond that harmful algal blooms follow excessive run-off of agricultural

Toxic bloom: algal growth in ocean

nitrogen and phosphorus fertilisers into inshore waters — and are not relevant to applying iron further out to sea.

Phil Williamson, an expert on the ocean environment at the University of East Anglia, says: "I wouldn't raise a big red flag over toxic algal blooms. That is not my big worry about ocean fertilisation. My concern is that, if you increase productivity in one area of the ocean, you might decrease it somewhere else."

The biggest obstacle, though, in his view, is public and political acceptance. "Many countries still dislike ocean fertilisation vehemently and say: 'Don't go there, don't even think about messing up the ocean'," he points out.

The National Academies report agrees that "social and regulatory acceptability is likely to be a barrier to many ocean carbon dioxide removal approaches", while noting that no international agreement imposes a legally binding ban on the practice.

However, proponents of "blue carbon" approaches aimed at increasing oceans' uptake of CO_2 insist that the tide of opinion is turning in their favour.

In the US, a bipartisan group of congress representatives recently introduced the Ocean Restoration Research and Development Act of 2022, which would authorise the spending of $33mn a year from 2023 to 2027 on research and development of technologies — such as adding alkaline minerals, or iron, to the seas.

"Ocean restoration provides a unique opportunity to sequester tens of millions of tonnes of blue carbon while simultaneously helping restore fisheries," says Todd Johnston, head of policy for the conservative environmental group ConservAmerica. "This initiative could be a game changer when it comes to our efforts to address climate change and improve the health of our oceans."

Fish migration highlights need for better ocean monitoring

Ocean science

Marine scientists are calling for more data collection to understand the impact of climate change on oceans, writes *Jeremy Grant*

At a "catch and release" aquarium in Tobermory, a small port on the Scottish island of Mull, staff have become used to taking delivery of some unusual specimens from the fishermen who supply it with fish for temporary display.

Recently, these included a grey triggerfish, an exotic-looking species that can grow to 60cm and is normally found in the Mediterranean, near Nova Scotia and Argentina, and even Angola.

The triggerfish was the third example of the species that the Mull Aquarium had displayed since its first captive example in 2015, suggesting the fish is being driven northwards, as some marine scientists believe, by ocean warming caused by climate change.

Grace Lambert, aquarium manager, agrees that climate change is a likely factor, pointing also to an increase in stormy weather off the shores of Mull in the past five years — which she says may be contributing to the movement of species that are not native to Scotland.

But she adds that, without more ocean monitoring, it is hard to be sure: "Not enough records are being kept of what's being caught commercially so we don't know whether climate change is having an effect on species like crab and lobster, because there's a lack of data."

Gathering data through regular monitoring is an increasing concern for climate scientists and marine biologists, globally, as the links between the ocean and climate change become clearer.

According to the UN, the ocean is absorbing about a quarter of all carbon dioxide emissions, and about 90 per cent of the excess heat generated by these emissions.

The ocean has also become more acidic because of increased levels of atmospheric carbon dioxide, threatening the coral reefs on which many fish and other species rely.

However, ocean monitoring is neither sufficiently widespread nor resourced to be carried out on the scale required to properly assess the ongoing impact of climate change on the oceans, marine scientists admit.

In Scotland, the Scottish Association for Marine Science (SAMS) operates a robotic underwater vehicle known as a "glider" that regularly shuttles between the Hebrides and Iceland over six-month periods, collecting data on the ocean to a depth of 1,000 metres.

But, with only one in operation, there are obvious limits to what it can do, says Nicholas Owens, Director of SAMS, based in the Scottish coastal town of Oban. "These measurements are crucial to understanding if the ocean currents off Scotland are changing in the face of climate change. But we really need a fleet of such instruments if we are to provide sufficient data," he says.

Data collection capacity in parts of Africa, a continent ravaged by climate change effects, is in a much worse state.

The Gulf of Guinea, off the coast of Nigeria, contains one of the largest sources of fish off Africa, supporting millions who live along the region's coastline. It is also rich in marine biodiversity. But, below a depth of 1,000 metres, very little information on factors as basic as temperature, salinity and nutrient richness.

On the move: triggerfish

So marine scientists from five African countries around the gulf have been working, since 2020, on a project to build a "regional oceanographic databank" for the analysis of ocean and climate conditions in the area.

The work is taking place under the auspices of the Partnership for Observation of the Global Ocean (POGO), a UK-based organisation founded in 1999 by oceanographic institutions around the world as a platform for boosting ocean monitoring. "We desperately need to up our game on [marine] observation, particularly in developing countries," says Owens, who also chairs POGO.

Nubi Olubunmi Ayoola, assistant director at the Nigerian Institute for Oceanography & Marine Research and project leader for the POGO Gulf of Guinea project, says collaboration is vital to ensure "adequate and more frequent research", and because the equipment required is "insufficient and expensive".

He adds that efforts so far to create awareness among coastal communities about the impact of climate change on marine resources need to be intensified.

One of the project's aims is to develop a monitoring network to produce data over the long-term. The National Oceanic and Atmospheric Administration (NOAA), the US federal agency that monitors oceanic conditions, says the value of long-term monitoring is only now starting to be fully recognised as work that began decades ago starts to shed light on trends.

One example is an oceanographic survey known as Newport Line, conducted over more than 20 years off the coast of Oregon, which recently helped NOAA see that a surge in "marine heatwaves" near the west coast of the US is expected to become more common with further climate change.

"It's only because this monitoring began decades ago that we now realise the scale and speed of how the ocean is changing," says Elliott Hazen, research ecologist at NOAA in California. "Even if we have successful models predicting where species' locations change over time, new data are critical to make sure the models are predicting accurately as conditions shift."

WE ARE PART OF
A GLOBAL EFFORT
Combating climate change is the biggest engineering project on the planet. And there are solutions. Because there is action.
Braskem is removing CO_2 from the atmosphere in the production of chemicals and plastics from plants. Using more and more renewable energy sources, improving the energy efficiency of our industrial units.
And developing technology to transform the greenhouse gases emitted into new products.
Because in the fight against climate change, we must act today.
LEARN MORE
There is only one way to make a more
sustainable
future:
together.
Braskem