Dubai

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Nikkei	26890.58	27006.96	-0.43
Hang Seng	16211.12	16280.22	-0.42
MSCI World $	2429.26	2439.30	-0.41
MSCI EM $	864.76	865.91	-0.13
MSCI ACWI $	563.06	565.21	-0.38
FT Wilshire 2500	4772.41	4811.02	-0.80
FT Wilshire 5000	37277.22	37579.15	-0.80

Ethereum	1296.15	1282.67	1.05
COMMODITIES			
	Oct 21	Oct 14	%Week
Oil WTI $	85.09	86.13	-1.21
Oil Brent $	93.25	92.03	1.33
Gold $	1635.30	1648.10	-0.78

GER 2 yr	2.03	2.10	-0.07
GER 10 yr	2.41	2.40	0.01
GER 30 yr	2.43	2.36	0.07

Prices are latest for edition
Data provided by Morningstar

A Nikkei Company

INTERNATIONAL

US growth

Biden adviser rebuffs recession concerns

White House aide insists economy strong enough to ride out global downturn

JAMES POLITI — WASHINGTON
COLBY SMITH — NEW YORK

Joe Biden's top economic adviser said the US economy had the "strength and resilience" to shield it from a recession, brushing off growing concerns that steep interest rate increases designed to fight inflation will quash the expansion.

Brian Deese, director of the White House's National Economic Council, spoke to the Financial Times as economists and chief executives are increasingly warning that the world's largest economy will experience a downturn next year on the back of global weakness and much tighter monetary policy.

But the Biden administration is sticking to its view that the US will experience a form of "soft landing" with a shift to slower growth rather than a deep contraction, and a cooling of job growth rather than mass lay-offs.

"If we look at where the United States are, two things are clear. One is that we have a degree of strength and resilience in the labour market and household balance sheets and in business investment. That is continuing to move our economy forward, and that's really important," Deese said.

"The second is that we are in a stronger position than . . . frankly, any other country to navigate through this transition without having to give up those gains."

Deese spoke ahead of midterm elections early next month with polls showing Republicans poised to regain control of the House of Representatives and possibly the Senate. He dismissed surveys showing that US voters disapproved of Biden's handling of the economy. "I'm a believer that good economic policy ultimately makes good politics because you know, people are quite sensible," Deese said.

The Federal Reserve has ploughed ahead with large 0.75 percentage point rate rises — with a fourth consecutive increase of that size slated for early November — but the US economy has not suffered a big hit from the monetary tightening. Interest-rate sensitive sectors such as housing have slowed considerably, but others have shown surprising resilience. This year, monthly jobs growth has averaged 420,000 positions. Still a healthy clip, that is down from 562,000 a month in 2021.

Inflation, meanwhile, continues to run rampant, with consumer price growth accelerating again last month to bring the annual rate for the "core" measure — which strips out volatile items such as food and energy — to 6.6 per cent. Traders in futures markets for the federal funds rate expect it to peak at 5 per cent next year, suggesting further large rate rises this year and early next. Fed officials are set to begin discussing how to slow the pace of its rate rises while committing to keep rates at a level that restrains the economy for some time.

Jay Powell, chair of the Fed, last month warned that the higher rates rise and the longer they stay at a restrictive level, the lower the odds the Fed can get inflation under control without causing significant economic pain. "No one knows whether this process will lead to a recession or if so, how significant that recession would be," he said.

See The FT View

Ukraine fallout. Poverty

East Europeans turn to toxic fuel in energy crisis

People forced to burn wood, lignite coal and rubbish amid rising gas and electricity costs

MARTON DUNAI — ÓZD
RAPHAEL MINDER — WARSAW

Zoltán Berki, a stocky Hungarian man in his fifties, stuffs twigs in his kitchen's iron stove, throws on a log or two — and then an old football boot.

"It burns, and we need to stay warm," he said. Across the northern city of Ózd as temperatures hit zero, other residents have also resorted to firing up their furnaces with polluting fuels such as lignite coal, wood or illegal items such as rubbish to keep warm.

Getting through winter has become the priority for millions of people in eastern Europe who cannot afford the higher gas and electricity prices caused by Russia's invasion of Ukraine. Across the region, the cost of firewood has doubled from last year as households stockpile reserves. Rates of energy poverty, defined as the inability to afford sufficient heating supplies, will rise significantly in countries such as Hungary, Slovakia and Bulgaria, say analysts.

"If the prices of basic goods, primarily energy and food, increase, that pushes many people into poverty, and those already under the poverty line into extreme poverty," said David Nemeth, Hungary economist for Belgian bank KBC Group.

The increased use of toxic fuels also threatens to significantly raise emissions across the region.

"Years of development will go down the drain now. If their survival depends on it, people will burn anything," said Zsuzsanna F Nagy, director of Hungarian environmental group Green Connection Association.

Unable to find a job in Ózd, whose Soviet-era heavy industry has largely been closed, Berki commutes 150km each way to work at a Budapest archaeological site. But his monthly salary of about €500 leaves little spare to buy firewood, which some shops now sell for more than €200 a cubic metre, roughly enough to heat a small house for a month.

Hungary's Prime Minister Viktor Orbán relaxed logging rules and ordered more mining of lignite, the sulphur-heavy brown coal regarded as one of the dirtiest fossil fuels. The measures show how climate change has fallen down the agenda of many governments.

Keeping warm: Gáspár Sipeki collects wood for burning in Miskolc, Hungary. Below, fellow city resident Zsuzsanna Mezes uses a heater to keep out the cold
Laszlo Balogh/FT

"Twice as many Hungarians die from air pollution as French or Dutch, relative to population size," said Budapest-based Clean Air Action Group. "But deaths are just a tip of the iceberg as a hundred times as many people get sick."

Poland removed quality standards for burning coal to reduce a shortfall after it fast-tracked an EU ban on Russian imports. Ruling party leader Jarosław Kaczyński last month told Poles to burn "everything except tyres" to keep warm.

Agnieszka Warso-Buchanan, a lawyer for non-governmental organisation ClientEarth in Poland predicts air quality will plummet across the region.

"People should not be put in the position of having to choose between heating their homes or harming their health from pollution," she said.

Poland is subsidising the purchase of coal, which heats one-third of homes. Other governments in the region are introducing emergency support measures, though mostly not on the scale of their western counterparts.

"Support schemes are badly set up for the really poor," said Dana Marekova, an environmentalist in Slovakia, where last year one-fifth of households were defined as being in energy poverty. The poorest Slovaks wasted only small amounts of energy, she said, so they would not benefit from a new law subsidising households that reduced energy consumption by 15 per cent.

Slovaks have scavenged so much wood from the foothills of the Tatra mountains bordering Poland that Nová Lesná's mayor Peter Hritz said his town was "going back 50 years" in heating methods and pollution. "Suddenly smoke and smog don't bother anyone," he told Slovak media recently.

The winter heating crisis will be particularly painful in countries such as Bulgaria, where two-thirds of rural homes burn wood. Even before the war 60 per cent of Bulgarians on low incomes could not adequately heat their homes, according to Eurostat.

'If their survival depends on it, people will burn anything'

In Kosovo, one of Europe's poorest countries, wood is burnt in nearly every rural home and most urban households. A faltering electricity system including regular blackouts could contribute to a doubling of wood usage this year, according to Egzona Shala, executive director of Pristina-based environmental group EcoZ. Illegal logging would not cover the fuel shortfall, she added.

For those who can afford more efficient heating units, supply is not keeping up with demand. Hungary's furnace manufacturers' association has urged customers to stop calling suppliers.

In Hungary's largest segregated slum close to Miskolc, another former hub of heavy industry, its 5,000 mostly Roma residents are braced for harsher times.

"I have a cubic metre of wood, which will be enough for a month, maybe," said Gáspár Sipeki, a Hungarian Roma. When his stock runs out, he can buy more wood illegally through a clandestine deal deep in the Ózd valley.

"What else am I going to do?" asked Sipeki, who is employed in a public works programme. "I make €150 a month, I can't buy wood for €100."

Commuting patterns

Working from home becomes entrenched in world's biggest economies

VALENTINA ROMEI

Office workers across the world's biggest economies have not resumed their pre-pandemic commuting, instead embracing hybrid working as the new normal, according to commuting data.

By mid-October trips to workplaces in the world's seven largest economies were still well below their levels before the coronavirus took hold in early 2020, according to a Financial Times analysis of phone-tracking movements published by Google.

In Japan, footfall was 7 per cent below pre-pandemic levels while in the UK it was down 24 per cent. Across major advanced economies office trips are more popular on the middle days of the week, while Monday and Friday tend to show large drops in attendance.

Cities that host financial and business districts had a larger loss of office footfall than other major population areas, according to the Google figures.

Economists said the shift towards remote working had become the new normal. "Working from home will ultimately stick," said Cevat Giray Aksoy, an economist at the European Bank for Reconstruction and Development who has researched the trend. "Workplace-related mobility levels will remain lower than the pre-pandemic levels."

The big shift to working from home "presents challenges for dense urban centres that are organised to support a large volume of inward commuters and a high concentration of commercial activity", said Aksoy.

Aksoy's research found that a rising share of job postings in many countries offered employees the opportunity to work remotely one or more days a week. Sara Sutton, founder and chief executive of FlexJobs, a careers service specialising in remote and hybrid jobs, said: "We have definitely seen a tipping point towards a deeper and more permanent integration of remote and hybrid work into organisations."

Survey data suggest that people like working from home and the practice helps to lower firms' overheads and carbon emissions, but evidence on the impact on productivity is mixed.

The Freespace index, which tracks office usage in big corporations around the world, shows that occupancy is about half its 2019 levels for both workspace stations and meeting rooms.

Kastle data, which tracks fob access to US offices, particularly in big professional services businesses, shows that occupancy returned to only about half of pre-pandemic levels in mid-October.

A survey by Munich-based think-tank Ifo showed that in August a quarter of employees in Germany still worked from home for at least part of the time.

In the UK, an Office for National Statistics survey showed that more than a fifth of UK workers were using a hybrid model of working in early October, largely unchanged since the spring.

That rose to more than half of the workforce for information and communication, with professional, scientific and technical activities being only a little lower.

Google began to publish daily data on travel patterns in April 2020 as a tool for policymakers to track the effects of Covid restrictions on the economy.

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EU diplomacy

Meloni premiership to test Italy's relations with Brussels

SILVIA SCIORILLI BORRELLI — MILAN

When Italy's new prime minister Giorgia Meloni was in opposition she gained notoriety for her fiery anti-Brussels speeches, accusing the EU of working against Italian interests.

But after the rightwing nationalist was sworn in over the weekend, replacing Mario Draghi, a staunchly pro-EU technocrat, she faces the challenge of … crats", Meloni has previously said the EU should be a federation of nations, each of which should regain sovereignty, not cede more of it.

However, analysts believe Meloni's first cabinet appointments are a sign that she is seeking to appease concerns in Brussels and across EU capitals about the direction she intends to steer the eurozone's third-largest economy.

Meloni on Saturday appointed Gian- … EU affairs minister, Raffaele Fitto, has been an MEP since 2014.

Whether tensions can be avoided, however, will not only be up to Meloni analysts say. Remarks last month by European Commission president Ursula von der Leyen and France's prime minister, Élisabeth Borne, suggesting that EU institutions would monitor Italy's respect of human rights, were an early sign that the relationship between … withholding of EU funds as Hungary and Poland "should things go in a difficult direction".

However, she said yesterday that she had a "good first call" with Meloni, adding that the EU and Italy would "work together to address the critical challenges of our time, from Ukraine to energy".

French president Emmanuel Macron and Germany chancellor Olaf Scholz

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Representative, Anjali Mahindroo

technocrat, she faces the challenge of balancing Italy's relations with the bloc while managing her party's nationalist tendencies.

Meloni's junior coalition partners include the eurosceptic League and Silvio Berlusconi's Forza Italia. "While Meloni's support for the US and Nato are very clear, her EU course isn't . . . she's at a crossroads," said Nicoletta Pirozzi, EU programme director at the International Affairs Institute in Rome.

Meloni, whose Brothers of Italy party won the largest share of the vote in last month's election, held after the sudden collapse of Draghi's coalition, is also the president of the eurosceptic European Parliament's Conservatives and Reformists group.

As well as attacking Brussels "bureau-

Meloni on Saturday appointed Giancarlo Giorgetti, as her finance minister. Giorgetti is a League member who served in Draghi's government as economic development minister and was one of his closest allies.

Giorgetti's party campaigned on cutting income tax to 15 per cent which it said would be funded by additional public debt. His upcoming budget law will be the first test of the Italy-EU relationship as any such a move would be a reversal of the fiscal discipline set out by Draghi, a former European Central Bank president.

Meloni has signalled her intention to maintain the stability of Italy's public finances. Her foreign minister, Antonio Tajani, is a former European Parliament president, and the new government's

sign that the relationship between Rome and its allies could become fraught, analysts say.

Von der Leyen also warned that Italy could be subject to the same punitive

Giorgia Meloni: must balance Italy's needs with party's nationalist views

and Germany chancellor Olaf Scholz have both said they are "ready to work" with Meloni's new government.

Meanwhile, Hungary's prime minister, Viktor Orbán, has described Meloni's victory as a "big day for the European right".

Pirozzi believes if Paris and Berlin take a pragmatic approach towards Rome, confrontation can be avoided.

An EU diplomat said the bloc was taking a "wait and see" approach.

"She [Meloni] has said a lot in the past but she hasn't made any policy yet," the diplomat said. "She clearly understands she needs to walk a tightrope when it comes to Europe. If she had right from the bat gone all out Orbán it would have made life very difficult."
Additional reporting by Alice Hancock

INTERNATIONAL

Iran exploits widening gulf between Russia and the west

Tehran seizes opportunity to expand economic ties and ease sanctions pain

NAJMEH BOZORGMEHR — TEHRAN

Iran's supreme leader used an address to academics this week to praise the effectiveness of his country's military drones, which according to Kyiv and the west are being sold to Russia and used to pummel Ukraine's big cities.

Whereas once people doubted our technology, Ayatollah Ali Khamenei said, "now they're saying: 'Iranian drones are very dangerous, why are you selling it to so and so?'"

Ukraine president Volodymyr Zelenskyy has accused Russia of deploying the Iran-made Shahed-136s against his country, saying Moscow had already ordered thousands more. Iran and Russia deny any trade in combat drones, but what is not in doubt are the increasingly cordial relations between Moscow and Tehran since the full invasion of Ukraine in February.

This was evident during Vladimir Putin's most recent visit to Tehran, when Khamenei credited Russia's president with taking "the initiative" in the war before the west imposed a similar conflict on him.

An appreciative Putin responded by calling for enhanced military co-operation between the two countries and held out the prospect that Iran could join trilateral military drills with China.

Iran's leaders are capitalising on the chasm that has opened between Russia and the west since the invasion to establish a strategic relationship with the Kremlin that can help minimise the impact of painful US sanctions, analysts say. Curbs have severed Iran's links to the global financial system and ability to trade, and deprived it of the revenues needed to keep its economy functioning. Better relations with Moscow can offset that, through trade and investment. Access to Russian military hardware is another aim.

"The mindset in Tehran is that the more the gulf between Russia and the west widens, the bigger the opportunities for Iran," said Elaheh Koolaee, an international relations professor at the University of Tehran, noting how it had already paved the way for Iran to join the Eurasian Economic Union and the Shanghai Cooperation Organisation.

"These can help Iran develop its trade ties with other countries, which is an opportunity Iran can't ignore," Koolaee said.

There are few signs yet that Moscow views Tehran as a permanent partner, Iranian analysts say, with the relationship for now largely dependent on the course of the war and the stalled process to restore the 2015 deal on Iran's nuclear programme. But the Islamic regime sees no other choice but to bet on Putin.

Iran views the US with deep suspicion and suspects its goal is to overthrow the Tehran regime. Iranian politicians say European countries may not share this goal but they do comply fully with US sanctions that make improvement of trade ties and oil sales impossible.

The US this week assessed that not only were Russian forces using Iranian drones but that Iranian forces were on the ground in occupied Crimea helping

Aerial attack: a drone strikes Kyiv. Below, Ebrahim Raisi, right, greets Vladimir Putin in Tehran
Yasuyoshi Chiba/AFP; Sergei Savostyanov/Sputnik/AFP/Getty Images

with training. Russia has received dozens of unmanned aerial vehicles from Iran, the White House said, expressing concern that it was seeking additional advanced weapons from Tehran.

Experts say feeding the Kremlin's war was, for Iran, a first step towards a wider relationship that includes replacing its ageing fleet of fighter aircraft with Russian-made Sukhoi jets. Decades of US sanctions on arms sales to Iran have prevented it from modernising its air force, while leading it to focus on the development of cheaper ballistic missiles and drones.

"The most modern fighter jets Iran has are MiG-29s bought from the Soviet Union," said Mohsen Jalilvand, a member of the scientific board at Islamic Azad University, meaning Tehran's best military craft are decades old.

Relations between the two countries have not always been straightforward. President Ebrahim Raisi and other Iranian leaders know Moscow has never been a reliable partner, recalling 19th-century treaties that led to the loss to Russia of modern-day Dagestan, Georgia, Azerbaijan and Armenia.

More recently, the contract with Russia to build the Bushehr nuclear power plant in southern Iran has been beset with delays.

The two countries, however, collaborated to keep Syria president Bashar al-Assad in power. Russia also backed

> There are few signs yet that Moscow views Tehran as a permanent partner

restoring the nuclear accord that collapsed when the US withdrew in 2018. Talks remain deadlocked after Tehran and Washington failed to agree on the most recent proposal by the EU.

Iran remains interested in a long-term deal with Russia similar to the one it signed with China in 2021. That agreement was to expand co-operation in areas from energy, petrochemicals and nuclear power to the high-tech and military sectors.

There are signs of a pick-up in Iran-Russia trade. Hessameddin Hallaj, deputy for international affairs at Tehran's chamber of commerce, said Russian business delegations had visited Iran regularly since May.

Saeed Laylaz, an analyst of Iran's political economy, pointed out that Russia-Iran trade was limited by the fact that neither needed to buy the other's most valuable commodity: hydrocarbons. "Can we sell oil and gas to Russia or vice versa? No," he said. "The best potential for co-operation is in the military sector."

trusted protégés". In 2013, he himself became governor of Zhejiang, before

mier Li Keqiang, a rival for China's top role in 2012, and a figure who has been

business' to investors," said Andrew Gilholm, head of China analysis at Control

Xueqiao and Tom Mitchell
See Opinion

urday he did not and ended up overshadowing Xi.

Gender gap

Beijing elite remains male bastion as president pushes traditional roles for women

PRIMROSE RIORDAN AND GLORIA LI
HONG KONG

Jiang Qing married the most powerful man in China, created revolutionary operas and was celebrated for bringing to life films by the country's greatest directors. But she was also blamed for stoking the excesses of the Cultural Revolution as part of the "Gang of Four" who controlled the Communist party during the turmoil.

Fifty years later, no Chinese woman has managed to get any closer to power than Madame Mao, as she was better known after marrying Mao Zedong.

When China's 101-year-old Communist party yesterday unveiled the new members of the politburo, its second most senior leadership group under President Xi Jinping, it was an exclusively male affair. In a break with a decades-old convention, no women were appointed to the new 24-member body.

While a handful of women have climbed the party ranks, none has ever made it to the seven-seat top committee, the standing committee, which was also announced at the weekend. Packed with Xi's allies, the new line-up is set to cement his hold on power. The equal right of women to participate in politics is constitutionally enshrined in China, but very few have been appointed to powerful political positions. Just one, retiring Covid tsar Sun Chunlan, had a seat on the politburo, despite the fact that women make up about 30 per cent of party members.

"[There is a] deep-seated male chauvinism, which is systemic in Chinese politics," said Valarie Tan, an analyst on Chinese elite politics at the Mercator Institute for China Studies in Berlin. "This has informed my not-so-optimistic view when it comes to the future of women leaders in the CCP."

Three women were considered to be in the running to take the place of vice-premier Sun. But analysts said there was no guarantee that a female would be appointed this year. It was a convention rather than a rule, they said, to name a woman to the body.

"The recognition of women's rights has been part of China's social development . . . [but] you don't have a lot of female representation in politics in China, which means that women's rights have always been very difficult to really push through as a political agenda," said Tan.

Fengming Lu, a specialist at the Australian National University, said that, apart from Chen Muhua, former governor of the People's Bank of China, few senior women had been able to even advocate for females to gain greater political influence in recent years.

Xi has also been pushing the party further towards a more traditional view of the family and under his rule feminist and LGBTQI activists have been censored and prosecuted.

Minglu Chen, a lecturer at the China Studies Centre at the University of Sydney, said another obstacle was that female politicians risked being judged as immoral if they mixed with men.

"Traditional gender stereotypes prevent women from building social networks they will rely on to get ahead . . . Women [fear] becoming a target of slander."

Jiang Qing, left, was closer to power than any Chinese woman — Bettmann Archive

Chen pointed to how Wu Yi, a former politburo member who was labelled the "Iron Lady of China", faced questions, such as why she was single, that male politicians were never asked.

Women must also retire at 55 in China, narrowing their window for reaching the top of the party ranks.

The party introduced a quota system in 2001, mandating at least one woman be appointed to most levels of government and party groups. But analysts said the rule had failed to make a difference. "So within a government department, or within the policy department, once they hit that quota for women, they stop," Tan said.

The attitude is prevalent throughout the organisation. Zhong, who provided only her surname for anonymity, joined the party in 2005 when she was looking after her seven-year-old child.

Zhong said that the gender ratio of party members in the government unit where she worked was roughly 50-50 but most of the leadership positions were occupied by men.

"Women spend more time tending their families while spending less time advancing their careers. They naturally receive less rewards at work," said Zhong. "After all, China is a male-dominated society, where women are always relatively weaker."

Xi said during talks with the All-China Women's Federation in 2013 that caring for and educating children was women's responsibility. "We need to give full play to women's unique role in . . . fostering family traditions," he said.

Traditional folklore does not help women's cause, either. A Chinese idiom says that a woman in power is like "a hen heralding the dawn", an omen for the overthrow of the natural order and disintegration of the state, according to Tan. That the Chinese president does not have to answer to the country's hundreds of millions of female citizens in direct and free elections further restricts female voices.

"The CCP is not held accountable, not held in check by inter-party competition or election, or the need to appeal to voters," said Chen. "The Communist party has always been a patriarchal institution . . . There has never really been a consideration of women's agency and needs."

Additional reporting by Nian Liu

'Are we there yet?' The investment keeps coming but driverless vehicles remain stuck in the slow lane ➲ ELAINE MOORE, OPINION

Companies & Markets

Top executives' pay protected despite slide in valuations

- Pliant US boards rework bonuses
- Performance targets eased in crisis

PATRICK TEMPLE-WEST — NEW YORK

Executives at some of America's publicly listed companies will earn millions of dollars in equity-based bonuses this year because sympathetic boards have reworked their incentive plans — even though stock market declines have wiped trillions of dollars off corporate valuations.

Companies adjusted bonus plans in 2020 to account for the coronavirus pandemic and have since revisited pay and eased performance assessments in response to inflation, energy crises and other macroeconomic problems, said Matteo Tonello, a managing director at the Conference Board, an economic research organisation.

> 'This phenomenon seems to be driven by the market for top talent, which continues to remain tight'

Among them are hard-drive manufacturer Western Digital, which this month said it paid chief executive David Goeckeler $32mn, up from $17mn in 2021, after scrapping performance goals tied to its share price. Western Digital's shares are down more than 47 per cent in 2022, compared with about a loss of 22 per cent for the S&P 500 index.

Aircraft parts manufacturer AAR Corp said last month that chief executive John Holmes was awarded $7.7mn ... Andrea Owen $1mn this year after adjusting annual bonus criteria for all eligible employees to compensate for "ongoing supply chain constraints".

In 2020, dozens of groups stung by Covid-19 lockdowns refashioned plans to help executives get paid bonuses they would not have earned in the downturn.

General Electric rewrote chief executive Larry Culp's pay that year, resulting in a $240mn pay deal that shareholders ultimately opposed.

In 2022, the rationale is different, Tonello said. "This phenomenon seems to be driven by the market for top talent, which continues to remain tight, and the hesitation to compound today's uncertainties with the risks that a leadership change could pose to the business," he said.

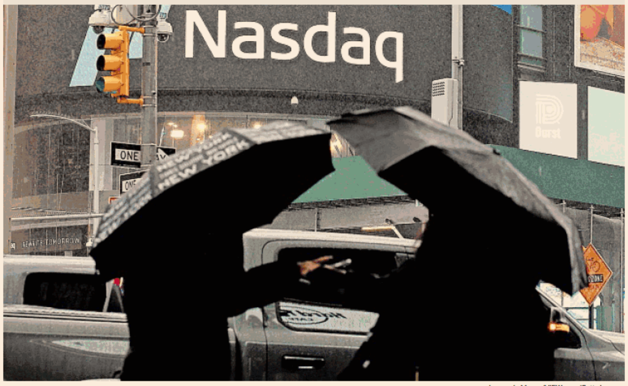
Other companies this year have replaced executives' stock options with shares in a sign that the businesses do not think their stock prices will rebound before the options expire.

Though shareholders overwhelmingly support executive pay at companies' annual meetings, signs are growing of unhappiness with bonuses.

A record 67 companies in the Russell 3000 index failed say-on-pay votes this year over bonus concerns, including JPMorgan Chase, Halliburton and Netflix, up from 61 last year and 45 in 2020, according to the Conference Board and ESG data analytics firm Esgauge.

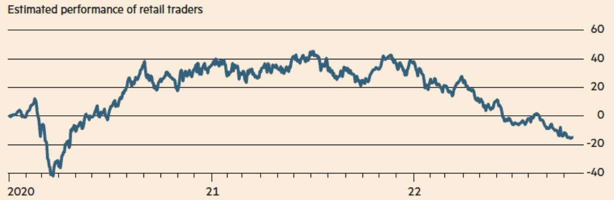
Less than half of AAR's shareholders backed executive pay at its annual meeting this month.

Out of stock US retail investors shun individual equities as their portfolios decrease by 44%



Leonardo Munoz/VIEWpress/Getty Images

Retail investors feel the pain of stock market fall
Estimated performance of retail traders



Source: JPMorgan

MADISON DARBYSHIRE — NEW YORK
JOSHUA OLIVER — LONDON

Retail investors are nursing steep losses this year, leading many to shun individual stocks in favour of funds that track the biggest high-tech companies on the Nasdaq in the hope of clawing back losses.

Personal portfolios in the US fell 44 per cent between January and October 18, according to data compiled by JPMorgan, in a reflection of the acute pressure applied to highly valued equities by rising interest rates and a darkening economic outlook.

"Retail investors have been conditioned to invest into growth catego... has tumbled almost a third over the same timeframe, knocking the indices into so-called bear market territory earlier this year.

Interactive Investor, which runs one of the UK's largest platforms for self-directed investors, said its clients had lost an average of 12 per cent since the start of the year.

Burnt by the sell-off, many retail investors have sold down shares in a bid to protect themselves from further pain.

JPMorgan noted that last week investors registered their longest weekly selling streak since the bank began measuring the market in 2016.

... Cheng, a global quantitative and derivatives strategist at JPMorgan. But he noted that they were buying products that tracked stock indices such as exchange traded funds.

Last week, investors bought more than $330mn of Nasdaq 100 ETFs, which track companies such as Apple, Microsoft and Tesla, more than the 12-month average.

In the UK, six of the top 10 most bought funds in September on Interactive Investor were passive options from Vanguard, and for the first time in the five years that the company has tracked the data, only one active manager ranked in the top 10.

Big Tech earnings hit as pandemic surge wanes

RICHARD WATERS — SAN FRANCISCO

The biggest US tech companies are set to face unfamiliar scrutiny on their costs when they report their latest earnings this week as a sharp revenue slowdown brings an end to the pandemic-fuelled surge in digital activity of the past two years.

Growth in the combined revenues of the five biggest US tech companies — Alphabet, Amazon, Apple, Meta and Microsoft — is expected to have slowed to just under 10 per cent in the third quarter, according to analysts' estimates.

That compares with a 29 per cent jump for all of last year when their combined sales soared to $1.4tn.

The earnings are being closely watched as a barometer of the wider consumer economy with online spending and digital advertising expected to continue a sharp deceleration already seen in the first half of this year.

In one potential sign of a wider pullback in spending, shares in Snap tumbled by 28 per cent on Friday after the social media company reported pressure on its advertising income.

Most analysts blamed the disappointment on Snap's own problems. But company executives also pointed to a growing caution among brand advertisers, who they said had been constantly fine-tuning digital ad spending in response to signs of economic slowdown.

Meta, formerly known as Facebook, could add to the concerns if, as expected, it reports that its revenue slipped 5 per cent in the third quarter.

It dipped 1 cent in the preceding three months, the group's first revenue decline. Growth has slammed to a halt after surging 37 per cent in 2021, though like Snap, Meta has been hit by privacy changes at Apple that have reduced how precisely it can target its advertising.

Along with a potential consumer slowdown, Big Tech's latest results are set to be weighed down by the soaring US dollar and comparisons with very strong results recorded a year ago.

Growth at Google's parent, Alphabet, is expected to slow to 10 per cent, from 41 per cent in all of 2021, though the ...

tive John Holmes was awarded $7.5mn in stock to compensate him for pay lost due to bonus restrictions applied to companies that took Covid-19 relief funds from the government.

Office furniture company MillerKnoll, which makes Aeron chairs and Noguchi tables, paid its chief executive

meeting this month.

Shareholders are also increasingly voting against members of a company's remuneration committee to voice disapproval over pay, Tonello said.

"Investors are rejecting excessive remuneration and lax pay-for-performance links," he added.

tioned to invest into growth categories," said Jose Torres, senior economist at brokerage IBKR. "But as the money supplies contracted, there's less liquidity driving up asset prices."

Wall Street's S&P 500 has lost more than 20 per cent so far in 2022 and the technology-heavy Nasdaq Composite

The volume of selling has not yet reached the levels seen during the depths of the pandemic in March 2020, with analysts suggesting investors are afraid of missing out on a market upswing.

"People have the memory of March 2020, and the rebound," said Peng

investors have also shifted nearly $140bn into money market mutual funds, low yielding accounts that are able to offer returns generally in line with Federal Reserve interest rate rises, since the start of the year, according to Investment Company Institute data.

search business has held up better than other forms of advertising in previous economic slowdowns.

Amazon, where growth slumped to 7 per cent in the first half of the year from 22 per cent in all of 2021, is expected to rebound slightly thanks to the addition of a second Prime Day to boost sales.

Airlines. Bookings rise

Strong dollar gives transatlantic travel a tailwind

Carriers' revenues soar as US travellers take advantage of weak pound and euro

CLAIRE BUSHEY — CHICAGO
OLIVER BARNES
AND PHILIP GEORGIADIS — LONDON

Transatlantic travel is booming, driving airline revenue as Americans armed with the strong US dollar fly to Europe and the UK.

Revenue at United Airlines from trips between the US and Europe rose 40 per cent in the third quarter compared with the same period in 2019, to $2.5bn. The average fare on those trips climbed 30 per cent compared with a year earlier.

The strong dollar had been "useful" in prompting US travellers to book trips to Europe, said United chief commercial officer Andrew Nocella. What was an "incredible" summer season had maintained momentum into the autumn.

The airline introduced multiple new routes last summer, flying 14 per cent more seats across the Atlantic than it did in 2019, and it plans to add more routes next year.

"It's full speed ahead across the Atlantic," Nocella said.

All three major US carriers reported an increase in transatlantic revenue compared with 2019 and many European airlines also have benefited from an uptick in demand. Executives and analysts attribute the increase to the rising value of the dollar against the pound and the euro. The pound now trades at $1.12, while the euro is at $1.02.

The dollar's influence appears in the direction of travel. Data from Dohop, a flight connections bookings platform used by more than 60 airlines including Spirit, Avianca and Air France, showed that passenger traffic from North America to Europe increased faster throughout the year than the reverse.

Outbound passenger traffic between May and August from North America was 2.8 times higher than between January and April. But Europe to North America passenger traffic during the summer was just under double the level between January and April.

Bookings from the US to Europe are closer to pre-pandemic levels. Olivier Ponti, vice-president of insights at travel industry data company ForwardKeys, said that as of mid-October, flight bookings from the US to Europe lagged behind 2019 levels by 6 per cent, while bookings from Europe to the US remained 19 per cent lower.

Norwegian start-up Norse Atlantic, which flew the first of its services between London and New York in August, said it had experienced "especially strong" demand from the US to London, a trend it attributed to the weak pound. Virgin Atlantic boss Shai Weiss said that UK holidays were essentially "on sale" for American tourists.

"If I was someone in New York and wanted to buy a Hermes bag, I would come to London," he said.

At American Airlines, transatlantic travel generated $1.9bn in revenue in the third quarter, rising 19 per cent compared with the same period three years earlier. A greater share of the airline's flights were domestic than before the pandemic, said chief commercial officer Vasu Raja, but still "there is clearly demand . . . for the long-haul product".

Delta's international revenue increased 12 per cent in the third quarter, even with a smaller network, driven by leisure trips to Italy, Spain and Greece.

Flying capacity is increasing, too. Delta Air Lines has been slower than US rivals to restore seats and flights to its schedule after pandemic cutbacks.

But last week Delta president Glen Hauenstein said that Europe was the first region at the airline where seating capacity on routes in October exceeded 2019 levels, including for US domestic travel.

The Louvre: Americans are visiting European tourist attractions in droves thanks to a favourable exchange rate Magali Cohen/Hans Lucas

Next summer United and Delta anticipate increasing the number of seats they offer on flights to Europe, according to aviation data company OAG. United, which historically operates more international flights, plans a 29 per cent expansion compared with 2019. Delta's capacity is scheduled to rise by 5 per cent.

Would-be tourists had missed out on years of European travel, Hauenstein said, and the result was "robust demand" that Delta expected to last through next summer.

"People run out of time, myself included," he said. "We think, 'Gosh, how many years do I have left to do that?' So I think we have a really good backdrop there."

Washington DC resident Vince Ryan was one of the travellers itching to visit Europe this past summer. He paid $980 to fly to Istanbul — more than he was used to paying in his annual pre-pandemic trips — to shake off restlessness with weeks of sun and ruins. It did not hurt that when he arrived $1 could buy 17 Turkish lira, while six months earlier it would have been only 13.

But while airline executives expect transatlantic travel to remain robust, Ryan's experience suggests there is a limit to wanderlust. He considered flying to Rome over the Christmas holidays before abandoning the plan in the face of pricey fares.

"I'm looking at economy-class flights for $1,300 to $1,700," he said. "I'm not going over there on that."

COMPANIES & MARKETS

UK gilts 'explosion' took banks by surprise

Lenders were left exposed as pension funds wobbled after fall in prices and surge in yields in wake of 'mini' Budget

OWEN WALKER, LAURA NOONAN,
DAN MCCRUM AND CAROLINE BINHAM

On Saturday, October 8, the UK's top bank executives were summoned to an emergency video call with Sam Woods, head of the Bank of England's regulatory arm.

Ten days earlier, the BoE had intervened in the bond market, pledging to buy up to £65bn of long-dated gilts to stabilise prices after turmoil started by Kwasi Kwarteng's "mini" Budget and amplified by the UK's huge pension funds.

The unprecedented fall in prices and surge in yields had taken the banks and officials by surprise.

"Before you get a big earthquake, you normally get a few tremors," said one chief executive on the call with the BoE. "This wasn't a tremor, it was a full-on explosion."

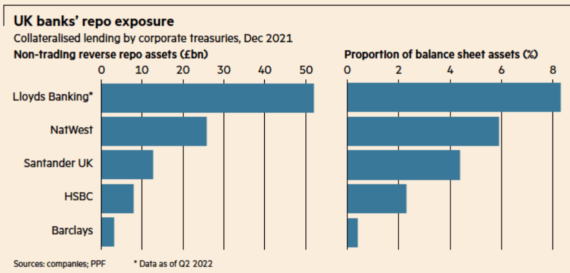
Although the BoE's intervention had calmed the markets, officials were still worried that the situation was fragile during their weekend meetings with senior executives at banks including Barclays, Lloyds and NatWest, along with the UK heads of JPMorgan Chase, Morgan Stanley, Goldman Sachs and Deutsche Bank. The BoE and the banks declined to comment.

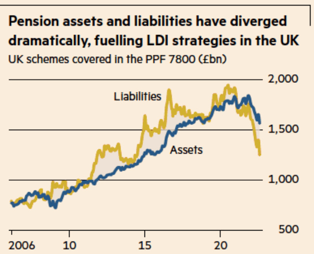
For several days, the banks had been providing the BoE with daily reports on their exposure to the wobbling pension funds including information on whether the schemes were failing to meet margin calls.

The UK's defined benefit pension funds invest heavily in gilts and also use derivatives as part of so-called liability-driven investment strategies. As gilt prices tumbled after the government's announcement of unfunded tax cuts, the schemes were forced to sell assets — including gilts — to raise cash for margin calls from banks on the derivatives. Those sales would make gilt prices fall even further, fuelling a price spiral.

Until the BoE's intervention there was the risk of default from individual pension schemes and pooled LDI funds, operated by asset managers such as Legal and General Investment Management.

Emergency: the Bank of England's bond intervention calmed the markets but regulators remained worried that the situation was still volatile — Marcin Nowak/LNP





long-term needs, and so were trying to sell whatever other assets they could first. Several banks were also reporting to the BoE that they were making very large collateral calls to clients that were going unmet.

Volatility in the market was adding to operational challenges. Banks would typically send out their margin calls to clients first thing in the morning with collateral due by 1pm. But by that time, market moves sometimes swung in the opposite direction, meaning funds were having to sell assets at distressed prices to deliver collateral that would then be returned straight back to them the following day.

Northern Trust — a large Chicago-based custody bank that provided administrative services to two of the largest LDI managers, Legal & General Investment Management and Insight Investment — was overwhelmed by the sheer volume of margin calls and was forced to rope in staff from the US to help with the its largely manual processing systems, according to people involved in the trades.

"Most of the focus was on the operational strain on the custodians, whose manual processes were holding up delivery of collateral," said a person involved in the BoE discussions.

At 7am on Monday, October 10 — following its weekend of calls with bank bosses — the BoE announced that it would drastically expand its support for the pensions market, increasing its capacity for buying gilts and accepting a wider range of assets as collateral for lending. A day later, it extended its bond buying to include index-linked gilts, whose value is linked to inflation.

"The really violent swings are probably behind us after the reaction from the Bank," said a CEO who was on the call over the weekend. "But we're in the middle of this. Things are still moving around."

Additional reporting by Kaye Wiggins, Emma Dunkley, Siddharth Venkataramakrishnan, Harriet Agnew, Stephen Morris and Joshua Franklin

That left the banks exposed but the BoE was also interested in other routes of potential contagion, including banks' use of reverse repo, or repurchase agreements, where they lend cash to pension funds through their corporate treasuries and take government bonds as collateral.

This was not the preserve of racy investment banks but the more typically humdrum parts of ordinary banks.

Among the UK lenders, Lloyds Banking Group had the largest exposure to the repo market, with £52bn, or 8.5 per cent of the assets on its corporate balance sheet. Out of the £400bn gilts repo market, as estimated by the BoE, Lloyds accounted for around 13 per cent of assets.

By comparison, NatWest had £25.8bn of repo exposure or 6 per cent of its balance sheet assets, Santander's UK bank had £12.6bn (4.4 per cent), HSBC's UK bank had £8bn (2.3 per cent) and Barclays had £3.2bn (0.4 per cent).

"Lloyds definitely have one of the larger repo books, so they would have been one of the larger affected counterparties," said a trader at a rival bank.

While the BoE was monitoring the potential knock-on effects for the banks, its focus was on the pension funds themselves and their efforts to overhaul their portfolios in the face of multi-billion-pound margin calls.

> 'Before you get a big earthquake, you normally get a few tremors. This was a full-on explosion'

By October 4, a week after the BoE's intervention, it was becoming clear that, although the central bank was willing to buy up to £5bn of gilts a day, the facility was not being heavily used. In the first six days of the programme, the BoE had purchased just £3.7bn in total.

LDI managers were telling the BoE that they were preparing to do most of their selling the following week because their pension fund clients would then have greater clarity about the amount of collateral they would need to post and what assets could be sold.

The BoE believed that LDI managers ultimately wanted to keep their sterling government bonds, which match their

Financials

Regulator questions PE groups over turmoil

KAYE WIGGINS — LONDON

Britain's financial regulator has been asking private equity firms about how rising rates and the bond market turmoil unleashed by the government's "mini" Budget are affecting them and their investors, as it assesses potential risks in an industry that has ballooned in influence over the past decade.

Officials at the Financial Conduct Authority have contacted several buyout groups following former chancellor Kwasi Kwarteng's mini-Budget in late September, according to people briefed on the calls.

The failed fiscal plan triggered a meltdown in the UK government bond market that forced some pension funds into fire sales of their assets.

Regulators asked how badly the turmoil had hit pension funds and other investors in buyout funds while also raising broader questions about the "impact on private markets and private markets firms", a person briefed on one of the calls said.

The conversations underscore the importance that regulators place on oversight of private markets, which have become a major force in the global economy during an era of low interest rates and stand to be hit hard by higher borrowing costs because of use of leverage.

Private markets span everything from leveraged buyouts to real estate, infrastructure and venture capital groups.

"Interest rates are rising and inflation is high" and the conversations were about how private markets were "operating in light of these fundamentals", a person familiar with the calls said.

They were informal talks and not part of any investigation, the people said. One added that it was not unusual for the regulator to contact private markets groups to understand how conditions were affecting them.

While the brutal sell-off in UK government debt has sharpened concerns over rising interest rates, one person familiar with the matter said the calls would have happened anyway as regulators tried to calibrate the toll higher inflation and rising borrowing costs were taking on the buyout industry.

One of the calls took place at the end of September at a time when attention was squarely focused on public markets as some UK pension funds raced to sell off liquid assets such as stocks and bonds to meet margin calls.

Another of the calls took place in the week of October 10.

The FCA declined to comment.

Food & beverage

Red Bull co-founder Mateschitz dies at 78

SAMUEL AGINI

Dietrich Mateschitz, co-founder of the Red Bull energy drink company and owner of the brand's Formula One racing team, has died at the age of 78.

The Austrian entrepreneur turned the caffeinated canned drink into one of the world's best-known brands with its "Red Bull gives you wings" slogan and marketing campaigns that revolved around extreme sports.

Mateschitz had a net worth of roughly $20bn, according to Forbes. He and Thai businessman Chaleo Yoovidhya founded Red Bull in 1984. The inspiration for the energy drink came to Mateschitz during his travels in Thailand as a marketing director for a toothpaste maker now owned by Procter & Gamble.

The Red Bull billionaire also built up a vast sports empire that ranged from Formula 1 racing teams to football clubs. The Red Bull network of football clubs includes Austria-based Red Bull Salzburg, Germany-based RB Leipzig and the New York Red Bulls.

Mateschitz got into the Formula 1 car racing series in the 1990s, bought the Jaguar racing team in 2004 and entered the following season under the Red Bull name. With Sebastian Vettel at the wheel, Red Bull Racing won both F1 championships four years running from 2010-13. Mateschitz's death emerged on Saturday during the F1 race weekend.

"It's very, very sad. What a great man," said Red Bull team principal Christian Horner on Sky Sports. "What he achieved and what he's done for so many people around the world across different sports is second to none."

COMPANIES & MARKETS

Banks

Goldman chiefs divided over retail strategy

Losses and investor unease led to dispute and reform of Marcus consumer project

JOSHUA FRANKLIN — NEW YORK

Goldman Sachs's decision last week to pull back from retail banking followed disagreements over strategy that in one instance pitted chief executive David Solomon against his subordinates, people familiar with the matter said.

Solomon had high hopes for Goldman's Marcus-branded consumer project, which started in 2015 under his predecessor, Lloyd Blankfein. Solomon, who became chief executive in 2018, viewed the operation as a fintech in the making that could provide the Wall Street bank with the kind of steady revenues that many analysts say it needs to boost its stock market valuation.

But it failed to turn a profit and investor unease with the project prompted Solomon's move last Tuesday to scale back the ambitions for Marcus and split it in two.

Solomon had argued that to build deeper relationships with consumers Marcus should offer current, or checking, accounts in addition to savings products and loans. When executives at Goldman's consumer division argued that it did not have a competitive advantage in checking, Solomon disagreed.

Goldman announced in January 2020 that it would offer a checking account for Marcus by 2021, but the project fell short of its target date and has not been made widely available to retail customers. "[Solomon's] view was that . . . if we want to be the digital bank of the future and have tens of millions of customers on the Marcus platform, how could we not have a primary checking relationship with those customers?" one of the people familiar with the matter said.

Goldman declined to comment.

The project was made more costly because Goldman's technology team opted to build from scratch a new cloud platform for the checking product, quashing a request by the consumer division to rely on technology the bank used for its Apple Card product, the people said.

In the process, the ill-fated Marcus checking-account push has become a symbol of one of Goldman's biggest business reversals, with the Wall Street firm pouring billions of dollars into the Main Street banking business.

Marcus did manage to attract more than $100bn in deposits, providing Goldman with cheap funding. It also generated $1.5bn in revenues last year.

Under the restructuring announced last week, consumer banking will be subsumed within Goldman's wealth management business.

Meanwhile, a new "platform solutions" business will include Goldman's credit card partnerships with companies such as Apple and General Motors and an online lending business, called GreenSky, acquired this year.

The disagreements over strategic direction that broke out over the eight years of the Marcus product came as Goldman cycled through three different consumer banking heads, moving from executives with experience in retail finance to its own bankers and tech engineers.

Market Questions. Economic upturn

Shrinking trade deficit to drive growth in US output

FT REPORTERS

Will America post its first quarterly GDP increase of 2022?

The US economy is expected to have grown in the third quarter of 2022 — largely helped by a shrinking trade deficit and despite forecasts for consumer spending to have weakened.

The commerce department on Thursday is forecast to report that US gross domestic product grew at an annualised rate of 2 per cent in the July to September period, according to economists polled by Reuters.

That is down from an unexpected 0.6 per cent fall in the second quarter and a 1.6 per cent decline in the first three

Support services

WFS hopeful ecommerce will boost air cargo demand

OLIVER TELLING — LONDON

The head of one of the world's largest air cargo handlers has brushed off the deteriorating outlook for global trade, arguing that the rise of ecommerce and growing demand for faster deliveries are driving a long-term shift towards moving goods by plane.

Worldwide Flight Services chief executive Craig Smyth said that air cargo, historically a relatively small part of the global supply chain, was playing an increasingly significant role as more shipping groups invested in aircraft fleets. "We're pretty excited about [that] growth," he said.

"Because of ecommerce . . . there's definitely a shift that is structural, that is permanent," he said. Online shopping deliveries now account for a fifth of the cargo that WFS is moving in some parts of the world.

Paris-based WFS, which provides ramps, cargo handling and other ground services to airlines, is one of several companies involved in a dealmaking spree in the air cargo sector.

In September, Singapore ground handling business Sats completed a €1.2bn takeover of WFS, a move that the companies said would create the industry's largest group in terms of cargo volume handled.

Meanwhile, the world's biggest shipping container group, Geneva-based Mediterranean Shipping Company, is preparing to launch its first air cargo

> 'There's definitely a shift

months of this year.

Analysts at JPMorgan expect the growth in GDP to be attributed to "significant narrowing in the trade deficit during the quarter".

The US trade deficit shrank for the fifth consecutive month in August as consumers spent more on services than goods and as retailers reduced overseas orders to manage excess inventories.

Although the trade deficit is expected to drive GDP growth in the third quarter, some of the underlying details of the report are expected to be negative.

Troy Ludtka, senior US economist at Natixis Americas, said consumer spending and investment was expected to weaken. Despite projections that the economy grew in the third quarter, the US may still be on track for a recession next year as the Federal Reserve continues to tighten monetary policy aggressively to curb inflation.

In many countries, two consecutive quarters of GDP contraction are classified as a "technical" recession. But the National Bureau of Economic Research, the government entity that determines whether the US has entered a recession, has declined to declare one as the job market remains strong.

"We're right now basically teetering on the precipice of what could be a very major economic contraction at [the Fed's] hands," Ludtka said. "They are trying to make up for a mistake they made back in 2020 and 2021 with an even bigger mistake." *Alexandra White*

Economists are expecting US consumer spending to weaken
Elijah Nouvelage/AFP/Getty

Will the ECB raise rates by three-quarters of a point again?

The European Central Bank is expected to announce its second consecutive 0.75 percentage point increase in interest rates on Thursday, reaffirming its determination to tackle continued record-setting levels of eurozone inflation.

Spyros Andreopoulos, senior European economist at BNP Paribas, summed up expectations by saying the ECB was "still playing catch-up" in trying to contain inflation and it was still "too early for a dovish pivot in ECB communication".

The potential increase in the ECB's deposit rate to 1.5 per cent — its highest level since January 2009 — is only one of several crucial decisions awaiting its president Christine Lagarde and the 24 other members of its governing council.

Faced with eurozone inflation that reached an all-time high of 9.9 per cent in September, the central bank is looking at other levers it could pull to reduce price growth in the 19 countries that share Europe's single currency.

The council is expected to discuss ways to start shrinking the ECB's almost €9tn balance sheet, which has ballooned over the past decade.

One is to change the rules to stop banks earning almost €25bn of risk-free profits from the €2.1tn of ultra-cheap loans that the ECB provided during the pandemic, known as Targeted Longer Term Refinancing Operations.

Another is to signal plans to reduce the amount of maturing bonds it replaces in its €3.26tn asset purchase programme from early next year. Such a process, known as quantitative tightening, has already started at the US Federal Reserve and Bank of England.

But, given the scars left by the eurozone debt crisis a decade ago, the ECB is likely to tread carefully. *Martin Arnold*

'We're teetering on the precipice of what could be a very major economic contraction at [the Fed's] hands'

Will the BoJ budge at its next monetary policy meeting?

The yen slid past ¥150 against the dollar for the first time since 1990 last week, dropping through ¥151 on Friday, while official data showed that Japan's inflation rate rose to an eight-year high of 3 per cent in September.

The Japanese currency shot higher later in the session on Friday, touching ¥146.23 following a second intervention by Japanese authorities in a month to stem the yen's slide.

In all, the developments once again beg the question of whether the Bank of Japan is going to do anything when its board meets for two days through October 28.

According to Masamichi Adachi, chief economist at UBS in Tokyo, the answer is "nothing".

Haruhiko Kuroda, BoJ governor, is expected to stand firm with its ultra-loose monetary policy and remain committed to keeping the 10-year Japanese government bond yield pinned below 25 basis points — even if that requires more emergency bond-buying operations.

"His message has been persistently decisive: Japan's consumer price index inflation will slow to below 2 per cent next year so policy tightening is not necessary and inappropriate at this stage," Adachi said. "We agree with this inflation outlook."

But Japanese authorities have indicated that they are ready to step in if there is too much volatility and they still have firepower even after a $20bn intervention in September and last week's action to prop up the yen. *Kana Inagaki*

that is structural, that is permanent'
Craig Smyth, WFS chief

service in the coming months following a bid earlier this year to acquire a majority stake in ITA Airways, successor to bankrupt Alitalia.

Ecommerce group Amazon, which Smyth said was a WFS client, has also been expanding its own air fleet, running an average of 164 flights a day towards the end of last year.

These investments follow a boom in demand during the pandemic for deliveries by air, a faster but more costly option than sea transport that was generally reserved for high-value goods. With the increase in online shopping during lockdowns, many retailers turned to airlines to circumvent logjams at seaports.

In 2021, the volume of goods moved by air jumped 18.7 per cent compared with the previous year, according to the International Air Transport Association. Volumes reached the highest level since 2010, measured in terms of cargo tonne-kilometres, a unit for freight traffic calculated by multiplying freight weight by the distance travelled.

However, demand has since plunged, with cargo volumes falling below pre-pandemic levels in recent months. Continuing lockdowns in China have hit demand for goods, while Russia's invasion of Ukraine had also grounded airlines in the region, the IATA said.

Smyth dismissed these as "temporary effects" but added WFS was starting to see some impact from consumers reining in spending and that profits in the second half of 2022 are expected to be flat compared with the previous year.

Industrials. Renewables

European offshore wind companies blast into Asia to beat Chinese rivals

Turbine-makers in the west hope their technological advantage will cement deals

CHRISTIAN DAVIES — SEOUL
ERI SUGIURA — TOKYO

European companies are leading a push into east Asia's offshore wind market, as they seek to gain a foothold in the region while western turbine-makers still enjoy a technological advantage over their Chinese competitors.

South Korea, Taiwan and Japan have all committed to boost their share of renewables as part of ambitious government net zero targets, while electronics companies such as TSMC, SK Group and Samsung Electronics have pledged to achieve 100 per cent renewable electricity in their global operations by 2050.

Jesper Krarup Holst, a partner at project developer Copenhagen Offshore Partners and head of the company's Seoul office, said that European companies had been attracted by a "fundamental shift" in demand for renewables in Asia, driven in part by US tech giants requiring suppliers to meet renewable energy targets.

"The competition is heating up," said Holst. "Now we are seeing a push not just from big companies but from consumers and governments as well, while the war in Ukraine has created a huge push for energy security."

In 2019, there were five gigawatts of installed offshore wind capabilities in all Asia compared with 19GW in Europe, according to Irena, the International Renewable Energy Agency. But Asia is projected to outstrip Europe by the end of the decade, accounting for 60 per cent of global offshore wind capacity by 2050, according to Irena.

Knud Bjarne Hansen, a Danish industry veteran and the co-chief executive of Korean wind tower company CS Wind, said that "China has perhaps a five to 10-year window to catch up with the turbine technology of the Europeans, so the Europeans need to get a foothold in Asia before that happens."

South Korea has a national target of achieving 12GW of offshore wind capacity by 2030, up from just 142.1 megawatts at present. Most of the existing capacity is derived from government pilot schemes.

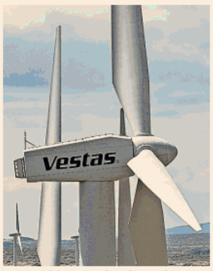
But the process is unwieldy: it currently requires developers to obtain 29 permits from nine ministries in a process that takes an average of seven years. "The process needs to be streamlined," said Eunbyeol Jo, a researcher for Solutions For Our Climate, an advocacy group in Seoul.

A South Korean wind industry executive said the permit process had given too much power to local politicians, who often grant permits only in exchange for promises of local employment and the inclusion of locally produced components.

That has fed inefficiencies and driven up the price of renewables, which in turn has suppressed demand.

One way for foreign turbine-makers to navigate some of these hurdles has been to form partnerships and joint ventures with local companies. Denmark's Vestas has formed a joint venture with CS Wind, while GE Renewable Energy signed a memorandum of understanding with Hyundai Electric in February. Holst said the waters off the east coast of Korea were a perfect testing ground for next generation floating wind towers, which unlike the fixed-bottom towers prevalent in Europe could be installed in waters more than 50-60 metres deep.

"It unlocks huge potential," said Holst, adding that the presence of Korea's world-leading shipbuilding industry was an asset in developing and building the massive floating towers.



Denmark's Vestas has formed a joint venture with Korea's CS Wind

Meanwhile, Taiwan, which has been quicker than South Korea and Japan to reform its energy market to encourage offshore wind projects, began its third round of auctions last month for site leases totalling 3GW.

In 2020, chipmaker TSMC signed a corporate power purchase agreement, the world's largest such renewables deal, with Ørsted. The 20-year fixed-price contract will give TSMC all of the 920MW generated by Ørsted's Greater Changhua 2b & 4 offshore wind farm.

Japan, which operates an auction model, is targeting 10GW of offshore wind by 2030, and 45GW by the end of the next decade. Renewables will account for between 36 and 38 per cent of its power generation mix in 2030, from 20 per cent in 2020, according to its latest energy plan.

But the country's first big auction in December ended in controversy after a consortium led by trading house Mitsubishi won all three tenders with bids that were much lower than any of their competitors. Japanese authorities abruptly suspended the process for the second big auction in March this year. People involved in the project pointed out that the suspension was in response to concerns that a single player would dominate all of Japan's biggest projects.

"The Japanese energy market is now likely to be perceived as having an unusually high risk of regulatory change," said Sumiko Takeuchi, a senior fellow at the International Environment and Economy Institute in Tokyo.

Kohei Amakusa, head of market development in Japan at Ørsted, which participated in the first auction, believes that Japan is still an attractive market among its peers in Asia because of its vast electricity market.

As the Chinese market remains inaccessible for foreign players, companies for now are focusing on the other countries in the region.

"The wind conditions are just as good around Japan and Korea as off the west coast of Denmark," noted Hansen. "The demand is there: no one can exclude themselves from the renewables push."

MARKET DATA

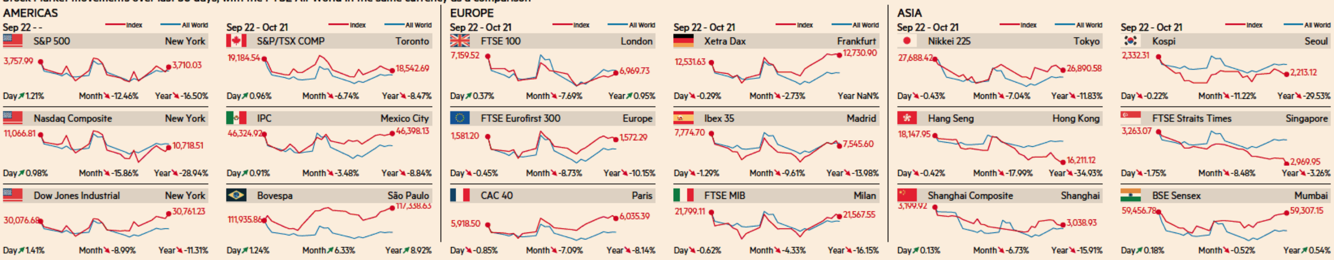
WORLD MARKETS AT A GLANCE

FT.COM/MARKETSDATA

Change during previous day's trading (%)

S&P 500	Nasdaq Composite	Dow Jones Ind	FTSE 100	FTSE Eurofirst 300	Nikkei	Hang Seng	FTSE All World $	$ per €	$ per £	¥ per $	£ per €	Oil Brent $ Sep	Gold $
1.21%	0.98%	1.41%	0.37%	-0.45%	-0.43%	-0.42%	0.72%	-0.407%	-1.325%	0.271%	0.921%	0.08%	0.22%

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



Country	Index	Latest	Previous
Argentina	Merval	138056.35	136138.78
Australia	All Ordinaries	6869.90	6918.70
	S&P/ASX 200	6676.80	6730.70
	S&P/ASX 200 Res	5323.10	5303.60
Austria	ATX	2775.09	2795.71
Belgium	BEL 20	3448.63	3440.93
	BEL Mid	8898.26	8947.80
Brazil	IBovespa	118621.89	117171.11
Canada	S&P/TSX 60	1137.74	1125.95
	S&P/TSX Comp	18758.19	18579.29
	S&P/TSX Div Met & Min	1378.03	1365.30
Chile	S&P/CLX IGPA Gen	27917.76	27776.69
China	FTSE A200	10013.74	10041.77
	FTSE B35	9000.71	8988.96
	Shanghai A	3184.52	3180.48
	Shanghai B	293.24	294.66
	Shanghai Comp	3038.93	3035.05
	Shenzhen A	2057.64	2062.62
	Shenzhen B	1135.64	1133.84
Colombia	COLCAP	1261.61	1260.21
Croatia	CROBEX	2013.05	2011.29
Cyprus	CSE M&P Gen	68.46	68.68
Czech Republic	PX	1164.33	1164.38
Denmark	OMXC Copenahgen 20	1576.59	1600.31
Egypt	EGX 30	10273.53	10156.34
Estonia	OMX Tallinn	1653.75	1661.00
Finland	OMX Helsinki General	10252.39	10258.09
France	CAC 40	6035.39	6086.90
	SBF 120	4640.02	4677.73
Germany	M-DAX	22918.01	23273.03
	TecDAX	2736.10	2755.23
	XETRA Dax	12730.90	12767.41
Greece	Athens Gen	854.00	854.80
	FTSE/ASE 20	2068.16	2069.56
Hong Kong	Hang Seng	16211.12	16280.22
	HS China Enterprise	5517.44	5512.30
	HSCC Red Chip	3307.12	3276.74
Hungary	Bux	40431.97	40451.17
India	BSE Sensex	59307.15	59202.90
	Nifty 500	15081.10	15112.10
Indonesia	Jakarta Comp	7017.77	6980.65
Ireland	ISEQ Overall	6626.73	6729.86
Israel	Tel Aviv 125	1925.32	1927.14
Italy	FTSE Italia All-Share	23433.78	23579.40
	FTSE Italia Mid Cap	36182.61	36300.01
	FTSE MIB	21567.55	21701.50
Japan	2nd Section	7228.27	7239.06
	Nikkei 225	26890.58	27006.96
	S&P Topix 150	1611.98	1624.02
	Topix	1930.17	1935.49
Jordan	Amman SE	2503.75	2506.70
Kenya	NSE 20	1705.02	1705.02
Kuwait	KSX Market Index	6633.44	6603.51
Latvia	OMX Riga	1063.41	1067.12
Lithuania	OMX Vilnius	899.00	901.00
Luxembourg	LuxX	1330.06	1327.75
Malaysia	FTSE Bursa KLCI	1446.42	1437.72
Mexico	IPC	46736.29	46315.41
Morocco	MASI	11310.82	11323.89
Netherlands	AEX	652.46	652.04
	AEX All Share	885.69	886.64
New Zealand	NZX 50	10782.36	10832.03
Nigeria	SE All Share	44318.15	45366.32
Norway	Oslo All Share	1017.37	1006.88
Pakistan	KSE 100	42213.48	42137.04
Philippines	Manila Comp	5983.56	6055.99
Poland	Wig	46756.42	47283.29
Portugal	PSI 20	5491.94	5466.48
	PSI General	4169.85	4166.55
Romania	BET Index	10875.61	10845.05
Russia	Micex Index	2436.57	2445.30
	RTX	1245.71	1212.57
Saudi-Arabia	TADAWUL All Share Index	11795.10	11809.95
Singapore	FTSE Straits Times	2969.95	3022.70
Slovakia	SAX	338.34	345.20
Slovenia	SBI TOP	-	-
South Africa	FTSE/JSE All Share	65539.24	65794.28
	FTSE/JSE Res 20	61165.30	60376.59
	FTSE/JSE Top 40	59091.06	59347.28
South Korea	Kospi	2213.12	2218.09
	Kospi 200	288.57	288.61
Spain	IBEX 35	7545.60	7644.40
Sri Lanka	CSE All Share	8685.52	8737.38
Sweden	OMX Stockholm 30	1901.51	1905.99
	OMX Stockholm AS	719.06	721.95
Switzerland	SMI Index	10418.60	10473.45
Taiwan	Weighted Pr	12819.20	12946.10
Thailand	Bangkok SET	1591.32	1592.73
Turkey	BIST 100	3934.99	3900.85
UAE	Abu Dhabi General Index	9222.93	9251.11
UK	FT 30	2268.60	2282.20
	FTSE 100	6969.73	6943.91
	FTSE 4Good UK	6220.21	6211.27
	FTSE All Share	3796.89	3790.95
	FTSE techMARK 100	5843.02	5861.54
USA	DJ Composite	10141.08	10009.53
	DJ Industrial	30761.23	30333.59
	DJ Transport	12572.62	12429.60
	DJ Utilities	859.61	849.28
	Nasdaq 100	11166.00	11046.71
	Nasdaq Cmp	10718.51	10614.84
	NYSE Comp	13996.40	13840.47
	S&P 500	3710.03	3665.78
	Wilshire 5000	36961.76	36589.85
Venezuela	IBC	8866.75	8889.70
Vietnam	VNI	1019.82	1058.45
Cross-Border	DJ Global Titans ($)	401.29	397.00
	Euro Stoxx 50 (Eur)	3472.83	3492.85
	Euronext 100 ID	1154.11	1158.80
	FTSE 4Good Global ($)	8943.15	8868.13
	FTSE All World ($)	374.03	371.35
	FTSE E300	1572.29	1579.47
	FTSE Eurotop 100	3096.57	3107.38
	FTSE Global 100 ($)	2349.38	2324.92
	FTSE Gold Min ($)	1394.57	1374.89
	FTSE Latibex Top (Eur)	4440.00	4432.20
	FTSE Multinationals ($)	2424.18	2432.10
	FTSE World ($)	678.46	673.29
	FTSEurofirst 100 (Eur)	4146.43	4156.59
	FTSEurofirst 80 (Eur)	4737.94	4762.53
	MSCI ACWI Fr ($)	563.06	565.21
	MSCI All World ($)	2429.26	2439.30
	MSCI Europe (Eur)	1610.93	1606.44
	MSCI Pacific ($)	2313.31	2319.31
	S&P Euro (Eur)	1573.35	1582.37
	S&P Europe 350 (Eur)	1609.69	1617.11
	S&P Global 1200 ($)	2696.58	2668.99
	Stoxx 50 (Eur)	3416.68	3424.30

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

STOCK MARKET: BIGGEST MOVERS

AMERICA — ACTIVE STOCKS | stock traded m's | close price | Day's change

LONDON — ACTIVE STOCKS | stock traded m's | close price | Day's change

EURO MARKETS — ACTIVE STOCKS | stock traded m's | close price | Day's change

TOKYO — ACTIVE STOCKS | stock traded m's | close price | Day's change

UK MARKET WINNERS AND LOSERS

FTSE 100 | Oct 21 price(p) | %Chg week | %Chg ytd — Winners

FTSE 250 | Oct 21 price(p) | %Chg week | %Chg ytd — Winners

FTSE SmallCap | Oct 21 price(p) | %Chg week | %Chg ytd — Winners

Industry Sectors | Oct 21 price(p) | %Chg week | %Chg ytd — Winners

CURRENCIES

The exchange rates printed in this table are also available at www.FT.com/marketsdata

FTSE ACTUARIES SHARE INDICES

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	6907.34	6911.07	6887.34	6884.63	6887.33	6889.10	6880.85	6965.18	6956.14	6974.58	6864.35
FTSE 250	17278.25	17259.04	17154.12	17116.65	17092.59	17089.71	17077.32	17237.30	17205.65	17302.92	17033.71
FTSE SmallCap	5752.99	5740.97	5728.65	5720.40	5719.26	5723.24	5719.18	5735.41	5732.26	5752.99	5716.91
FTSE All-Share	3770.86	3771.76	3757.54	3755.01	3755.49	3756.27	3752.07	3795.62	3790.49	3800.57	3743.57

Time of FTSE 100 Day's high:14:16:00 Day's Low12:21:15 FTSE 100 2010/11 High: 7672.40(10/02/2022) Low: 6826.15(12/10/2022)
Time of FTSE All-Share Day's high:14:16:00 Day's Low12:21:00 FTSE 100 2010/11 High: 4296.96(10/02/2022) Low: 3712.50(12/10/2022)

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FT 30 INDEX

	Oct 21	Oct 20	Oct 19	Oct 18	Oct 17	Yr Ago	High	Low
FT 30	2268.60	2282.20	2276.40	2287.90	2278.10	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
2282.2	2265.8	2253.2	2251.7	2252.9	2251.3	2249.3	2275.1	2265.3	2282.2	2243.9

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

FT WILSHIRE 5000 INDEX SERIES

	Oct 20		Oct 20
FT Wilshire 5000	37277.22	FT Wilshire Mid Cap	4939.91
FT Wilshire 2500	4772.41	FT Wilshire Small Cap	4528.76
FT Wilshire Mega Cap	4776.85	FT Wilshire Micro Cap	4484.12
FT Wilshire Large Cap	4804.15		

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

FTSE GLOBAL EQUITY INDEX SERIES

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FTSE 100 SUMMARY

UK STOCK MARKET TRADING DATA

	Oct 21	Oct 20	Oct 19	Oct 18	Oct 17	Yr Ago
Order Book Turnover (m)	116.20	59.98	271.66	66.44	197.87	197.87
Order Book Bargains	696550.00	697888.00	737511.00	759156.00	876414.00	876414.00
Order Book Shares Traded (m)	1306.00	1401.00	1589.00	1588.00	1760.00	1760.00
Total Equity Turnover (£m)	6056.02	4962.17	7380.97	5467.71	4665.54	4665.54
Total Mkt Bargains	892146.00	888294.00	930830.00	942639.00	1069698.00	1069698.00
Total Shares Traded (m)	7945.00	5743.00	5644.00	5946.00	5406.00	5406.00

† 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

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	
Manchester & London Investment Trust	Pre			61.122L	22.264	151.620L	57.100	7.00000	7.00000	Nov 25	14.000	14.000

UK RECENT EQUITY ISSUES

Issue date	Issue price(p)	Sector	Stock code	Stock	Close price(p)	+/-	High	Low	Mkt Cap (£m)
10/07	10.00		ACG	ACG Acquisition Company Ltd	9.95	-0.08	10.10	9.95	155.5
10/04	1.00		MII	Milton Capital PLC	1.03	0.08	1.20	1.00	102.5

10 ★ FINANCIAL TIMES Monday 24 October 2022

MARKET DATA

FT500: THE WORLD'S LARGEST COMPANIES

FT 500: TOP 20

	Close price	Prev price	Day change	Day change %	Week change	Week change %	Month change %
Netflix	281.25	268.16	13.09	4.88	51.25	22.3	16.36
Schlmbrg	49.85	45.69	4.16	9.10	7.69	18.2	32.44
Lockheed	452.51	444.34	8.17	1.84	63.10	16.2	2.64
ASML Hld	457.15	452.30	4.85	1.07	59.70	15.0	-16.41
BakerHu	26.32	25.95	0.37	1.43	3.41	14.9	5.01
Halliburton	33.49	31.66	1.83	5.78	4.08	13.9	13.88
Carnival	8.07	8.00	0.07	0.86	0.94	13.2	-18.64
Oracle	72.31	69.25	3.06	4.42	8.00	12.4	-8.35
EOG Res	135.43	131.59	3.84	2.92	14.86	12.3	13.67
Northrop	520.48	512.44	8.04	1.57	56.29	12.1	5.78
AT&T	16.80	16.74	0.06	0.33	1.81	12.0	-8.14
SvnskaHn	103.40	101.65	1.75	1.72	10.80	11.7	12.98
StateSt	68.10	64.86	3.24	5.00	6.99	11.4	-6.20
Salesforce	157.79	157.50	0.29	0.18	15.57	10.9	-14.33
ValeroEngy	126.55	124.44	2.11	1.70	12.43	10.9	6.49
BOE Tech	0.72	0.65	0.07	10.77	0.07	10.8	-22.08
Amazon	117.25	115.25	2.00	1.74	10.35	9.7	-15.60
Illumina	218.25	208.64	9.61	4.61	18.93	9.5	6.96
Zoom	79.05	79.96	-0.91	-1.14	6.76	9.4	-20.68
SHOP	39.42	40.94	-1.52	-3.71	3.31	9.2	-7.86

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 %
Ericsson	61.17	61.54	-0.37	-0.60	-9.93	-14.0	-24.33
Telia Co	28.25	32.21	-3.96	-12.29	-4.00	-12.4	-27.08
SandsCh	14.86	15.08	-0.22	-1.46	-1.88	-11.2	-11.55
Allstate	121.24	117.71	3.53	3.00	-11.20	-8.5	-6.97
Nutrien	110.55	113.74	-3.19	-2.80	-8.45	-7.1	-3.13
HCA Hold	187.17	208.61	-21.44	-10.28	-14.30	-7.1	-13.06
Nokia	4.31	4.39	-0.08	-1.80	-0.31	-6.8	-14.23
21stC Fox A	29.44	29.01	0.43	1.47	-2.12	-6.7	-17.32
Heineken	85.18	86.26	-1.08	-1.25	-5.70	-6.3	-11.47
AbbottLb	94.90	95.21	-0.31	-0.33	-6.01	-6.0	-14.00
USBancorp	40.26	40.01	0.25	0.61	-2.51	-5.9	-17.33
Tencent	232.80	232.40	0.40	0.17	-13.40	-5.4	-26.10
Lowes	178.93	178.30	0.63	0.35	-10.03	-5.3	-15.67
VF Cp	27.49	27.58	-0.09	-0.33	-1.46	-5.0	-39.96
JardnMt US$	47.86	49.69	-1.83	-3.68	-2.41	-4.8	-8.17
SK Hynix	90500.00	90200.00	300.00	0.33	-4400.00	-4.6	-6.12
Brookfield	51.35	52.01	-0.66	-1.27	-2.45	-4.6	-22.50
Danaher	242.20	243.08	-0.88	-0.36	-11.51	-4.5	-17.05
LOreal	311.55	329.20	-17.65	-5.36	-14.80	-4.5	-14.21
Truist Financial Corp	41.07	40.42	0.65	1.61	-1.93	-4.5	-18.81

Based on the FT Global 500 companies in local currency

INTEREST RATES: OFFICIAL

INTEREST RATES: MARKET

Oct 21	Short term		7 Days notice		One month		Three month		Six month		One year	
Euro	0.52	0.82	0.50	0.80	1.00	1.30	1.29	1.59	1.83	2.13	2.36	2.66
Sterling					0.45	0.55	0.58	0.68	0.71	0.86	0.90	1.05
US Dollar	2.88	3.08	2.90	3.10	3.53	3.73	4.22	4.42	4.72	4.92	5.10	5.30
Japanese Yen	-0.15	0.05	-0.20	0.00	-0.20	0.00	-0.15	0.05	-0.10	0.20	-0.05	0.25

Libor rates come from ICE (see www.theice.com) and are fixed at 11am UK time. Other data sources: US $, Euro & CDs: Tullett Prebon; SDR, US Discount: IMF; EONIA: ECB; Swiss Libor: SNB; EURONIA, RONIA & SONIA: WMBA.

BOND INDICES

	Index	Day's change	Month's change	Year change	Return 1 month	Return 1 year
Markit IBoxx						
ABF Pan-Asia unhedged	185.85	-0.31	-1.44	-15.44	-4.24	-14.80
Corporates(£)	307.10	0.34	1.86	-22.41	-4.67	-21.54
Corporates(€)	202.32	-0.21	-1.26	-16.23	-3.00	-16.39
Eurozone Sov(€)	208.26	-0.16	-1.70	-18.14	-3.17	-18.35
Gilts(£)	266.03	0.41	0.86	-25.99	-3.67	-23.79
Overall(£)	272.85	0.38	1.09	-24.62	-3.80	-22.77
Overall(€)	203.39	-0.17	-1.54	-17.55	-3.14	-17.74
FTSE						
Sterling Corporate (£)	-	-	-	-	-	-
Euro Corporate (€)	104.47	-0.05	-	-	0.54	-1.73
Euro Emerging Mkts (€)	580.17	5.89	-	-	-18.82	-24.06
Eurozone Govt Bond	110.04	-0.19	-	-	-0.34	-0.64

CREDIT INDICES	Index	Day's change	Week's change	Month's change	Series high	Series low
Markit iTraxx						
Crossover 5Y	602.94	0.02	-24.11	1.25	688.92	584.73
Europe 5Y	125.06	0.14	-6.23	2.69	142.08	121.70
Japan 5Y	106.80	2.28	1.73	5.19	119.29	98.33
Senior Financials 5Y	135.74	-0.15	-9.20	1.87	155.06	133.08
Markit CDX						
Emerging Markets 5Y	324.41	1.74	-3.46	29.18	335.29	288.27
Nth Amer High Yld 5Y	567.85	12.55	-13.85	-	625.47	544.32
Nth Amer Inv Grade 5Y	99.04	2.34	-2.08	-3.28	110.98	94.43

Websites: markit.com, ftse.com. All indices shown are unhedged. Currencies are shown in brackets after the index names.

COMMODITIES

www.ft.com/commodities

Energy		Price*	Change	Agricultural & Cattle Futures		Price*	Change
Crude Oil†	Dec	84.58	0.07	Corn♦	Dec	679.00	-5.00
Brent Crude Oil‡		93.25	0.87	Wheat♦	Dec	835.50	-13.75
RBOB Gasoline†	Dec	2.65	0.00	Soybeans♦	Nov	1377.25	-14.25
Natural Gas†	Nov	5.06	-0.30	Soybeans Meal♦	Dec	409.60	-3.70
Base Metals (♠ LME 3 Months)				Cocoa (ICE Liffe)⊕	Dec	1961.00	12.00
Aluminium		2200.50	-16.50	Cocoa (ICE US)♥	Dec	2296.00	-32.00
Aluminium Alloy		1675.00	-905.00	Coffee(Robusta)⊕	Nov	1998.00	-47.00
Copper		7582.00	48.00	Coffee (Arabica)♥	Dec	187.25	-3.80
Lead		1907.00	-70.50	White Sugar⊕		533.80	5.90
Nickel		21955.00	-245.00	Sugar 11♥		18.51	0.12
Tin		18685.00	-790.00	Cotton♥	Dec	76.00	-1.40
Zinc		2943.00	-13.50	Orange Juice♥	Nov	210.05	-1.15
Precious Metals (PM London Fix)				Live Cattle♣	Oct	149.83	0.48
Gold		1635.30	3.60	Feeder Cattle♣	May	134.88	-
Silver (US cents)		1878.50	35.00	Lean Hogs♣	Dec	86.88	-0.50
Platinum		893.00	-1.00				
Palladium		2019.00	49.00		Oct 20	% Chg Month	% Chg Year
Bulk Commodities							
Iron Ore		94.76	-0.10	S&P GSCI Spt	624.92	-6.81	15.89
Baltic Dry Index		1819.00	-18.00	DJ UBS Spot	111.13	-9.22	13.83
Richards Bay ICE Futures		244.00	2.00	TR/CC CRB TR	292.37	-6.45	23.84
				LEBA EUA Carbon	58.91	-1.98	129.94
				LEBA UK Power	1048.00	-37.43	-39.60

Sources: † NYMEX, ‡ ECX/ICE, ♦ CBOT, ⊕ ICE Liffe, ♥ ICE Futures, ♣ CME, ♠ LME/London Metal Exchange.* Latest prices, $ unless otherwise stated.

BONDS: INDEX-LINKED

	Price Oct 20	Yield Oct 20	Yield Prev	Month return	Value stock	Market	No of stocks
Can 4.25%' 26	109.54	1.826	1.693	-1.36	5.25	67607.13	8
Fr 0.25%' 24	102.32	-1.048	-0.994	-0.39	17.92	238844.94	17

BONDS: TEN YEAR GOVT SPREADS

BONDS: HIGH YIELD & EMERGING MARKET

BONDS: GLOBAL INVESTMENT GRADE

VOLATILITY INDICES

BONDS: BENCHMARK GOVERNMENT

GILTS: UK CASH MARKET

GILTS: UK FTSE ACTUARIES INDICES

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

MANAGED FUNDS SERVICE

SUMMARY

FT.COM/FUNDS

Winners - Europe ex-UK Equity

Fund Name	1yr Return GBP	3yr Return GBP	5yr Return GBP	3yr Sharpe Ratio	3yr Std Dev
LF Brook Continental European Fund	-1.60	9.04	5.78	0.38	28.26
BlackRock Continental European Fund	-23.70	8.67	6.38	0.44	22.74
VT Argonaut European Income Opportunities Fund	2.22	8.46	5.67	0.49	18.14
LF Lightman Investment Funds-LF Lightman European Fund	0.43	7.96	-	0.40	25.58
MI Chelverton Equity Fund-MI Chelverton European Select Fund	-16.88	7.58	-	0.40	23.41

Losers - Europe ex-UK Equity

Fund Name	1yr Return GBP	3yr Return GBP	5yr Return GBP	3yr Sharpe Ratio	3yr Std Dev
Schroder European Sustainable Equity Fund	-17.80	-5.30	-5.27	-0.12	23.90
Schroder European Alpha Plus Fund	-24.22	-4.74	-5.21	-0.09	24.09
Hang Seng IS - Continental European Index	-26.10	-1.86	-1.33	0.19	19.44
Jupiter European Special Situations Fund	-26.36	-1.65	-2.04	0.01	20.83
LF Future World Sustainable European Equity Focus Fund	-35.67	-0.50	-3.01	0.07	23.08

Morningstar Star Ratings

Fund Name	Base Currency	Morningstar Rating 3 Yr	Morningstar Rating 5 Yr	Morningstar Rating 10 Yr
European Multi-Sector	Euro	★★★★★	★★★★★	★★★★★
Ashmore SICAV Global Small Cap Equity Fund	US Dollar	★★★★	★★★	
US Growth USD Inst Acc	US Dollar	★★★	★★★	★★★
North American I USD	US Dollar	★★	★	★★★
Ashmore SICAV Emerging Market Total Return Fund	US Dollar	★	★	★★

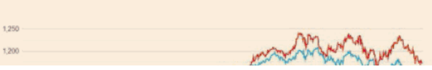
Global Broad Category Group - Commodities

Morningstar Category	Base Currency	Total Ret 1Yr GBP	Total Ret 3Yr GBP	Total Ret 5Yr GBP
Commodities - Grains	US Dollar	10.60	24.41	8.04
Commodities - Broad Agriculture	US Dollar	14.40	14.94	5.77
Commodities - Other	US Dollar	8.12	12.05	5.13
Commodities - Broad Basket	US Dollar	-8.63	7.97	2.50
Commodities Precious Metals	Baht	-4.11	5.41	4.53

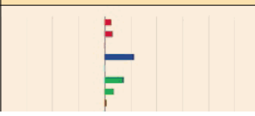
Advertising Feature

TROY ASSET MANAGEMENT

Performance



Weightings - As of 31/08/2022



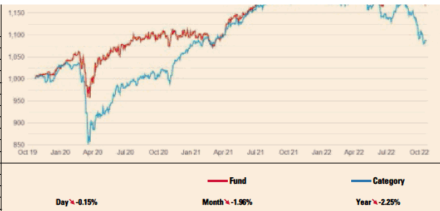
Sector	Weighting	Cat Avg.
Basic Materials	2.91%	3.25%
Communication Services	3.39%	3.16%
Consumer Cyclical		5.26%
Consumer Defensive	12.32%	4.19%
Energy		3.28%
Financial Services	8.05%	8.24%
Healthcare	3.95%	5.79%
Industrials	0.66%	5.61%

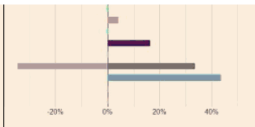
Top 10 Holdings - As of 31/08/2022

Holding	Sector	Weighting
Visa Inc Class A	Financial Services	4.25%
Microsoft Corp	Technology	4.03%
Unilever PLC	Consumer Defensive	3.34%
Alphabet Inc Class A	Communication Services	3.09%

Please remember that past performance is not necessarily a guide to future performance

Firm Name	Troy Asset Management Limited
Fund Name	Trojan Fund O Inc
Morningstar Category	GBP Flexible Allocation
Max Annual Charge	
3Yr Rating	★★★★★
Morningstar Sustainability Rating	
Bid Price	-
KIID Ongoing Charge	1.01
Offer Price	-
Day'x	-0.98
+/-	-0.58
Total Ret 3Yr	5.08





Real Estate	-	2.42%
Technology	4.43%	6.07%
Utilities	-	1.91%
Cash & Equivalents	17.89%	17.27%
Corporate	-	11.11%
Derivative	-1.29%	4.55%
Government	47.89%	16.93%
Municipal	-	0.01%
Securitized	-	0.95%

Nestle SA	Consumer Defensive	2.90%
Franco-Nevada Corp	Basic Materials	2.65%
Diageo PLC	Consumer Defensive	2.62%
American Express Co	Financial Services	2.61%
Agilent Technologies Inc	Healthcare	1.82%
Becton, Dickinson and Co	Healthcare	1.78%

Risk Measures - As of 30/09/2022

	1Yr	1Yr Cat Ave	3Yr	3Yr Cat Ave	5Yr	5Yr Cat Ave
Alpha	3.94	-1.76	4.67	-0.71	3.06	-1.45
Beta	0.55	0.88	0.56	0.99	0.56	0.98
Information Ratio	1.46	-0.17	0.89	-0.18	0.47	-0.33
R Squared	58.28%	59.91%	60.50%	65.18%	58.66%	64.80%
Sharpe Ratio	-0.24	-0.61	0.76	0.20	0.80	0.27
Std Dev	6.16	9.19	6.25	9.80	5.42	8.85

abrdn Capital (CI) Limited (JER)
PO Box 189, St Helier, Jersey, JE4 9RU 01534 709130
FCA Recognised
abrdn Capital Offshore Strategy Fund Limited

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Bridge Fund	£2.0602	-	-0.0087	2.02	-12.99	3.68
Global Equity Fund	£3.0973	-	-0.0074	1.26	-12.40	7.31
Global Fixed Interest Fund	£0.6922	-	-0.0035	6.62	-22.58	-6.46
Income Fund	£0.5959	-	-0.0025	3.36	-9.96	3.36
Sterling Fixed Interest Fund	£0.6341	-	-0.0070	3.86	-24.46	-7.59
UK Equity Fund	£1.7721	-	-0.0038	4.25	-14.66	-2.26

Algebris Investments (IRL)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Algebris Financial Credit I EUR	€160.56	-	-0.07	0.00	-16.73	-0.92
Algebris Financial Credit R EUR	€138.26	-	-0.06	0.00	-17.28	-1.50
Algebris Financial Credit Rd EUR	€84.59	-	-0.04	5.66	-17.28	-1.46
Algebris Financial Income I EUR	€164.41	-	0.34	0.00	-11.42	5.13
Algebris Financial Income R EUR	€149.77	-	0.29	0.00	-12.21	4.19
Algebris Financial Income Rd EUR	€91.80	-	0.19	4.24	-12.21	4.18
Algebris Financial Equity B EUR	€146.78	-	-0.75	0.00	-2.41	9.98
Algebris IG Financial Credit I EUR	€89.49	-	-0.15	0.00	-19.49	-
Algebris IG Financial Credit R EUR	€88.16	-	-0.15	0.00	-19.88	-
Algebris Global Credit Opportunities I EUR	€117.74	-	0.17	0.00	-9.39	1.49
Algebris Global Credit Opportunities R EUR	€115.01	-	0.15	0.00	-9.92	1.14
Algebris Global Credit Opportunities Rd EUR	€101.11	-	0.15	0.45	-9.90	1.26
Algebris Core Italy I EUR	€131.54	-	1.11	0.00	-21.66	7.43
Algebris Core Italy R EUR	€124.99	-	1.06	0.00	-22.37	7.72
Algebris Financial Equity R EUR	€123.59	-	-0.64	0.00	-3.38	8.93

The Antares European Fund Limited
Other International

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
AEF Ltd Usd	$551.79	-	5.78	0.00	-2.24	-4.40
AEF Ltd Eur	€510.13	-	5.11	0.00	-3.43	-5.13

Artemis Fund Managers Ltd (1200)F (UK)
57 St. James's Street, London SW1A 1LD 0800 092 2051
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Artemis SmartGARP UK Eq I Acc	2149.00	-	-19.39	4.07	-2.57	8.42
Artemis Corporate Bond I Acc	91.84	-	1.11	3.14	-18.85	-
Artemis SmartGARP Eur Eq I Acc	388.76	-	-2.41	3.25	-7.43	3.26
Artemis European Opps I Acc	112.80	-	-0.83	-	-17.56	0.85
Artemis SmartGARP GloEmr Eq I Acc	159.38	-	0.33	5.10	-6.24	4.66
Artemis SmartGARP Glo Eq I Acc	373.88	-	-1.32	2.59	-1.60	8.93
Artemis Global Income I Inc	108.56	-	0.34	4.44	3.30	9.14
Artemis Global Select I Acc	156.24	-	-0.43	0.57	-9.09	7.96
Artemis High Income I Q Inc	64.59	-	-0.25	5.96	-15.44	-2.50
Artemis Income I Inc	228.51	-	-1.80	4.51	-5.14	1.33
Artemis Monthly Dist I Inc	68.37	-	0.01	4.78	-4.82	2.67
Artemis Positive Future Fund	63.31	-	-0.74	0.00	-39.14	-
Artemis Strategic Assets I Acc	91.20	-	0.37	0.00	4.82	2.61
Artemis Strategic Bond I Q Acc	95.28	-	-0.65	3.29	-14.91	-3.02
Artemis Target Return Bond I Acc	101.04	-	-0.39	2.88	-7.86	-
Artemis UK Select Fund Class I Acc	631.50	-	-4.81	2.32	-20.96	2.99
Artemis UK Smaller Cos I Acc	1822.25	-	-22.07	1.79	-16.37	0.50
Artemis UK Special Sits I Acc	652.59	-	-4.84	2.16	-18.12	0.42
Artemis US Abs Return I Hdg Acc	111.13	-	-0.01	0.00	-1.94	-1.26
Artemis US Extended Alpha I Acc	325.54	-	0.39	0.00	-1.14	12.39
Artemis US Select I Acc	296.18	-	0.08	0.00	-6.89	10.13
Artemis US Smlr Cos I Acc	306.91	-	-3.10	0.00	-18.12	8.74

Ashmore Group
61 Aldwych, London WC2B 4AE. Dealing team: +352 27 62 22 233
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Emerging Markets Equity Fund	$102.35	-	-0.54	0.00	-38.58	-0.08
Emerging Markets Equity ESG Fund	$114.22	-	-0.61	0.00	-40.88	-
Emerging Markets Active Equity Fund	$106.43	-	-0.02	0.00	-35.36	-6.10
Emerging Markets Frontier Equity Fund	$176.26	-	0.05	0.40	-15.38	2.33
Emerging Markets Blended Debt Fund	$47.06	-	-0.06	6.73	-33.46	-13.83
Emerging Markets Blended Debt ESG Fund	$75.19	-	-0.12	0.00	-28.02	-10.61
Emerging Markets Debt Fund	$50.29	-	-0.28	8.32	-36.99	-15.28
Emerging Markets Corporate Debt Fund	$55.43	-	-0.26	9.75	-30.58	-9.80
Emerging Markets Local Currency Bond Fund	$55.34	-	0.05	4.46	-20.72	-7.73

Atlantas Sicav (LUX)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
American Dynamic	$5927.89	-	37.30	0.00	-20.32	5.98
American One	$6108.34	-	61.01	-	-16.49	7.79
Bond Global	€1581.48	1581.48	10.04	0.00	2.90	0.69
Eurocroissance	€1221.29	-	18.80	0.00	-16.32	3.68
Far East	$862.06	-	6.04	0.00	-31.54	-1.51

Blue Whale Investment Funds ICAV (IRE)
www.bluewhale.co.uk, info@bluewhale.co.uk
FCA Recognised - Ireland UCITS

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Blue Whale Growth USD T	$7.70	-	0.01	0.00	-40.38	-

Brooks Macdonald International Fund Managers Limited (JER)
5 Anley Street, St Helier, Jersey, JE2 3QE
+44 (0) 1534 700 104 (Int.) +44 (0) 800 735 8000 (UK)
Brooks Macdonald International Investment Funds Limited

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Euro High Income	€1.1868	-	-0.0019	3.06	-18.19	-6.55
High Income	£0.6204	-	-0.0012	5.14	-21.31	-6.79
Sterling Bond	£1.1759	-	-0.0026	1.67	-21.96	-6.94

Brooks Macdonald International Multi Strategy Fund Limited

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Cautious Balanced Strategy	£1.1852	-	-0.0031	0.00	-14.71	-2.47
Cautious Balanced Strategy A	£0.8470	-	-0.0022	1.16	-14.29	-
Balanced Strategy	£0.8665	-	-0.0028	0.09	-13.27	-
Balanced Strategy A	£0.8668	-	-0.0028	0.60	-12.38	-
Growth Strategy	£1.8157	-	-0.0066	0.00	-14.44	-0.76
Growth Strategy A	£0.8671	-	-0.0032	0.53	-14.03	-
High Growth Strategy	£2.5310	-	-0.0105	0.00	-15.12	0.38
High Growth Strategy A	£0.8625	-	-0.0036	0.13	-14.70	-
US$ Growth Strategy	$1.4870	-	-0.0086	0.00	-31.96	-3.81

Dealing Daily. Initial Charge Nil for A classes and up to 2% for other classes

Brown Advisory Funds plc (IRL)
http://www.brownadvisory.com Tel: 020 3301 8130
FCA Recognised

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
US Small Cap Blend Fund USD B	$19.76	-	-0.23	0.00	-19.58	4.01
US Flexible Equity Fund USD B	$20.86	-	-0.16	0.00	-24.17	7.25
Global Leaders Fund USD C	$17.77	-	-0.10	0.00	-25.34	3.52
US Sustainable Growth Fund USD C	$20.49	-	-0.20	0.00	-32.15	9.07
Global Leaders Sustainable Fund USD C	$10.83	-	-0.07	0.00	-25.87	-
US Equity Growth Fund USD B	$41.40	-	-0.40	0.00	-37.22	2.28
US Smaller Companies Fund USD B	$31.72	-	-0.23	0.00	-26.13	5.23
US Mid-Cap Growth Fund USD C	$14.96	-	-0.16	0.00	-35.74	0.75
Global Sustainable Total Return Bond GBP B	£9.36	-	-0.03	-	-	-

CG Asset Management Limited (IRL)
25 Moorgate, London, EC2R 6AY
Dealing: Tel. +353 1434 5098 Fax. +353 1542 2859
FCA Recognised
CG Portfolio Fund Plc

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Absolute Return Cls M Inc	£135.11	135.11	0.22	1.36	-2.42	4.16
Capital Gearing Portfolio GBP P	£37232.58	37232.58	66.57	1.05	-3.72	4.22
Capital Gearing Portfolio GBP V	£181.08	181.08	0.32	1.05	-3.72	4.22
Dollar Fund Cls D Inc	£173.66	173.66	-1.02	1.39	2.87	3.72
Dollar Hedged GBP Inc	£91.34	91.34	-0.05	1.74	-16.43	-1.45
Real Return Cls A Inc	£206.21	206.21	-1.12	1.43	0.84	2.54

Candriam Investors Group (LUX)
FCA Recognised

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Candriam Eqts L Australia Cap	A$1775.01	-	-15.78	0.00	-4.44	7.49

Candriam Investors Group
Other International Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Candriam Eqts L Emerging Mkts Cap	€860.41	-	1.37	0.00	-25.63	1.50
Candriam Bonds Credit Opportunities	€189.28	-	0.04	0.00	-6.67	-1.95
Candriam Bds Euro High Yield Cap	€1100.38	-	-3.26	0.00	-13.61	-2.62
Candriam Bds Euro Sh.Term Cap	€1971.62	-	-0.26	0.00	-4.82	-1.95

Chartered Asset Management Pte Ltd
Other International Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
CAM-GTF VCC	$276530.19	276530.19	-10829.19	-	-6.36	3.78
CAM GTi VCC	$780.49	-	-32.39	-	12.31	4.69
RAIC VCC	$1.64	1.64	0.03	2.06	5.74	-1.66

Consistent Unit Tst Mgt Co Ltd (1200)F (UK)
Stuart House, St John's Street, Peterborough, PE1 5DD
Dealing & Client Services 0345 850 8818
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Consistent UT Inc	57.83	57.83	0.14	1.14	-23.87	7.37
Consistent UT Acc	156.00	156.00	0.40	1.13	-23.90	7.35
Practical Investment Inc	213.10	213.10	-1.00	4.15	-13.87	2.30
Practical Investment Acc	1334.00	1334.00	-6.00	4.15	-13.94	1.60

CP Global Asset Management Pte. Ltd.
www.cpglobal.com.sg, Email: customer_support@cpglobal.com.sg
International Mutual Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
CP Multi-Strategy Fund	$301.51	-	-0.62	0.00	13.94	14.79

CP Capital Asset Management Limited
www.cpgbl.com, email: fundservices@cpgbl.com
International Mutual Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
CPS Master Private Fund	$413.45	-	0.52	0.00	9.78	13.90
CP Global Alpha Fund	$339.56	-	0.38	0.00	10.50	14.03

DWS (LUX)
Tel: +44 (0) 20 7541 8999 www.dws.com
FCA Recognised

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
DWS Invest Top Dividend	£149.61	149.61	-0.31	3.07	7.34	5.17
DWS Invest Top Euroland	£137.04	137.04	1.09	0.98	-19.19	1.74
DWS Invest Multi Opportunities	£108.06	108.06	0.08	0.00	-6.17	0.79
DWS Invest Global Bonds	£88.10	88.10	-0.28	0.00	-15.62	-5.23

Dodge & Cox Worldwide Funds (IRL)
48-49 Pall Mall, London SW1Y 5JG.
www.dodgeandcox.worldwide.com 020 3713 7664
FCA Recognised
Dodge & Cox Worldwide Funds plc - Global Bond Fund

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
EUR Accumulating Class	€15.83	-	-0.10	0.00	0.89	3.04
EUR Accumulating Class (H)	€9.68	-	-0.05	0.00	-16.84	-3.01
EUR Distributing Class	€11.60	-	-0.08	0.95	-2.05	2.06
EUR Distributing Class (H)	€7.04	-	-0.04	1.06	-19.38	-4.02
GBP Distributing Class	£12.40	-	-0.06	0.84	1.46	2.43
GBP Distributing Class (H)	£7.52	-	-0.04	1.16	-18.68	-3.34
USD Accumulating Class	$11.18	-	-0.05	0.00	-15.24	-1.36

Dodge & Cox Worldwide Funds plc-Global Stock Fund

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
USD Accumulating Share Class	$25.56	-	-0.03	0.00	-16.96	5.66
GBP Accumulating Share Class	£37.46	-	-0.04	0.00	2.27	10.80
GBP Distributing Share class	£25.28	-	-0.03	0.57	1.52	10.54
EUR Accumulating Share Class	€39.24	-	-0.08	0.00	-1.08	10.42
GBP Distributing Class (H)	£11.93	-	-0.01	0.61	-18.91	3.59

Dodge & Cox Worldwide Funds plc-U.S. Stock Fund

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
USD Accumulating Share Class	$34.58	-	-0.14	0.00	-15.08	9.26
GBP Accumulating Share Class	£47.92	-	-0.20	0.00	4.58	14.58
GBP Distributing Share Class	£28.77	-	-0.11	0.18	4.01	14.36
EUR Accumulating Share Class	€45.83	-	-0.24	0.00	1.13	14.17
GBP Distributing Class (H)	£13.80	-	-0.06	0.22	-16.95	7.16

Dragon Capital
www.dragoncapital.com
Fund information:info@dragoncapital.com
Other International Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Vietnam Equity (UCITS) Fund A USD	$26.14	-	-0.13	0.00	-31.08	4.03

EdenTree Investment Management Ltd (UK)
PO Box 3733, Swindon, SN4 4BG, 0800 358 3010
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Amity Balanced For Charities A Inc	89.09	-	-0.29	6.03	-14.53	-2.47
Amity Global Equity Inc for Charities A Inc	146.60	-	-0.70	2.96	-6.78	5.78
EdenTree European Equity Cls A Inc	274.60	-	-2.00	2.00	-9.70	3.26
EdenTree European Equity Cls B Inc	277.80	-	-2.10	2.44	-9.23	3.91
EdenTree Global Equity Cls A Inc	301.50	-	-1.40	0.08	-18.17	3.22
EdenTree Global Equity Cls B Inc	304.00	-	-1.50	0.70	-17.74	3.84
EdenTree Responsible and Sust S Dtd Bd B	91.29	-	-0.47	0.78	-6.91	-1.89
EdenTree Sterling Bond Cls A Inc	81.81	-	-0.60	4.00	-17.53	-4.49
EdenTree Sterling Bond Cls B Inc	92.26	-	-0.67	3.99	-16.99	-3.86
EdenTree UK Equity Cls A Inc	194.70	-	-1.20	1.07	-25.77	-5.36
EdenTree UK Equity Cls B Inc	194.20	-	-1.20	1.80	-25.34	-4.75
EdenTree UK Equity Opps Cls A Inc	242.10	-	-1.70	0.97	-31.75	-4.47
EdenTree UK Equity Opps Cls B Inc	247.20	-	-1.70	1.73	-31.36	-3.86
Edentree Global Impact Bond B	81.48	-	-0.48	-	-	-
Edentree Green Future B Net Inc	94.36	-	-0.70	-	-	-
EdenTree Managed Income Cls A Inc	110.80	-	-0.50	5.29	-11.74	-1.46
EdenTree Managed Income Cls B Inc	118.20	-	-0.50	5.28	-11.31	-0.93

Euronova Asset Management UK LLP (CYM)
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Smaller Cos Cls One Shares	€49.86	-	-0.08	0.00	-18.85	3.30
Smaller Cos Cls Two Shares	€31.85	-	-0.05	0.00	-19.26	1.69
Smaller Cos Cls Three Shares	€15.89	-	-0.03	0.00	-20.27	1.34
Smaller Cos Cls Four Shares	€20.95	-	-0.03	0.00	-18.42	2.23

Fidelity Investments International
Other International Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Emerging Mkts NAV	£7.21	-	-0.16	2.01	-28.05	-5.29

FIL Investment Services (UK) Limited (1200)F (UK)
Beech Gate, Millfield Lane, Lower Kingswood, Tadworth, KT20 6RP
Callfree: Private Clients 0800 414161
Broker Dealings: 0800 414 181
OEIC Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Allocator World Fund W-ACC-GBP	£2.54	-	-0.01	1.01	-5.39	7.74
American Fund W-ACC-GBP	£52.66	-	0.09	0.00	-16.84	5.18
American Special Sits W-ACC-GBP	£23.01	-	-0.01	0.49	17.28	13.64
Asia Fund W-ACC-GBP	£14.26	-	0.06	0.28	-19.89	0.78
Asia Pacific Ops W-Acc	£2.59	-	-0.01	0.51	-14.30	7.30
Asian Dividend Fund W-ACC-GBP	£2.19	-	-0.01	2.95	-2.14	3.36
Cash Fund W-ACC-GBP	£1.02	-	0.00	0.00	0.73	0.33
China Consumer Fund W-ACC-GBP	£2.40	-	-0.02	0.00	-30.51	-6.30
Emerg Europe, Middle East and Africa Fund W-ACC-GBP	£1.56	-	0.00	4.95	-51.97	-10.59
Emerging Asia Fund W-ACC-GBP	£1.76	-	0.01	0.30	-15.80	4.11
Enhanced Income Fund W-INC-GBP	£0.80	-	0.00	6.37	0.88	1.64
European Fund W-ACC-GBP	£21.20	-	-0.12	1.15	-6.44	6.68
Extra Income Fund W-ACC-GBP	£1.18	-	-0.01	4.13	-18.75	-4.45
Global Dividend Fund W-ACC-GBP	£2.78	-	-0.02	2.70	0.47	5.53
Global Enhanced Income W-ACC-GBP	£2.17	-	-0.01	4.37	0.93	4.66
Global High Yield Fund W-ACC-GBP	£12.96	-	-0.02	5.88	-18.85	-4.65
Global Property Fund W-ACC-GBP	£1.90	-	0.01	1.62	-12.26	-2.93
Global Special Sits W-ACC-GBP	£52.15	-	-0.09	0.31	-6.86	9.05
Index Emerging Markets P-ACC-GBP	£1.60	-	0.01	2.39	-15.23	1.42
Index Europe ex UK P-ACC-GBP	£1.67	-	-0.01	2.17	-12.10	3.39
Index Japan P-ACC-GBP	£1.74	-	-0.02	2.01	-10.11	1.25
Index Pacific ex Japan P-Acc-GBP	£1.78	-	-0.02	3.75	-4.76	2.57
Index Sterling Corporate Bond Fund P-ACC-GBP	£0.77	-	-0.01	2.13	-22.50	-
Index UK Gilt Fund P-ACC-GBP	£0.72	-	-0.01	0.62	-23.23	-
Index UK P-ACC-GBP	£1.42	-	-0.01	3.41	-5.05	1.53
Index US P-ACC-GBP	£3.42	-	0.00	1.10	1.51	14.22
Index World P-ACC-GBP	£2.60	-	0.00	1.46	-2.97	10.41
Japan Fund W-ACC-GBP	£5.24	-	-0.04	1.29	-3.50	9.50
Japan Smaller Companies Fund W-ACC-GBP	£3.28	-	-0.02	0.63	-20.38	-0.56
MoneyBuilder Balanced Fund W-ACC-GBP	£0.56	-	0.00	3.13	-8.73	-1.64
MoneyBuilder Dividend Fund W-INC-GBP	£1.19	-	0.00	4.00	1.39	2.26
Multi Asset Allocator Adventurous Fund W-ACC-GBP	£2.03	-	-0.01	0.92	-7.64	5.29
Multi Asset Allocator Defensive Fund W-ACC-GBP	£1.25	-	0.00	0.96	-14.17	-2.37
Multi Asset Allocator Growth Fund W-ACC-GBP	£1.76	-	-0.01	0.89	-9.93	2.66
Multi Asset Allocator Strategic Fund W-ACC-GBP	£1.51	-	-0.01	0.84	-12.16	0.09
Multi Asset Balanced Income Fund W-INC-GBP	£0.92	-	-0.01	4.16	-13.69	-2.47
Multi Asset Income & Growth Fund W-INC-GBP	£0.98	-	0.00	4.41	-12.29	-1.17
Multi Asset Income Fund W-INC-GBP	£0.85	-	0.00	5.09	-16.52	-3.70
Multi Asset Open Advent W-ACC-GBP	£1.65	-	0.00	0.91	-6.20	4.24
Multi Asset Open Defen W-ACC-GBP	£1.27	-	0.00	1.16	-10.79	-0.60
Multi Asset Open Growth Fund W-ACC-GBP	£1.56	-	0.00	1.11	-7.04	3.56
Multi Asset Open Strategic Fund W-ACC-GBP	£1.42	-	0.00	1.26	-9.15	1.13
Open World Fund W-ACC-GBP	£2.18	-	0.01	0.59	-3.63	7.75
Select 50 Balanced Fund PI-ACC-GBP	£1.08	-	-0.01	1.05	-11.16	0.37
Short Dated Corporate Bond Fund W-ACC-GBP	£10.10	-	-0.06	4.21	-9.36	-1.91
Special Situations Fund W-ACC-GBP	£38.86	-	-0.38	2.20	-7.19	1.63
Strategic Bond Fund W-ACC-GBP	£1.10	-	-0.01	2.28	-20.28	-4.80
Sustainable European Equity Fund W-ACC-GBP	£4.73	-	-0.02	0.74	-17.19	0.99
Sustainable Global Equity Fund W-ACC-GBP	£31.67	-	-0.21	0.00	-10.71	8.33
Sustainable MoneyBuilder Income Fund W-ACC-GBP	£11.38	-	-0.12	3.80	-21.79	-6.09
Sustainable Multi Asset Balanced Fund W-ACC-GBP	£0.89	-	-0.01	0.15	-12.40	-
Sustainable Multi Asset Conservative Fund W-ACC-GBP	£0.86	-	-0.01	0.16	-14.74	-
Sustainable Multi Asset Growth Fund W-ACC-GBP	£0.92	-	0.00	0.08	-11.03	-
Sustainable Water & Waste W-ACC-GBP	£1.06	-	-0.01	0.15	-17.11	-
UK Opportunities Fund W-ACC-GBP	219.60	-	-1.90	4.50	-28.31	-1.06
UK Select Fund W-ACC-GBP	£3.36	-	-0.02	2.18	-8.85	1.70
UK Smaller Companies W-ACC-GBP	£3.10	-	-0.03	1.26	-17.71	5.99

Findlay Park Funds Plc (IRL)
30 Herbert Street, Dublin 2, Ireland Tel: 020 7968 4900
FCA Recognised

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
American EUR Unhedged Class	€152.08	-	-2.46	0.00	-7.82	-
American Fund USD Class	$149.70	-	-1.61	0.00	-22.10	5.46
American Fund GBP Hedged	£73.92	-	-0.80	0.00	-23.40	3.97
American Fund GBP Unhedged	£132.20	-	-2.17	0.00	-4.95	10.14

Foord Asset Management
Website: www.foord.com - Email: info@foord.com
FCA Recognised - Luxembourg UCITS

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Foord International Fund | R	$45.56	-	0.02	0.00	-6.35	3.62
Foord Global Equity Fund (Lux) | R	$14.12	-	-0.01	0.00	-25.80	-

Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Foord Global Equity Fund (Sing) | B	$16.79	-	-0.01	0.00	-26.05	2.03
Foord International Trust (Gsy)	$44.41	-	0.02	0.00	-6.31	3.60

Fundsmith Equity Fund

Fundsmith LLP (1200)F (UK)
PO Box 10846, Chelmsford, Essex, CM99 2BW 0330 123 1815
www.fundsmith.co.uk, enquiries@fundsmith.co.uk
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Fundsmith Equity T Acc	556.45	-	-2.91	0.05	-11.45	7.94
Fundsmith Equity T Inc	507.77	-	-2.66	0.05	-11.45	7.94

GAM
funds@gam.com, www.funds.gam.com
Regulated

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
LAPIS GBL TOP 50 DIV.YLD-Na-D	£121.56	-	-1.13	2.66	11.78	6.79
LAPIS GBL F OWD 50 DIV.YLD-Na-D	£94.42	-	-0.38	1.05	-13.47	-0.62

Guinness Global Investors

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Guinness Global Equity Income Y GBP Dist	£17.68	-	-0.23	2.42	4.74	10.59
Guinness Global Innovators Y GBP Acc	£24.04	-	-0.13	0.00	-15.39	10.64
Guinness Sustainable Global Equity Y GBP Acc	£10.49	-	-0.08	0.00	-11.19	-

HPB Assurance Ltd
Anglo Intl House, Bank Hill, Douglas, Isle of Man, IM1 4LN 01638 563490
International Insurances

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Holiday Property Bond Ser 1	£0.48	-	0.00	0.00	1.26	-2.57
Holiday Property Bond Ser 2	£0.63	-	0.00	0.00	0.32	-0.63

Hermes Property Unit Trust (UK)
Property & Other UK Unit Trusts

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Property	£7.87	8.48	0.04	-	18.73	5.43

Janus Henderson Investors (UK)
PO Box 9023, Chelmsford, CM99 2WB Enquiries: 0800 832 832
www.janushenderson.com
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Janus Henderson Asia Pacific Capital Growth Fund A Acc	1074.00	-	-1.00	0.00	-19.43	-1.74
Janus Henderson Asian Dividend Income Unit Trust Inc	77.52	-	0.04	6.43	-7.13	-2.41
Janus Henderson Cautious Managed Fund A Acc	256.30	-	-2.30	3.25	-12.73	-1.78
Janus Henderson Cautious Managed Fund A Inc	128.20	-	-1.10	3.31	-12.76	-1.54
Janus Henderson China Opportunities Fund A Acc	1093.00	-	-1.00	0.00	-31.34	-7.34
Janus Henderson Emerging Markets Opportunities Fund A Acc	189.10	-	0.80	0.00	-21.50	0.59
Janus Henderson European Growth Fund A Acc	260.40	-	-1.20	1.37	-10.82	4.30
Janus Henderson European Selected Opportunities Fund A Acc	1956.00	-	-8.00	1.40	-11.49	4.16
Janus Henderson Fixed Interest Monthly Income Fund Inc	16.52	-	-0.11	5.29	-23.70	-5.76
Janus Henderson Global Equity Fund Acc	4106.00	-	-29.00	0.00	-14.46	7.75
Janus Henderson Global Equity Income Fund A Inc	62.12	-	-0.23	3.54	0.81	4.73
Janus Henderson Global Sustainable Equity Fund A Inc	442.70	-	-2.10	0.00	-13.48	10.97
Janus Henderson Global Technology Fund A Acc	2650.00	-	18.00	0.00	-21.85	9.94
Janus Henderson Instl UK Idx Opps A Acc	£1.02	-	0.00	3.21	-5.91	-
Janus Henderson Multi-Asset Absolute Return Fund A Acc	156.40	-	-0.20	0.68	0.26	3.22
Janus Henderson Multi-Manager Active Fund A Acc	241.60	-	0.10	0.00	-10.52	1.77
Janus Henderson Multi-Manager Distribution Fund A Inc	119.80	-	-0.60	2.58	-11.25	-1.11
Janus Henderson Multi-Manager Diversified Fund A Acc	82.06	-	-0.43	2.51	-13.43	-2.54
Janus Henderson Multi-Manager Global Select Fund Acc	295.90	-	-0.50	0.00	-7.82	5.79
Janus Henderson Multi-Manager Income & Growth Fund A Acc	177.00	-	-0.80	2.43	-11.41	-0.83
Janus Henderson Multi-Manager Income & Growth Fund A Inc	139.60	-	-0.60	2.46	-11.43	-0.83
Janus Henderson Multi-Manager Managed Fund A Acc	294.60	-	-0.30	0.00	-10.48	1.06
Janus Henderson Multi-Manager Managed Fund A Inc	285.20	-	-0.30	0.00	-10.46	1.07
Janus Henderson Sterling Bond Unit Trust Acc	192.40	-	-1.90	1.46	-21.24	-6.57
Janus Henderson Sterling Bond Unit Trust Inc	52.82	-	-0.51	1.47	-21.24	-6.57
Janus Henderson Strategic Bond Fund A Inc	98.53	-	-0.89	3.59	-21.49	-5.12
Janus Henderson Absolute Return Fund A Acc	160.80	-	-0.20	0.00	-4.00	1.08
Janus Henderson UK Alpha Fund A Acc	120.30	-	-1.40	1.29	-31.18	-5.80
Janus Henderson UK Equity Income & Growth Fund A Inc	463.90	-	-2.60	5.00	-6.64	-0.57
Janus Henderson UK Property PAIF A Acc	£2.65	2.78	0.00	-	13.53	4.26
Janus Henderson UK Property PAIF A Inc	£1.06	1.11	0.00	-	13.53	4.32
Janus Henderson US Growth Fund A Acc	1608.00	-	-3.00	0.00	-18.66	8.16

Kleinwort Hambros Bank Limited (UK)
5TH Floor, 8 St James's Square, London, SW1Y 4JU
Dealing and enquiries: 033 0024 0785
Authorised Inv Funds
Unit Trust Manager/ACD - Host Capital

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
HC Kleinwort Hambros Growth A Acc	228.39	-	-0.61	0.00	-9.54	2.22
HC Kleinwort Hambros Growth A Inc	207.21	-	-0.56	0.00	-9.55	2.21
HC Kleinwort Hambros Equity Income A Inc	89.79	-	-0.90	4.16	-8.33	-1.62
HC Kleinwort Hambros Equity Income A Acc	175.97	-	-1.75	4.07	-8.33	-1.62
HC Kleinwort Hambros Multi Asset Balanced A Acc	163.22	-	-0.64	0.00	-10.33	-0.22
HC Kleinwort Hambros Multi Asset Balanced A Inc	154.88	-	0.16	0.00	-10.33	-0.21
HC Kleinwort Hambros Fixed Income A Acc	118.24	-	0.44	2.49	-13.77	-4.05
HC Kleinwort Hambros Fixed Income A Inc	90.07	-	0.33	2.52	-13.78	-4.05

Lazard Fund Managers Ltd (1200)F (UK)
P.O. Box 364, Darlington, DL1 9RD
Dealing: 0870 6066408, Info: 0870 6066459
Authorised Inv Funds
Lazard Investment Funds (OEIC) B Share Class

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Developing Markets Acc	110.87	-	-0.26	0.00	-19.15	-2.42
Developing Markets Inc	108.56	-	-0.26	0.00	-19.16	-2.43
Emerging Markets Acc	336.93	-	3.82	2.90	-8.31	0.43
Emg Mkts Inc	253.83	-	2.87	2.97	-8.31	0.43
European Alpha Acc	925.33	-	-4.51	1.01	-12.82	2.41
European Alpha Inc	792.33	-	-3.86	1.02	-12.77	2.42
European Smaller Cos Acc	595.74	-	-3.95	0.00	-30.51	0.40
Global Equity Income Acc	217.51	-	-0.65	3.71	-5.10	6.88
Global Equity Income Inc	109.81	-	-0.33	3.80	-5.11	6.86
Managed Bal Inc	167.08	-	-1.81	2.03	-15.28	0.83
UK Income Acc	1428.38	-	-8.91	4.67	-8.19	-0.31
UK Income Inc	519.48	-	-3.24	4.80	-8.19	-0.31
UK Omega Acc	245.10	-	-1.95	1.84	-10.45	-0.67
UK Omega Inc	202.39	-	-1.61	1.87	-10.45	-0.67
UK Smaller Cos Inc	2001.70	-	8.44	0.40	-24.24	1.74

Lothbury Property Trust (UK)
155 Bishopsgate, London EC2M 3TQ +44(0) 20 3551 4900
Property & Other UK Unit Trusts

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Lothbury Property Trust GBP	£2081.74	2242.69	-43.29	2.60	7.62	2.35

M & G Securities (1200)F (UK)
PO Box 9038, Chelmsford, CM99 2XF
www.mandg.co.uk/charities Enq./Dealing: 0800 917 4472
Authorised Inv Funds

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Charifund Inc	1376.02	-	-4.10	5.76	-5.33	0.64
Charifund Acc	28590.20	-	-79.07	4.84	-5.33	0.64
M&G Charibond Charities Fixed Interest Fund (Charibond) Inc	£1.05	-	-0.01	2.12	-11.67	-
M&G Charibond Charities Fixed Interest Fund (Charibond) Acc	£37.24	-	-0.43	1.70	-11.68	-
M&G Charity Multi Asset Fund Inc	£0.83	-	-0.01	3.92	-3.78	-
M&G Charity Multi Asset Fund Acc	£98.41	-	-0.53	3.78	-3.77	-

MANAGED FUNDS SERVICE

MMIP Investment Management Limited (GSY)
Regulated
Multi-Manager Investment Programmes PCC Limited

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
UK Equity Fd Cl A Series 01	£2667.84	2697.24	-30.05	0.00	-14.79	-1.47
Diversified Absolute Rtn Fd USD Cl AF2	$1580.93	-	-51.35	0.00	-9.14	-0.91
Diversified Absolute Rtn Stg Cell AF2	£1468.42	-	-51.93	0.00	-10.02	-2.00
Global Equity Fund A Lead Series	£1653.91	1658.58	-103.81	0.00	-8.54	0.82

Fund	Bid	Offer	+/-	Yield	1Yr	3Yr
Tosca Mid Cap GBP	£169.38	-	-22.79	0.00	-34.33	-17.95
Tosca Opportunity B USD	$258.80	-	-15.18	0.00	-33.99	-17.17
Pegasus Fund Ltd A-1 GBP	£40.34	-	-2.47	0.00	-34.03	-18.07

Marlborough Investment Management Limited (UK)
Marlborough, PO BOX 1852 Lichfield, Staffordshire, England, WS13 8XU. 0808 145 2500.
www.marlboroughfunds.com
Authorised Inv Funds

Balanced	212.74	212.74	-0.54	0.23	-11.58	1.64
Bond Income	38.33	38.33	-0.42	2.61	-22.50	-7.24
Cautious Inc	81.17	81.17	-0.15	1.64	-10.28	-1.19
Emerging Markets	331.00	331.00	1.45	0.87	-8.04	2.87
Conservative P Acc	89.97	-	-0.14	0.00	-10.51	-
European Multi-Cap	632.75	632.75	-1.73	1.38	-21.15	12.65
Extra Income	80.74	80.74	-1.41	4.50	-8.21	1.64
Far East Growth A Inc	219.71	219.71	1.78	1.26	-17.50	0.30
Global	280.08	280.08	-1.15	0.00	-13.52	3.97
Global Bond Inc	133.10	133.10	0.02	2.18	-10.42	-3.41
High Yield Fixed Interest	58.54	58.54	0.34	4.79	-15.07	-2.67
Marlborough Technology Fund A	789.37	789.37	-3.39	0.00	-28.72	12.55
Multi Cap Income A Inc	108.90	108.90	-0.48	-	-24.65	-5.93
Nano-Cap Growth A Acc	190.04	190.04	1.29	0.00	-33.94	4.40
Special Situations A Acc	1553.02	1553.02	-0.33	0.37	-36.68	-0.99
UK Multi-Cap Growth A Inc	314.07	314.07	-0.72	0.10	-31.92	-1.61
UK Micro Cap Growth A	714.85	714.85	1.64	0.00	-40.12	0.69
US Multi-Cap Income	721.91	721.91	-3.52	1.44	0.61	10.14
MFM - Third Party Funds						
Junior Gold C Acc	29.90	29.90	0.40	0.00	-40.57	1.14
MFM Bowland	303.05	303.05	-3.89	0.97	-16.83	5.29
MFM Hathaway Inc	135.80	135.80	2.20	1.00	-19.31	-1.92
MFM UK Primary Opportunities A Inc	394.51	394.51	-1.50	1.08	-20.04	-0.68

Marwyn Asset Management Limited (CYM)
Regulated

Marwyn Value Investors	£329.72	-	-6.14	0.00	-	-7.17

McInroy & Wood Portfolios Limited (UK)
Easter Alderston, Haddington, EH41 3SF 01620 825867
Authorised Inv Funds

Balanced Fund Personal Class Units	5864.90	-	85.00	1.40	-1.54	6.46
Income Fund Personal Class Units	2824.10	-	33.40	2.89	2.37	4.60
Emerging Markets Fund Personal Class Units	2281.20	-	24.70	1.43	-3.61	2.09
Smaller Companies Fund Personal Class Units	5694.40	-	166.00	1.31	-25.48	1.37

Milltrust International Managed Investments ICAV (IRL)
mimi@milltrust.com, +44(0)20 8123 8316 www.milltrust.com
Regulated

British Innovation Fund	£121.92	-	2.89	0.00	-	-
MAI - Buy & Lease (Australia)	A$ 103.45	-	0.50	0.00	-16.53	1.41
MAI - Buy & Lease (New Zealand)	NZ$ 91.20	-	-6.06	0.00	-7.20	-2.67
Milltrust Global Emerging Markets Fund - Class A	$ 85.78	-	-0.82	0.00	-30.80	-1.00

Milltrust International Managed Investments SPC
em@milltrust.com, +44(0)20 8123 8316, www.milltrust.com
Regulated

Milltrust Alaska Brazil SP A	$ 84.41	-	1.72	0.00	22.58	-
Milltrust Laurium Africa SP A	$ 89.12	-	-0.20	0.00	-17.51	-
Milltrust Marcellus India Fund	$ 128.94	-	-0.85	0.00	-13.49	-
Milltrust Singular ASEAN SP Founders	$ 123.32	-	1.08	0.00	-25.73	-
Milltrust SPARX Korea Equity SP A	$ 86.98	-	-0.65	0.00	-44.56	-
Milltrust Xingtai China SP A	$ 84.73	-	-0.21	0.00	-40.94	-
The Climate Impact Asia Fund SP (Class A)	$ 70.18	-	-0.88	0.00	-34.75	-
The Climate Impact Asia Fund (Class B)	$ 69.66	-	-0.88	0.00	-35.08	-

Ministry of Justice Common Investment Funds (UK)
Property & Other UK Unit Trusts

The Equity Idx Tracker Fd Inc	1770.00	-	-3.00	2.64	-8.36	3.01

Distribution Units

MIRABAUD 1819 2019

Mirabaud Asset Management (LUX)
www.mirabaud.com, marketing@mirabaud-am.com
Conviction based investment vehicles details available here www.mirabaud-am.com
Regulated

Mir. - Glb Strat. Bd I USD	$109.19	-	-0.21	0.00	-12.28	-1.61
Mir. - DiscEur D Cap GBP	£152.64	-	0.61	0.00	-30.02	3.75
Mirabaud - UK Equity High Alpha	£123.92	-	0.42	0.00	-27.03	0.32

Oasis Crescent Global Investment Funds (UK) ICVC (UK)
Regulated

Oasis Crescent Global Equity Fund USD A (Dist)	$ 31.39	-	0.26	0.26	-19.31	1.16
Oasis Crescent Global Income Fund USD A (Dist)	$ 9.75	-	-0.02	2.68	-9.33	-0.89
Oasis Crescent Global Low Equity Fund USD D (Dist)	$ 11.44	-	0.03	0.61	-15.45	-1.29
Oasis Crescent Global Medium Equity Fund USD A (Dist)	$ 12.64	-	0.06	0.16	-15.57	-0.27
Oasis Crescent Global Property Equity Fund USD A (Dist)	$ 6.98	-	0.02	0.73	-30.21	-8.26
Oasis Crescent Global Short Term Income Fund USD A (Dist)	$ 0.93	-	0.00	1.84	-4.22	-0.25
Oasis Crescent Variable Fund GBP A (Dist)	£ 9.26	-	0.01	0.18	-9.59	-1.38

Omnia Fund Ltd
Other International Funds

Estimated NAV	$955.58	-	173.14	0.00	43.52	9.86

Orbis Investments (U.K.) Limited (GBR)
28 Dorset Square, London, NW1 6QG
www.orbis.com 0800 358 2030
Regulated

Orbis OEIC Global Cautious Standard	£ 11.42	-	-0.03	0.00	4.64	3.93
Orbis OEIC Global Balanced Standard	£ 18.22	-	-0.05	2.14	6.70	9.14
Orbis OEIC Global Equity Standard	£ 20.63	-	-0.09	2.08	-5.10	8.73
Orbis OEIC UK Equity Standard	£ 10.13	-	0.05	3.65	-5.57	7.44

PLATINUM CAPITAL MANAGEMENT

Platinum Capital Management Ltd
Other International Funds

Platinum All Star Fund - A	$143.77	-	-	0.00	-	2.91
Platinum Global Growth UCITS Fund	$ 7.96	-	0.00	0.00	-45.33	-8.64
Platinum Essential Resources UCITS Fund SICAV USD Class E	$ 11.28	-	0.15	0.00	15.22	8.06
Platinum Global Dividend UCITS Fund	$ 44.62	-	-0.06	0.00	-24.06	-7.68

Polar Capital Funds Plc (IRL)
Regulated

Automation & Artificial Intelligence Cl I USD Acc	$ 12.65	12.65	-0.03	0.00	-36.56	3.29
Asian Stars I USD Acc $	$ 11.98	-	-0.14	0.00	-38.72	1.70
Biotechnology I USD	$ 35.33	35.33	-0.12	0.00	-18.42	16.65
China Stars I USD Acc $	$ 9.27	9.27	-0.11	0.00	-39.05	-3.42
Emerging Market Stars I USD Acc	$ 9.73	-	-0.10	0.00	-39.15	-0.20
European Ex UK Inc EUR Acc	€ 12.96	12.96	-0.02	0.00	-1.59	1.51
Financial Opps I USD	$ 12.48	-	-0.09	2.91	-25.13	0.15
Global Convertible I USD	$ 12.64	12.64	0.00	0.00	-23.58	-1.18
Global Insurance I GBP	£ 9.41	-	-0.25	0.00	17.29	8.16
Global Technology I USD	$ 58.20	-	0.15	0.00	-39.07	5.72
Healthcare Blue Chip Fund I USD Acc	$ 16.74	16.74	-0.07	0.00	-10.72	8.57
Healthcare Dis I Acc USD $	$ 11.84	-	-0.03	0.00	-24.10	-
Healthcare Opps I USD	$ 59.12	-	-0.37	0.00	-14.76	7.51
Income Opportunities B2 I GBP Acc	£ 2.78	2.78	-0.01	0.00	-1.70	6.49
Japan Value I JPY	¥138.67	138.67	-0.62	0.00	3.94	5.69
North American I USD	$ 29.87	29.87	-0.23	0.00	-21.58	5.87
Smart Energy I USD Acc $	$ 7.55	7.55	-0.01	0.00	-27.54	-
Smart Mobility I USD Acc $	$ 7.30	7.30	-0.03	0.00	-30.48	-
UK Val Opp I GBP Acc	£ 10.60	10.60	-0.11	0.00	-26.03	-3.59

Private Fund Mgrs (Guernsey) Ltd (GSY)
Regulated

Monument Growth 18/10/2022	£519.09	524.16	2.34	1.08	-4.82	2.18

Prusik Investment Management LLP (IRL)
Enquiries - 0207 493 1331
Regulated

Prusik Asian Equity Income B Dist	$ 158.12	-	-1.11	4.96	-12.58	-1.79
Prusik Asia Emerging Opportunities Fund A Acc	$ 176.17	-	-2.77	0.00	-24.82	4.64
Prusik Asia Fund U Dist.	£215.61	-	-1.35	0.00	-16.62	6.07
Prusik Asia Sustainable Growth Fund A Acc	$ 80.77	-	-0.58	-	-	-

Purisima Investment Fds (UK) (1200)F (UK)
65 Gresham Street, London, EC2V 7NQ
Order Desk and Enquiries: 0345 922 0044
Authorised Inv Funds
Authorised Corporate Director - Link Fund Solutions

Global Total Fd PCG A	356.74	-	0.88	0.00	-13.79	10.64
Global Total Fd PCG B	351.74	-	0.87	0.00	-14.01	10.36
Global Total Fd PCG INT	345.35	-	0.84	0.00	-14.22	10.08

Purisima Investment Fds (CI) Ltd (JER)
Regulated

PCG B ✠	252.47	-	-1.28	0.00	-28.99	3.89
PCG C ✠	245.69	-	-1.25	0.00	-29.14	3.67

Ram Active Investments SA
www.ram-ai.com
Other International Funds

RAM Systematic Emerg Markets Eq	$ 186.75	186.75	0.15	0.00	-24.68	2.53
RAM Systematic European Eq	€ 478.02	478.02	0.02	0.00	-18.87	2.08
RAM Systematic Funds Global Sustainable Income Eq	$ 134.54	134.54	-0.86	0.00	-18.03	2.09
RAM Systematic Global Eq Sustainable Alpha	$ 113.51	113.51	-0.14	0.00	1.49	-0.37
RAM Systematic Long/Short European Eq	€ 155.52	155.52	-0.35	0.00	4.31	2.68
RAM Systematic US Sustainable Eq	$ 313.52	313.52	-3.01	0.00	-26.57	1.20
RAM Tactical Global Bond Total Return	€ 134.38	134.38	-0.21	0.00	-12.50	-3.24
RAM Tactical II Asia Bond Total Return	$ 138.44	138.44	-0.42	0.00	-11.10	-2.60

Royal London (UK)
55 Gracechurch Street, London, EC3V 0RL rlam.co.uk
Authorised Inv Funds

Royal London Sustainable Diversified A Inc	£ 2.14	-	-0.02	0.67	-18.14	1.00
Royal London Sustainable World A Inc	316.90	-	-2.40	0.00	-17.90	5.17
Royal London Corporate Bond Mth Income	70.73	-	-0.57	4.50	-19.62	-5.46
Royal London European Growth Trust	182.40	-	-1.70	0.83	-12.08	4.21
Royal London Sustainable Leaders A Inc	688.90	-	-6.00	1.12	-14.41	2.85
Royal London UK Growth Trust	552.40	-	-3.80	2.25	-16.28	0.34
Royal London UK Income With Growth Trust	189.50	-	-1.00	5.48	-6.88	0.34
Royal London US Growth Trust	361.60	-	0.50	0.00	-0.55	14.17

Additional Funds Available
Please see www.royallondon.com for details

RUFFER

Ruffer LLP (1000)F (UK)
65 Gresham Street, London, EC2V 7NQ
Order Desk and Enquiries: 0345 601 9610
Authorised Inv Funds
Authorised Corporate Director - Link Fund Solutions

LF Ruffer Diversified Rtrn C Acc	104.24	-	-0.81	0.87	1.14	-
LF Ruffer Diversified Rtrn C Inc	103.37	-	-0.81	0.90	1.15	-
LF Ruffer European C Acc	707.67	-	20.15	0.91	-22.29	5.05
LF Ruffer European C Inc	126.95	-	3.62	0.94	-22.27	5.06
LF Ruffer European O Acc	686.32	-	19.51	0.59	-22.52	4.73
LF Ruffer Equity & General C Acc	536.97	-	4.03	0.82	-4.08	6.84
LF Ruffer Equity & General C Inc	485.13	-	3.64	0.82	-4.08	6.84
LF Ruffer Equity & General O Acc	520.81	-	3.87	0.50	-4.37	6.52
LF Ruffer Equity & General O Inc	479.22	-	3.56	0.50	-4.37	6.52
LF Ruffer Gold C Acc	202.98	-	-8.86	0.00	-21.52	1.72
LF Ruffer Gold C Inc	122.85	-	-5.36	0.00	-21.52	1.72
LF Ruffer Gold O Acc	196.80	-	-8.60	0.00	-21.76	1.42
LF Ruffer Japanese C Inc	150.85	-	-1.64	0.26	-16.19	6.64
LF Ruffer Japanese C Acc	324.99	-	-3.53	0.26	-16.19	6.64
LF Ruffer Japanese O Acc ✠	314.77	-	-3.50	0.00	-16.45	6.32
LF Ruffer Total Return C Acc	555.31	-	7.65	-	0.88	7.59
LF Ruffer Total Return C Inc	346.32	-	4.77	-	0.88	7.58
LF Ruffer Total Return O Acc	538.53	-	7.38	2.50	0.57	7.26
LF Ruffer Total Return O Inc	335.67	-	4.61	2.55	0.57	7.26

RUBRICS

Rubrics Global UCITS Funds Plc (IRL)
www.rubricsam.com
Regulated

Rubrics Emerging Markets Fixed Income UCITS Fund	$ 129.43	-	0.15	0.00	-7.56	-2.12
Rubrics Global Credit UCITS Fund	$ 16.16	-	-0.04	0.00	-10.79	-1.67
Rubrics Global Fixed Income UCITS Fund	$ 164.64	-	-0.61	0.00	-8.51	-1.63

Scottish Friendly Asset Managers Ltd (UK)
Scottish Friendly Hse, 16 Blythswood Sq, Glasgow G2 4HJ 0141 275 5000
Authorised Inv Funds

Managed Growth ♦	324.50	-	0.10	0.00	-6.94	6.39
UK Growth ♦	369.80	-	-1.30	0.00	-14.04	6.32

SICO Est 1995 سيكو

SICO BSC (c) (BHR)
+973 17515031.
www.sicobank.com

Khaleej Equity Fund	$613.87	-	-12.47	0.00	17.28	19.37
SICO Kingdom Equity Fund	$ 37.25	-	-0.53	0.00	15.21	20.31
SICO Gulf Equity Fund	$170.59	-	-3.37	0.00	23.60	16.85

Slater Investments Ltd (UK)
www.slaterinvestments.com; Tel: 0207 220 9460
FCA Recognised

Slater Growth A Acc	608.68	608.68	-3.47	0.00	-28.29	3.40
Slater Income A Inc	133.83	133.83	-0.59	4.84	-8.13	1.56
Slater Recovery A Acc	318.06	318.06	-2.05	-	-20.87	7.74
Slater Artorius	280.91	280.91	4.42	0.33	-25.21	8.27

Stewart Investors

Stewart Investors (UK)
23 St Andrew Square, Edinburgh, EH2 1BB
enquiries@stewartinvestors.com
Client Services: 0800 587 4141
Dealing Line: 0800 587 3388
Authorised Funds

SI Asia Pacific A Acc	1583.17	-	6.02	0.00	-3.16	8.06
SI Asia Pacific A Inc	£ 2.80	-	0.01	0.00	-3.33	7.63
SI Asia Pacific Leaders A Acc	874.43	-	0.73	0.00	-6.23	7.95
SI Asia Pacific Leaders A Inc	£ 2.97	-	0.00	0.00	-6.26	7.89
SI Asia Sustainability A Acc	730.08	-	2.75	0.00	-1.84	9.30
SI Global Emerging Mkts A Acc	778.80	-	4.74	2.44	0.66	0.24
SI Global Emerging Mkts Leaders A Acc	545.40	-	2.97	1.29	-2.65	0.87
SI Global Emerging Mkts Sus A Acc	366.07	-	2.23	0.00	-8.99	3.07
SI Indian Sub-Cont A Acc	832.68	-	4.05	0.00	13.43	19.24
SI Latin America A Acc	£ 2.18	-	-0.01	2.87	-4.66	-8.93
SI Worldwide Equity A Acc	£ 2.36	-	0.05	-	21.94	8.37
SI Worldwide Equity A Inc	£ 2.39	-	0.05	-	23.40	8.80
SI Worldwide Leaders A Acc	559.67	-	0.91	0.00	-9.33	7.31
SI Worldwide Sus A Acc	£ 2.46	-	0.01	0.00	-18.09	4.76
SI Worldwide Sus A Inc	£ 2.38	-	0.01	0.00	-18.01	4.88

STONEHAGE FLEMING
GLOBAL BEST IDEAS EQUITY FUND

Stonehage Fleming Investment Management Ltd (IRL)
www.stonehagefleming.com/gbi
enquiries@stonehagefleming.com
Regulated

SF Global Best Ideas Eq B USD ACC	$ 201.19	-	-1.08	0.00	-29.48	3.01
SF Global Best Ideas Eq D GBP INC	£ 269.59	-	-2.97	0.00	-13.96	7.59

SUPERFUND INVEST BETTER

Superfund Asset Management GmbH
www.superfund.com, +43 (1) 247 00
Other International Funds
Other International Funds

Superfund Green Gold	$ 1192.64	-	3.79	0.00	-23.07	4.00
Superfund Green Silver	$ 960.28	-	18.36	0.00	-35.76	2.42
Regulated						
Superfund Green US$	$ 1030.49	-	1.66	0.00	-13.85	3.77

Thesis Unit Trust Management Limited (UK)
Exchange Building, St Johns Street, Chichester, West Sussex, PO19 1UP
Authorised Funds

TM New Court Fund A 2011 Inc	£ 17.29	-	-0.09	0.00	-14.41	2.93
TM New Court Fund - A 2014 Acc	£ 17.43	-	-0.10	0.00	-14.43	2.92
TM New Court Equity Growth Fund - Inc	£ 18.50	-	-0.12	0.00	-17.70	3.19

TOSCAFUND

Toscafund Asset Management LLP (UK)
www.toscafund.com
Authorised Funds

Aptus Global Financials B Acc	£ 4.48	-	0.04	4.50	-10.29	8.78
Aptus Global Financials B Inc	£ 2.90	-	0.03	4.65	-10.29	10.85

Toscafund Asset Management LLP
www.toscafund.com

Tosca A USD	$ 397.17	-	-1.87	0.00	-6.92	11.57

Troy Asset Mgt (1200) (UK)
65 Gresham Street, London, EC2V 7NQ
Order Desk and Enquiries: 0345 608 0950
Authorised Inv Funds
Authorised Corporate Director - Link Fund Solutions
Trojan Investment Funds

Trojan Ethical O Acc	123.97	-	0.80	0.00	-2.89	5.36
Trojan Ethical Global Inc O Acc	100.12	-	2.24	-	-	-
Trojan Ethical Global Inc O Inc	98.30	-	2.20	-	-	-
Trojan Ethical O Inc	123.73	-	0.81	0.00	-2.89	5.36
Trojan Ethical Income O Acc	125.76	-	-0.73	2.71	-12.04	-2.68
Trojan Ethical Income O Inc	105.39	-	-0.61	2.77	-12.04	-2.68
Trojan Fund O Acc	376.21	-	-0.58	0.00	-2.25	5.52
Trojan Fund O Inc	304.51	-	-0.47	0.00	-2.25	5.52
Trojan Global Equity O Acc	453.26	-	-0.78	0.00	-11.46	7.34
Trojan Global Equity O Inc	373.98	-	-0.64	0.00	-11.46	7.34
Trojan Global Income O Acc	152.53	-	-0.75	2.82	5.61	6.88
Trojan Global Income O Inc	128.46	-	-0.63	2.87	5.61	6.88
Trojan Income O Acc	314.86	-	-2.23	2.92	-11.93	-3.31
Trojan Income O Inc	155.87	-	-1.11	-	-11.94	-3.31

Unicorn Asset Management Ltd (UK)
PO Box 10602, Chelmsford, Essex, CM1 9PD 0845 026 4287
Authorised Inv Funds

UK Growth A Inc	557.27	-	5.21	0.10	-29.45	-1.68
Mastertrust A Inc ✠ F	537.80	-	0.95	0.50	-18.18	2.38
UK Growth B Inc	560.00	-	5.25	1.03	-28.89	-0.96
Mastertrust B Inc ✠ F	481.60	-	0.86	1.34	-17.55	3.14
Outstanding British Cos A Acc ✠ F	256.94	-	-0.31	0.51	-21.40	-5.08
Outstanding British Cos B Acc ✠ F	282.35	-	-0.32	1.37	-20.79	-4.36
UK Smaller Cos A Inc ✠ F	538.38	-	0.81	0.77	-26.11	-0.01
UK Smaller Cos B Inc ✠ F	524.59	-	0.79	1.67	-25.54	0.72
UK Income A Acc ✠ F	269.01	-	-0.95	5.58	-21.91	-4.74
UK Income A Inc ✠ F	179.97	-	-0.64	5.76	-21.90	-4.89
UK Income B Acc ✠ F	300.85	-	-1.06	-	-21.33	-4.02
UK Income B Inc ✠ F	201.40	-	-0.71	-	-21.33	-4.15

Zadig Gestion (Memnon Fund) (LUX)
FCA Recognised

Memnon European Fund - Class U2 GBP	£ 217.89	-	0.50	0.00	-0.62	7.25

Guide to Data

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Guide to pricing of Authorised Investment Funds: (compiled with the assistance of the IMA. The Investment Association, Camomile Court 23 Camomile Street, London EC3A 7LL. Tel: +44 (0)20 7831 0898.)

OEIC: Open-Ended Investment Company. Similar to a unit trust but using a company rather than a trust structure.

Different share classes are issued to reflect a different currency, charging structure or type of holder.

Selling price: Also called bid price. The price at which units in a unit trust are sold by investors.

Buying price: Also called offer price. The price at which units in a unit trust are bought by investors. Includes manager's initial charge.

Single price: Based on a mid-market valuation of the underlying investments. The buying and selling price for shares of an OEIC and units of a single priced unit trust are the same.

Treatment of manager's periodic capital charge: The letter C denotes that the trust deducts all or part of the manager's/operator's periodic charge from capital, contact the manager/operator for full details of the effect of this course of action.

Exit Charges: The letter E denotes that an exit charge may be made when you sell units, contact the manager/operator for full details.

Time: Some funds give information about the timing of price quotes. The time shown alongside the fund manager's/operator's name is the valuation point for their unit trusts/OEICs, unless another time is indicated by the symbol alongside the individual unit trust/OEIC name.

The symbols are as follows: ✠ 0001 to 1100 hours; ♦ 1101 to 1400 hours; ▲ 1401 to 1700 hours; # 1701 to midnight. Daily dealing prices are set on the basis of the valuation point, a short period of time may elapse before prices become available. Historic pricing: The letter H denotes that the managers/operators will normally deal on the price set at the most recent valuation. The prices shown are the latest available before publication and may not be the current dealing levels because of an intervening portfolio revaluation or a switch to a forward pricing basis. The managers/operators must deal at a forward price on request, and may move to forward pricing at any time. Forward pricing: The letter F denotes that that managers/operators deal at the price to be set at the next valuation.

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Why rugby union needs tackling
Player health and financial woes have created an existential crisis

THE BIG READ

Rebranding is hard but there is no excuse for disemvowelling

Kenneth Andersson

Pilita Clark
Business Life

When Vladimir Putin decided to invade Ukraine in February, the staff at a smallish travel business more than 1,500 miles away in England were busy with other things.

Their outfit specialises in what it calls unforgettable experiences for young people — teaching in Thailand, South African skydiving, Ibiza partying — and Ukraine had not been on its radar. But it soon was because, throughout its 14-year history, the business had only had one name: Invasion. "We couldn't operate with that name," says Nick Steiert, the law school graduate who co-founded the Manchester-based company. There were too many "negative connotations" because people instantly thought of Ukraine.

So it was that Invasion last week entered the infamous halls of the corporate rebrand, a step that triggers derision, suspicion and bewilderment in more or less equal measure.

As of Thursday, Invasion became Intravelr, a cross between its old name and Intrax, an older, larger US travel group that bought Invasion last year.

"It's a shame," says Steiert, who named the company after the big city "invasions" or getaways for law students that he used to organise while at university. "But equally this also represents a new opportunity." I am sure it does, and not just for Invasion, or Intravelr as we must now call it.

Its story also offers a chance to consider some of the dos and don'ts of rebranding, starting with motivation.

Intravelr, unlike other rebranders, had a good reason to change its name. It was a victim of events, as was the US company, Isis Pharmaceuticals. The biotech group was founded in 1989, long before the acronym for the Islamic State jihadist group became a household name, and wisely became Ionis Pharmaceuticals in 2015.

That puts both it and Intravelr well ahead of the unnecessary and actively harmful rebrand, still best epitomised by the costly and much-mocked 2001 decision to rebadge Royal Mail as "Consignia". "The new name describes the full scope of what the Post Office does in the way that the words 'post' and 'office' cannot," the group claimed, before conducting an abrupt U-turn the following year.

> "The corporate rename: a step that triggers derision, suspicion and bewilderment in more or less equal measure"

Tribune Publishing, publisher of the Chicago Tribune newspaper, took only slightly longer to ditch the even more awful name it came up with in 2016: Tronc. It was gone by 2018.

Intravelr also gets points for devising its new name itself, rather than hiring expensive outside consultants. Happily, it has failed to follow Weight Watchers, which in 2018 ditched a perfectly comprehensible name for two letters — WW. And Intravelr is a reasonably recognisable name for a travel company, so it should avoid some of the ridicule that greeted Refinitiv, the name dreamt up for the trading and data business spun out of Thomson Reuters. "What's a Refinitiv?" people asked, much as they once wondered what to make of Accenture, which used to be Andersen Consulting.

Alas, Intravelr has committed one serious blunder. It has succumbed to the egregious trend for disemvowelling. This is a company that deals with travellers, not travellrs. Why on earth did it have to dispense with a second "e" in its new name? "We wanted to be called Intravel," said Seiert, but that name had already been taken. That led to the idea of Intravelr, minus the second "e" because "we thought that it would just talk to a younger audience", said Seiert. "It's a little bit rebellious," he added, and sounds "a bit more modern, a bit more hip." I suppose it was this thinking that persuaded UK asset manager Standard Life Aberdeen to change its name last year to Abrdn, a name that was not merely unintelligible but required explanation about how to pronounce it. (It's still "Aberdeen", the company said.)

The truth is, there is absolutely nothing modern or hip about stripping perfectly serviceable vowels from names. The tech magazine, Wired, published an obituary for the letter "E" as far back as 2013, having observed the march of Flickr, the photo-sharing app; Grindr, the dating app; Tumblr, the blogging app, and much more.

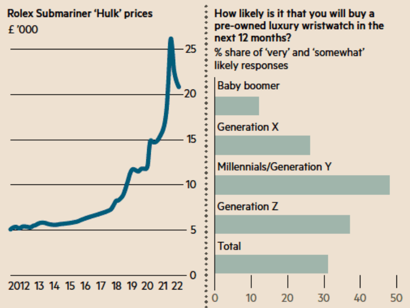
On the upside, all these businesses are still going nearly a decade later. I wish the same for Intravelr, missing vowel and all.

pilita.clark@ft.com

Lex.

Second-hand Rolexes: this isn't a wind-up

Millennials drive 'ridiculous' rise of the used Rolex



Source: Chrono24

Source: Deloitte

Find yourself with some spare cash? Fancy a luxury timepiece? If you're new to the market, prepare to be shocked. First, because there are few new watches to be had. Second, because second-hand watches sell at a premium to the retail price — often at multiples of that figure.

For experienced collectors, this is old news. The UK retail price of a new Rolex Submariner "Hulk" with its deep green face and bezel was "just" £7,550 in 2020 before it was discontinued that year, according to the website Swiss Watch Trader.

Data on another site, Chrono24, show that the average second-hand price broke above the retail price in April 2018 and went on rising, peaking at £25,233 this April.

The websites of UK retailers such as Mappin & Webb do not mention prices. They do acknowledge that demand for Rolex watches at times outstrips production capacity.

Collectors advise tyros to buy their way into the good graces of jewellers who may add their names to waiting lists of up to five years.

Watchmakers are getting in on the act. A new report on the Swiss watch industry from Deloitte projects that the "pre-owned" market will be worth SFr35bn (£31bn) by 2030 and make up more than half of what it calls the "primary" market.

In a survey of 5,579 consumers in 11 countries, Deloitte found that most buyers of used watches today are in their 30s and 40s. Some makers already offer their own models second-hand.

They may struggle to compete with the impressively resourced third-party websites offering multiple models and brands.

Haywood Milton of Miltons, which has four UK stores specialising in second-hand Rolexes, described the market of the past two years as "ridiculous, stupid". The belief had taken hold that a Rolex could only ever go up in price. Well-paid professionals have pandemic-era savings to spend.

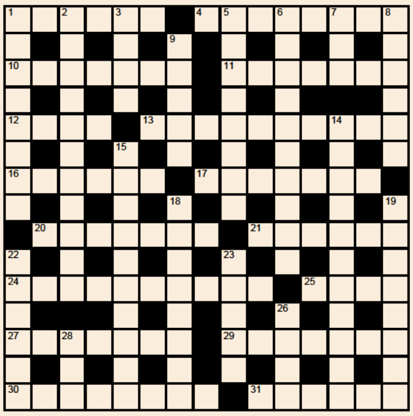
While prices have fallen in recent months, Milton said, they have stabilised at a high level.

There is a dark side to the market, he added. Thousands of youngsters have become dealers overnight on platforms such as Instagram, where know-your-customer and anti-money laundering rules have little weight.

There is also the recent phenomenon of "superfakes". The insides of these knock-offs look much like the real thing. Buyer beware.

CROSSWORD

No 17,233 Set by PETO

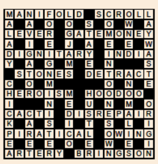


ACROSS
1 Stone one bishop after another held captive by old king (6)
4 Ample bass, tuna and flounder (8)
10 Degree in dance (7)
11 Submissive to mate with hint of liking for cocaine (7)
12 Report on Conservative resigning again (4)
13 Carry on assuming clergyman has debts from earlier (10)
16 Tell of difficulty reciting poem on back of lorry (6)
17 Carry on with boxing match in Indian state (2,5)
20 Record the German returning diminished (7)
21 Posed holding revolutionary's bag (6)
24 Stop ringing following girl's unreliable assertions (4-6)
25 *Carry On* comedian taking coke at the end (4)
27 One in eight Romans answer wrongly (7)
29 Suddenly surprise scab turning back in street on the outskirts of Lille (7)
30 Withdrawn for example over anxiety before opening of *Robin Hood.* (8)
31 Annoyed? Perhaps after Penny disappeared with a Nepalese mountain guide (6)

DOWN
1 Mix with water for example (8)
2 Lag behind after brilliance shown by American pioneer (5,1,5)
3 Praise for French artist? Not outside of Carcassonne (4)
5 Girl's bottom pinched by singer as it's played (4,4)
6 Close talk conceitedly dismissing Samoa's principal mode of transport (6,4)
7 Winger featured in Liverpudlian iconology (3)
8 Drawn towards Tyler's oddly neglected method of colouring textiles (3-3)
9 Bryan's boat (5)
14 Wanted group discussion at a later time (6,5)
15 Frequently sent item of jumble (10)
18 Succession of queen decided without the Church (8)
19 Create stir about 80's film and others (2,6)
22 Item of clothing worn by ringleader in crowd (6)
23 Be quiet son – silence! (5)
26 Bumptious Republican leaves party (4)
28 Sped from a country – not Italy (3)

JOTTER PAD

Solution 17,231



WORK & CAREERS

Media careers put skills in the spotlight

The film and TV industry is producing jobs. But there is a lack of people with the right expertise, writes *Jonathan Black*

Esme Ash, a freelance assistant producer, says securing jobs in her industry depends on luck and timing Charlie Bibby/FT

"It's exhausting, but we love it!" Sharon Soor says about the film and TV industry, where she has recently landed a new job.

Soor, a first assistant production accountant, had previously worked in the music industry, for a car maintenance business and as a film extra. Then one weekend she attended an event run by Screenskills, a non-profit organisation, to show people in mid-career how accounting skills were sought after across media. "After that event, I sent out seven CVs, and got seven replies — eventually choosing to work on *The Crown*," she says.

The industry is forecast to grow by up to 36 per cent by 2025, translating to almost 18,700 more production jobs. This growth has created a skills shortage in all "below the line" (ie support) roles. Vicki Goodall, head of production at an independent production company, confirms the skills shortage. "We have never been so busy, the work has never been so good, or so well paid," she says.

"The backlog from the pandemic, plus the rise in commissioning from streaming services, is driving the demand for high-end TV [also known as HETV — defined roughly as costing more than £1mn per episode to make]." Goodall sees a shortage for all skills: "We need lawyers, carpenters, accountants, choreographers, electricians — you name it, there are jobs for everyone."

The film and TV industry is built on a freelance model. For those with valuable skills and a financial safety net, the lifestyle can be attractive. After her present production, Soor is planning to go travelling for a few months, and feels assured that she'll get a job the moment she returns. With such flexibility, freelancers are attracted to HETV — especially multi-part series — but less so to documentary, children's and unscripted shows that pay less well and are shorter assignments.

Goodall observes that it's a "who you get to know industry". Once you've got in, and worked well with colleagues, the time pressures usually mean that people quickly hire those they've worked with before.

Esme Ash, a freelance assistant producer, started her career as a BBC production trainee. "I was very fortunate to be on a scheme," she says, "otherwise you have to start with very ad hoc running work and wait for a break."

Although successful and in work, Ash says she feels a "constant low-level terror" about securing her next contract. Even on relatively long assignments, contracts are usually month to month. "A few weeks before the end of a contract, I have to organise many coffee meetings, send emails to producers and check the Talent Manager website [a recruitment and networking platform for the TV industry]. So much depends on luck and timing, and when you do land a role, there's a scrappy hustle with the recruiter about pay rates."

> Freelance models based on personal relationships can appear inaccessible to potential workers

The "magic allure of storytelling", as Seetha Kumar, chief executive of Screenskills, describes it, will continue to attract people to work in this fast-growing, quite fragmented industry. The freelance model, based on personal relationships, can appear inaccessible and off-putting to potential workers from under-represented groups. Screenskills works to grow the talent pipeline and show that, as Kumar puts it, "the barriers to entry are not overly complex. Candidates need aptitude, critical-thinking ability and a problem-solving approach. Most things can be learnt on the job."

Growing the workforce and making it more representative requires attracting new people. While schemes help to bring in mid-career production staff, relying on personal networks will not be enough. Added to this, the freelance nature may be unattractive to young people, who often seek more secure roles with supporting benefits that other organisations can provide.

Anna Sinfield, a full-time producer at podcast company Novel, loves the opportunity to make series of eight to 12 parts to tell important stories. "It's very creative and mentally challenging," she says. "I get the chance to work in many different roles and meet interesting people." However, she saw that small companies have very limited capacity to train people: "Young assistant producers don't get a chance now to work on a story." She built on her own background in radio with extra courses in her own time at weekends.

Perhaps because of the recent growth, the skills shortages, or the fragmented, freelance structure of the industry, there are other pressing issues around working culture. Alex Pumfrey, chief executive of the Film and TV Charity, observes that since the height of the pandemic, workers have become more assertive about other concerns. Pumfrey describes the three pressure points reported in the Looking Glass Survey 2021 on mental health in the film and TV industry. The survey concluded that workers' mental health suffered from a "culture [of bullying behaviour], conditions [especially unpredictable, long hours] and capability [of managers]".

The survey reports that conditions have not changed from a similar survey in 2019, although respondents were generally optimistic that things would get better. However, the very people in schools and colleges that the industry seeks to attract, so-called Gen Z, now expect much higher standards of behaviour and conditions than perhaps their predecessors in the industry did.

Pumfrey agrees. "The younger generations are more discerning about industry and employers on [issues such as] mental health support, social justice, racial equality and the climate emergency." The skills shortage is also driving a "phenomenon of early promotion", which can lead to poor management practice as people "improvise or impersonate", as Pumfrey describes it.

Pumfrey is "really optimistic about the capacity for the industry to change; major employers have been very responsive". As Ash has observed, perhaps in comparison with her friends in large corporate businesses, "there are no large human resources teams in small production houses, so negotiating contracts can feel scrappy".

Ash realised that she would have to "speak up" to raise concerns; however, as elsewhere, in an industry that operates on personal networks, reputations can be damaged if poor behaviour is challenged.

While some work to make conditions more attractive, others seek to make it easier to enter the industry. For example, Screenskills recently launched Trainee Finder, a website to match new trainees with opportunities, to make it easier for trainees to enter the industry and producers to bring in new talent.

If the industry wants to become more representative and attract young people, it may find it helpful to make roles more secure and with more formal training. Relying on goodwill and umbrella industry organisations and campaigns to effect change may not be enough to meet the growth demands.

The author is head of the careers service at the University of Oxford and writes the FT's Dear Jonathan careers advice column

FEATURES

The Henry Mance Interview

'Putin's invasion won't lead to a return to the age of warring civilisation'

STEVEN PINKER

The Harvard professor of psychology says he doesn't buy the pessimistic conclusion that humans are inherently irrational

Charlie Bibby/FT

To his wife's annoyance, Steven Pinker arrives at airports as late as possible. "I have a pathological fear of being early," says the psychologist. But, at the age of 68, he has not given up on his ability to change this irrational habit. "I do recalibrate."

This is Pinker's message to all of us: that being more rational in our decisions would make us happier. We can recalibrate, because reports of our irrationality have been grossly exaggerated. Behavioural economics — whose findings of biased decisions have won several Nobel Prizes — needs a corrective. "I don't sign on to the most pessimistic conclusion, which is that humans are inherently irrational."

In his book *Rationality*, Pinker argues that, although people struggle with abstract reasoning, we make logical decisions when dilemmas are grounded in everyday terms. After all, "we're obviously rational in the sense of the world we've built. We did invent the vaccines, we did go to the Moon."

Pinker, a professor of psychology at Harvard University, sees himself as a champion of Enlightenment values. To his many admirers, including Bill Gates, he is an oracle of optimism. His books, including *The Better Angels of Our Nature* and *Enlightenment Now*, compile data showing that humans are living longer and better, even if news headlines suggest the opposite. "Journalism is a non-random sample of the worst things that are happening on Earth at any given time. When you look at the world through the lens of data, it looks much more positive."

But Pinker's outlook is challenged on two fronts. The first is the endurance of

> 'Babies aren't born believing that there's a paedophilia cabal in the "deep state"'

irrationality. People don't pursue their best interests, whether it's by playing the lottery or opposing a carbon tax. Conspiracy theories now penetrate governments. Has Pinker ever persuaded a believer in QAnon to see the light?

"Oh, I have not. No. [But] there are always people on the fence who could be persuaded. There are babies being born all the time. They aren't born believing that there's a paedophilia cabal in the 'deep state', so the persuasion has to be aimed at them."

The other challenge comes from threats to human wellbeing. "Not every

progress that's been made since the Eighties. But it could if it escalates." (Russia's use of a tactical nuclear weapon "may not" in itself reverse the trend, even though it would be "truly horrific".)

Pinker argues that history still bends towards reason. "Putin really is anachronistic. He's pushing against an enormous current . . . The forces that did reduce war are still in operation, although they were not strong enough to deter Putin." The international response may deter other despots. "I suspect that the invasion won't lead to a return to the age of warring civilisation."

Raised in a Jewish community in Montreal, Pinker was an atheist by the age of thirteen. He made his name in linguistics before branching out into questions of human progress. His work has rubbed against that of linguist Noam Chomsky, whose hard-left views on politics sometimes seem impermeable to reason. "Forget about it. For all of his brilliance, early on in his life he signed on to a demonological theory of history," laughs Pinker.

How can we reason with Putin? Pinker points to the risk of escalation: the rational response, he argues, is not to escalate directly but to change the rules of the game. That is how the west seems to be viewing Putin's nuclear threats.

"Even if Putin were to use a tactical nuclear weapon, the most likely response would not be in kind, but plans to destroy the Russians' Baltic fleet, to try to rack up sanctions even further, to isolate Russia even further — the hope would be that China and India would [distance themselves from Moscow]."

A conflict between major powers would blow apart the Pinker view of progress. World war three is "unlikely" but not "astronomically unlikely", he says. "It's a possibility that we have to prepare for."

In other respects, the darkness has already arrived. Pinker once cited the Varieties of Democracy index as evidence of democratic resilience. But the latest edition grimly concludes: "The level of democracy enjoyed by the average global citizen in 2021 is down to 1989 levels. The last 30 years of democratic advances are now eradicated."

About 70 per cent of the global population live in dictatorships. Maybe progress is not linear? Or maybe it's only assured in the long run, by which time we may all be dead?

"We're clearly going in the wrong direction [on democracy]," admits Pinker. "History is never cyclical, but it can be chaotic."

He argues that democracy has built-in advantages. Democracies "are open to feedback from the world . . . Some light version of [Francis] Fukuyama might be right." In contrast, autocracies fail to correct: "You may be seeing that in China now, with the zero-Covid policies. That kind of attitude might weaken the Chinese leadership in the long run."

A critique of Pinker is that his work breeds complacency. If we believe that things always get better, we will cut off some of the mechanisms by which they have got better — protests and politics. "It's quite the opposite," he says: if you don't believe things get better, you might fall into fatalism.

Is he politically active? "Especially during the Trump years, I definitely opened my cheque book. My wife Rebecca [Newberger Goldstein, a philosopher and novelist] and I now call this our attempts at ineffective altruism, as we supported one failing candidate after another. In 2016, I think I was the second most generous donor to the Democratic party among Harvard faculty."

US politics would benefit from more scientists and fewer lawyers, because lawyers "just want to win the argument", he says. But I point out that some of the least trustworthy politicians are

> 'We're going in the wrong direction [on democracy]. History is never cyclical, but it can be chaotic'

doctors, such as Republican senate candidate Mehmet Öz. "Doctors are not scientists! Doctors are professional descendants of medieval barber surgeons. There's a surprising number of doctors who don't think scientifically." (Pinker is a campaign donor to Bill Foster, the only PhD physicist in Congress.)

Pinker argues that humans have a "mythology mindset" when it comes to things outside their personal experience: we are happy to believe things for which there is no evidence. So it is often rational to pander to each other's irrationality: Republican politicians must pretend not to believe in the 2020 election result. "That's why we have institutions: like science, responsible journalism, liberal democracy, a court system." So the problem of rationality is actually a political problem of defending institutions and decreasing partisanship.

While we're talking, people arrive at a nearby table. Their loud voices at times drown out Pinker's defence of the Enlightenment. It's a metaphor for

been born. "They've jumped the shark. I was a pretty strong advocate of effective altruism when it came to, 'Should you donate your charitable dollar to malarial bednets or drilling wells?' When it came to 'Let's prioritise how to stop AI from turning us into paper clips, or maximise the chance that we can upload our connectome [the synaptic wiring diagram of the cortex] to the cloud and create trillions of consciousnesses', I think it's not so rational."

Pinker's worries are climate change and nuclear war. He is pro-nuclear power now and pro-nuclear disarmament [one day]. In *Rationality*, he points out that the worst nuclear accident, Chernobyl, killed roughly as many people as die from coal emissions every day. Meanwhile, as recently as 1986, Ronald Reagan and Mikhail Gorbachev jointly suggested disarmament. The geopolitics has changed, but countries could reduce the risks of nuclear war, for example by agreeing "no first strike" policies.

"If we are complacent about climate change and nuclear weapons stability, terrible things could happen," Pinker says. "Our only choice is to deal with them as rationally as we can." I leave him, thinking that he's more fair-minded and less reassuring than I'd imagined. I also worry that he is again running late.

problem is a Crisis, Plague, Epidemic or Existential Threat," Pinker wrote in *Enlightenment Now* (2018). But the world did suffer a plague and now faces existential threats. After Vladimir Putin's invasion of Ukraine, we stand close — we don't know how close — to nuclear war, not to mention climate tipping points.

Have the past two years changed Pinker's outlook? "I certainly recalibrated my subjective probability of the appeal of conquest to political leaders. I thought that had gone the way of human sacrifice and slave auctions," he says, his tone soft-spoken and curious.

"Putin's invasion of Ukraine changed the data. So far, in terms of battle deaths per year, it's not on track to undo the

On the spot

Most irrational habit? Bicycling — I put myself at mortal risk.

Will brain-computer interfaces one day be standard? For treatment of conditions that impair people, possibly. For enhancement of people, I strongly doubt it. The brain is too complicated.

Has 'cancel culture' peaked? The tide might turn. I don't think it has yet.

Are you vegetarian? I ought to be, but I'm not. I'm a reducetarian.

something.

Pinker rightly identifies the media's tendency towards pessimism. But another of the media's failings is to treat a small group of thinkers — including him — as authorities on nearly every issue. Does he ever feel uncomfortable? "I have to remind myself not to blunder into every controversy, and not to be a guru or a prophet or an oracle — to frame my own opinions with the proper degree of uncertainty," he says.

Meanwhile, the tech world has spawned hyper-rationality. Effective altruism asks how humans can do the most good, including by donating most of their salary to charity. Its offshoot, long-termism, argues we should maximise the wellbeing of those who haven't

ARTS

Portrait of a master-pupil relationship

An 1869 meeting between Édouard Manet and Eva Gonzalès sparked an artistic friendship with rivalrous undertones, according to a new National Gallery show. By Jackie Wullschläger

When Édouard met Eva: the National Gallery's pleasurable small exhibition *Discover Manet & Eva Gonzalès* unfolds the relationship between the great painter of modern life and an obscure Spanish student. Discovering one another in 1869, each knew instinctively that the friendship could help their art.

Gonzalès, a prominent writer's daughter, was an ambitious 22-year-old taking lessons from academic painter Charles Chaplin. Manet at 37 was famous but uncertain in both his public and private life: hailed leader of the avant-garde but mocked by conventional audiences whose approval he craved; comfortably married but half in love with painter Berthe Morisot.

"The Balcony", his masterpiece inspired by Goya and starring Morisot, was being jeered at the Salon when Gonzalès began visiting his studio. The only pupil he ever accepted, she was attractive, attentive, well-connected and a link to the Spanish tradition that he revered.

"The Balcony" disturbed viewers with its flattened forms, brash contrasts, exposed brushwork, sense of detachment — the things that made Manet modern. So his next move was unexpected: he spent a year painting the large rococo-influenced "Eva Gonzalès", the focus of this show. Although he maintained his characteristic concision and rough finish, this was a society portrait, set to seduce not shock. It is the most awkward Manet in Trafalgar Square's collection, and the exhibition offers a chance to explore its oddness.

The context in the first room is a dozen figure works by Manet and Gonzalès, tracing how she learnt from him, and comparing her effect on him with that of other models. A less successful second room jumbles female portraits by artists of varying quality; standouts are 18th-century self-portraits by pioneers Élisabeth Vigée Le Brun and Angelica Kauffman, whose talent and refinement Manet referenced when representing Gonzalès.

Huge and resplendent, "Eva Gonzalès" is a frothy fiction. Manet's pupil poses at her easel, but is incongruously clothed in evening dress. The sparkling white muslin with ruffled flounce is so bright that light bounces off it, and contrasts brilliantly with a deep black sash. It's hardly a costume to work in, and Gonzalès looks as if she is role-playing rather than painting. She stretches her arm stiffly, holds the brush weakly, twists her head away from the canvas even as she apparently retouches it.

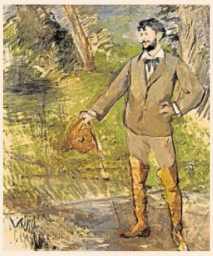
Anyway, the painting on the easel, a bouquet in 18th-century style, is already finished and framed — in extravagant gilt Louis XVI manner, with a blue scarf spiralled around it. In a tribute converging gender and genre, Manet's Gonzalès is a rococo heroine, with attributes — floral carpet, dainty footstool, discarded flower at her hem — to match.

Manet signed the picture on a scroll of canvas. His more flamboyant signature is the single, luscious peony on the rug — a bravura flourish, emphasising by comparison the conventionally rendered flowers on Gonzalès's easel. The fallen bloom echoes Manet's 1864-65 group of peony paintings in loose facture; a stunning example from the Musée d'Orsay, "Branch of White Peonies and Secateurs", the curling flowers opening like pools of light, hangs alongside the portrait here.

As the affectionate illustrated letters on display prove, Manet loved his flirtation with "Mademoiselle Eva", her clothes, her beauty; an etching dwells on her abundant dark hair, coiled at the top, flowing down her back. On canvas, he acknowledged her as a painter, but one whose every move he controlled, and in a setting highlighting femininity and fashion.

This came at a price. Manet worked best from tougher models, able to appear indifferent or resistant, as scowling Victorine Meurent did in "Olympia". "Eva Gonzalès" lacks tension, yet from his submissive, pretty model Manet was unable, as he hoped, to produce a decorative picture to win over his critics. Reviewers thought Eva grotesque — "stupefied eyes, and a nose like a parrot's beak".

The rivalrous Morisot gleefully noted that "Eva Gonzalès" caused Manet endless trouble. "Manet lectures me and holds up that eternal Mademoiselle Gonzalès as an example; she has poise, perseverance . . . He has begun her portrait over again for the 25th time. She poses every day, and every night . . . the head is washed out with soft soap. That will scarcely encourage anyone to pose for him!"



Clockwise from main: 'Eva Gonzalès' (1870) by Édouard Manet; 'A Theatre Box at the Italiens' (c1874) by Gonzalès; 'Portrait of Carolus-Duran' (1876) by Manet — RMN-Grand Palais (Musée d'Orsay); National Gallery; The Henry Barber Trust, Barber Institute of Fine Arts, University of Birmingham

'Berthe Morisot' by Manet
Victoria and Albert Museum

But Morisot herself eagerly posed for Manet during the same period. The show includes his lithograph "Berthe Morisot" (1872), made from a celebrated painting. Her expression is at once candid, satirical, defiant — far more psychologically charged and engaging than Gonzalès.

The other significant Manet portrait here is a monumental, full-length depiction of successful portraitist Emile-Auguste Carolus-Duran in riding boots, all affability and masculine swagger — though not represented as an artist. The competitive Manet resented Carolus-Duran. In this intriguing, ambivalent picture, Manet weighs himself, his originality, against his friend. He never completed the work.

Lined up alongside "Carolus-Duran", and inevitably in Manet's shadow, are smaller works by Gonzalès. The earliest, "Indolence", depicting her beloved sister Jeanne, recalls Chaplin's gentle figures but is fuller-bodied, with Manet borrowings — the parrot from his "Young Lady in 1866", the violets from his portrait of Morisot.

"On the Beach", elegantly dressed figures placed uneasily on the sand, follows Manet's moody painting of the same name, though the facture is drier. And the master is emphatically behind

> Manet loved his flirtation with 'Mademoiselle Eva'. An etching dwells on her abundant dark hair

her grandest composition, "A Theatre Box at the Italiens" (c1874): the daring chromatics of the girl's pale skin and light dress against black choker and dark ground; the bouquet directly quoting "Olympia"; hazy brushwork; a playfulness, choreographing a couple in the audience — posed by Manet's engraver Henri Guérard and again Jeanne — as the performers.

In 1879 Gonzalès married Guérard. For the pastel "A Bride" she dressed Jeanne in Gonzalès's own wedding gown, sketching her features with dynamic hatching, and the silk in long powdery strokes.

Such accomplished pastels may have encouraged Manet to pursue the medium. Gonzalès no longer asked his advice. "Did my failures attract your contempt?" he asked mournfully.

The friendship endured. At Manet's death in 1883 Gonzalès, who had just given birth to her only child, was braiding a wreath for him when she too died, of an embolism, six days after her teacher had.

Becoming the bride as the painting prophesied, Jeanne married Guérard. He guarded Gonzalès's paintings and continued to make etchings of Manet's: a custodian of two careers sympathetically connected, each cut tragically short.

To January 15 2023, nationalgallery.org.uk

Scandalous storytellers tackle Boris Johnson

PODCASTS
Fiona Sturges

At the start of *British Scandal*, hosts Matt Forde and Alice Levine list the traits required for a person to feature on their show: "Elite background, dripping in privilege. A philanderer, ideally

subscribers, on Wednesday for everyone else) to journey into the past, starting in Exmoor in the early 1970s where young Alexander Boris de Pfeffel Johnson, his sister Rachel and brother Leo practised shooting air rifles as their father, Stanley, looked on. We learn how, during one shooting practice, Leo shot Boris in the stomach, prompting a dash to hospital.

Back at home that night, Stanley made a prediction that one of his children would grow up to be exceedingly powerful. As *British Scandal* tells it, this was when young Boris, clutching his stitched-up wound, made

fashioned potboiler, while she delivers pithy asides. Their amused tone hasn't always sat well in previous series — one about the murder of Russian defector Alexander Litvinenko was jarring.

But here it works well as Levine emits gasps of horror at the emerging similarities between Johnson's antics in his university days — such as his speech at the Oxford Union arguing for the reintroduction of capital punishment, despite not believing a word of it — and his actions in frontline politics.

This is, remarkably, the 19th season of *British Scandal* since its launch in 2021 privilege. A philanderer, ideally. A huge ego. A liar. Power-hungry. Just shameless."

Step forward Boris Johnson, the latest subject of the podcast that tells the stories of those caught up in collective outrage. His inclusion marks a departure of sorts for the series which, until now, has dealt almost exclusively with people and events from the past, among them the abdication of Edward VIII, the Profumo affair, Robert Maxwell, Lord Lucan and Mary Whitehouse.

While these have undoubtedly made for juicy subject matter, they are already well covered in books, dramas and TV documentaries, a fact that has sometimes made *British Scandal* seem like old hat. Johnson is hardly an unknown figure either, but the chain of events that led to his downfall as prime minister, from the Chris Pincher affair to Partygate, still feel comparatively fresh. And given the events of the past few days, there's the chance of another plot twist to come.

But before dealing with the present, Forde and Levine use the opening episode (out now for premium

clutching his stitched-up wound, made his pronouncement that he would grow up to be "king of the world".

Listeners of *My Dad Wrote a Porno*, the chart-topping podcast built around excerpts of bad erotic novels, will already be familiar with Levine's sardonic style of commentary. Her role here is much the same: Forde narrates a script that reads like an old-

British Scandal since its launch in 2021, an output that is only possible if you recycle existing material rather than try to unearth something new. Nonetheless, Forde and Levine are good company, and their jokes aren't bad either. *British Scandal* doesn't aim high but it does what it does with aplomb.

wondery.com

Boris Johnson, pictured in 1999, is no stranger to controversy
Jane Bown

FT BIG READ. SPORTS

As the English Premiership faces steep financial headwinds, the issue of player welfare is threatening the future of the sport as well. The twin problems add up to a transformative moment for the game.
By Samuel Agini and Josh Noble

Rugby union's existential crisis

On September 23, the storied rugby union team Wasps sealed their first win in this year's Gallagher Premiership, fending off a second-half fightback by Bath. It would be their last victory in the league, perhaps forever.

The Coventry-based club was placed into administration on October 17, and immediately made 167 employees redundant, from the England players in their first team, to coaches and players. Wasps were founded in 1867 and achieved European glory twice.

But history wasn't enough to pay the bills. The club collapsed when it was unable to repay debts to creditors, including the UK tax department and retail bondholders, after Covid-19 ate into revenues.

Wasps are not the only victim among the 13 teams that made up the Premiership. Worcester Warriors were suspended from the league earlier in October after they failed to show the authorities proof of insurance cover, funds to meet monthly payroll and a "credible plan" to take the club forward.

Jason Whittingham and Colin Goldring, the former owners, were fined and banned from serving as company directors for 12 months because they did not file financial accounts for the year to the end of February 2021. Rumours persist that other teams might yet join them in administration.

The collapse of the two clubs hints at something rotten in the financial state of English club rugby. Even before Covid wiped out ticket sales and hospitality revenues, rugby union's top clubs were mired by fragile finances.

In a review published in May 2020, the late British lawmaker Lord Myners found that even as collective revenues rose to more than £200mn in 2018 on the back of a new broadcast deal with BT, losses mounted to £40mn. All but one club in the top flight booked losses in both 2017 and 2018.

By choice or necessity, rich owners were forced to act as benefactors, picking up the bill as losses — and debts — mounted. "There are people who make the assumption that rich people will continue to fund clubs because they're rich," says one sports banker. "Those people are idiots."

The future of the Premiership — and its clubs — is vital to the wider game, from fans and the grassroots to players and the club European Cup and Six Nations contest of national teams.

Interested parties go beyond sport: CVC Capital Partners, which paid £200mn for a 27 per cent stake in the Premiership in 2018 as part of a wider investment in rugby union that also includes the Six Nations, is betting that the league can grow its audience and strike more lucrative commercial deals.

UK taxpayers are also on the hook after the government stepped in as a lender of last resort during the height of Covid-19 as clubs added debt to their balance sheets. Julian Knight, a Conservative member of parliament and

A scrum between Wasps and Toulouse in January, main. Also pictured are Leicester player Ben Youngs, centre, and Wasps' Jacob Umaga, right, in an English game that is struggling to overcome problems compounded by the pandemic. Harlequins' Alex Dombrandt, below
FT montage; AFP/Getty Images

the start. To control those costs, and ensure a level financial playing field for clubs, the league introduced a salary cap for players in 1999. Rather than limit individual salaries, it put a ceiling on the overall collective wages for senior players.

But as England began to breed superstars such as Jonny Wilkinson, whose last-minute drop goal won the World Cup in 2003, the clubs needed to pay superstar-sized salaries.

"An arms race started for players with money the game couldn't afford," says Tim Crow, a sports marketer who has negotiated sponsorships with the Six Nations, British & Irish Lions and the Premiership. "It hasn't changed."

As the Myners review would later report, the game became prone to financial ups and downs. Periods of relative stability typically led to excess, mostly as clubs pushed salary budgets to the limits in pursuit of domestic and European titles.

Club owners becoming accustomed to annual losses were delighted, then, when CVC took a 27 per cent stake in the Premiership in 2018, giving the game a £200mn windfall for growth.

Then the pandemic struck. Instead of using the roughly £15mn they each received from CVC to invest in infrastructure, clubs were forced to use the cash to survive. CVC was flexible and

'An arms race started for players with money the game couldn't afford. It hasn't changed'

club plays by six a season. "What we need to do is create a system and a model where investors in clubs feel the confidence to take a long-term view on the asset growth of the club and the sport," says Simon Massie-Taylor, chief executive of Premiership Rugby. "We need to improve some of the governance structures that we have and improve decision-making."

Some club owners want a rethink of their relationship with the RFU, the national governing league. At present its primary responsibility is running the national team but it also invests in development of the grassroots game in partnership with the clubs, and sets the rule book for the professional game.

Some say the Premiership should be given more responsibility for overseeing the competition and its clubs. "The [RFU is] our biggest competitor for sponsors and players," says one club owner. "[Yet] they're governing us and regulating us. It makes no sense."

Clubs especially lament that internationals take precedence over domestic games, and that their teams suffer when their star players are away on England duty. "The reality is that the RFU stage international games," says Tony Rowe, chair and chief executive of Exeter Chiefs. "That's to obviously give them the funds to support community rugby in England but also to pay to borrow our

Premiership may need to consider whether the ceiling on player pay is set at the right level. "I don't know how it has been feasible to have that salary cap considering what their revenue is."

But revenue growth is also important to the clubs and CVC, which is optimistic about the future of the Premiership's media rights. Cutting the number of games played is not expected to be an issue because not all are screened live by pay-TV partner BT Sport. The addition of free-to-air games on ITV has widened the league's reach.

CVC is optimistic about the league's chances when its media rights next come up for sale. Relative to its 12mn fan base in the UK, rugby union underperforms on broadcast and commercial income, according to Nielsen Sport.

The private equity firm is betting the Premiership can increase the value of its £40mn-a-season UK broadcast deal (France's Top 14, by comparison, secured a deal with Canal+ in 2021 worth €113mn a year). Growing the value of media rights might also attract richer investors to the Premiership.

'What we need to do is create a system and a model where investors in clubs feel the confidence

former players — including Thompson — have initiated legal proceedings against World Rugby, the RFU and Welsh Rugby Union, alleging that the sport's governing bodies had been negligent in "failing to take reasonable action in order to protect players from permanent injury caused by repetitive concussive and sub-concussive blows".

Richard Boardman, the lawyer leading the action, says that brain injuries among former players had now become "an epidemic and an existential crisis" at all levels of the game.

The RFU calls the welfare of players its "number one priority", and says its guidelines are continuously updated in line with scientific advice. "As understanding of concussion in sport evolves then our protocols and laws have evolved, and will continue to do so."

As the scientific research showing potential dangers from playing rugby has been growing, participation in the sport has been in decline.

A survey by Sport England showed that the number of people participating in rugby union in 2019 was 228,400, a 12 per cent drop from three years earlier. The figure for last year plunged to 133,600, partly due to Covid.

A separate survey by the Drake Foundation, a non-profit that funds research into head injuries in sport, found that more than half of parents were conchair of the digital, culture, media and sport select committee, has warned that the travails of Wasps and Worcester raise "serious concerns about the future of the sport and its financial viability".

Club owners, senior executives, investors, the league and authorities see a window of opportunity for a "reset" that can put the sport's finances back on track. "We've had 25 years of pro rugby now and the model is bust, really," says the owner of one club. "This is a moment to reset the dial."

Doing so could unleash the commercial power of a league in rude health in terms of the competitive quality of the matches and viewership numbers.

Yet looming beyond the health of the UK rugby's clubs is a separate, more existential, crisis over the health of its players that could have even wider repercussions for the sport. Hundreds of former players are suing global rugby authorities for alleged negligence in protecting them from life-altering head injuries. The twin crises add up to a transformative moment for the game.

The seeds of disaster

Rugby is a punishing game played by two teams of 15 players. The rules are complex but can be boiled down to a war for territory that is won by moving the ball up the pitch to score a try. The Rugby Football Union was founded in 1871, but the game only turned professional in 1995.

The Premiership's first season as a professional league followed in 1997-98, and teams struggled with losses from

made funds available to support clubs, according to people close to the firm and the sport, while the Premiership slashed its salary cap to £5mn from £6.4mn previously.

Fundamental reforms are now on the table. Proposals include giving greater oversight of club finances to the Premiership, which already monitors salary cap compliance, and cutting the league down to 10 teams.

Advocates say a 10-team league would concentrate revenues — and top players — among fewer clubs, strengthening their finances. Senior executives in the sport speak of a "less is more" approach that would also help the Premiership avoid clashes with international matches by reducing the number of games each

Rugby's broadcast revenues are dwarfed by football
Annual media rights values* (£mn, 2019)

Source: Nielsen Sports

* Live and non-live, domestic only

assets, which are the players . . . and I don't think they pay enough. They take the cream of English rugby."

The RFU says "deconflicting and thereby reducing the overlap between the international and club calendar is a huge priority". The governing body also said it should take the lead on checks of new owners of clubs, in consultation with the Premiership.

Both the league and governing body are discussing how to ramp up financial oversight of clubs, pointing to how the French top-tier league is run.

Clubs in France's Top 14 have to satisfy a range of criteria to obtain a licence before the season to compete. RFU chief executive Bill Sweeney says the process involves a "complete review" of club financial projections and business plans by an independent body.

"They have to keep in the bank 15 per cent of their cost projections in cash deposits [and] if an owner is guaranteeing to bankroll any financial shortcomings, it's not just satisfactory to have a letter from the owner, they have to have a bank guarantee," says Sweeney.

"We need something like that in place," he adds, saying it will be discussed with the Premiership and government.

Clubs may also need to take a hard look at whether salaries in the league are sustainable. David Bond, a professor at UTS Business School who sits on the board of Sydney Rugby Union, says the

to take a long-term view'

At heart, however, a 10-team league could be part of the solution to a far bigger threat to the future of the game: player welfare.

Serious health questions

The precise link between contact sport and brain damage later in life remains a hotly debated topic within the scientific community.

Rugby has faced questions on the issue for years, especially since the game went professional, resulting in bigger, stronger players and a steep increase in the amount of time spent training.

The subject is increasingly gaining attention as more ex-players are diagnosed with serious neurological impairments, such as chronic traumatic encephalopathy, and motor neuron disease. Their plight has also been highlighted by recent TV documentaries, such the BBC's *Head On: Rugby, Dementia and Me*, which tells the story of former England World Cup winner Steve Thompson, who was diagnosed with early onset dementia at the age of 42.

This month, a study released by researchers at the University of Glasgow showed that international rugby players had a "higher risk of a neurodegenerative disease diagnosis" than the general population, ranging from a doubling of risk for dementia, and a more than 10-fold increased risk of developing MND.

Some of those affected are taking action. A group of more than 200

cerned about the long-term impact playing rugby might have on their child's brain health.

Progressive Rugby, a non-profit group whose members include doctors and former players, has been lobbying for a number of changes to help reduce the risk of long-term damage to the brain. Those include reduced contact training, longer time on the sidelines for those who have suffered a blow to the head, extended breaks for players returning from international duty, and stiffer punishments for clubs that fail to comply.

"If we want to protect this game for future generations, then we've got to make changes," the group says.

Yet anyone involved with rugby knows that change is a constant in this sport, from an ever-shifting rule book to the many teams that have fallen from the top tiers to obscurity. Clubs owners say the fate of two teams shouldn't be mistaken for a death knell for the sport.

"Please, we're upbeat. It's tough. Business is tough. Attendances are slightly down but we're not all looking over our shoulders for the liquidators," says Rowe. "No matter what business you're in, it's pretty tough, and it's been made worse by that bad Russian man. We just need our supporters to turn up."

In some ways it reflects the game itself. "You slowly lose a bit of momentum and that happens in a game of rugby," said Wasps player Tom Willis after the September 23 game in which Bath had almost made a comeback, only for his side to close it out. "Teams find their way back into it."

The FT View

FINANCIAL TIMES
'Without fear and without favour'

ft.com/opinion

The US midterm elections carry high stakes

But the results will not be decisive for Trump's chances of a comeback

American politics has observed a certain rhythm since the end of the cold war. A president is elected, attempts a major piece of legislation or two, incurs a hostile reaction and loses the first midterm elections. Bill Clinton (1994), Barack Obama (2010) and Donald Trump (2018) all know the routine. George W Bush does not but he had lots of post-9/11 goodwill on his side in 2002.

So if, as polls suggest, Joe Biden's Democrats lose one or both houses of Congress on November 8, it will not by itself spell a historic Republican realignment. It will not assure the GOP of the White House in 2024. Though Biden was slow to see that inflation was a public concern, it will not even mean that his party ran a terrible campaign. There is a cycle at work, and it is hard to buck.

What a Republican Congress will do is change Washington. Biden, who has been a prolific legislator, with bills on infrastructure and social spending to his name, will see his domestic agenda slow and, perhaps, end. (He hopes, for example, to strengthen abortion rights through statute).

Republicans will neuter the inquiry into the Capitol siege, and launch new ones of their own into Democratic scandals, real or imagined. America's episodic debt-ceiling saga might also return for another instalment. In return for concessions in other areas, a Republican Congress can withhold permission to raise the limit of federal borrowing. This is disruptive enough in normal times. At an already fraught moment in world financial markets, it carries an extra danger.

Thanks to bipartisan revulsion of Russia's war on Ukraine, and cross-aisle votes on a few issues, some of the poison has drained out of Congress of late. Expect it to seep back in. There is no guarantee, as winter bites and the economy falters, that even the consensus over Ukraine will survive. The democratic world must hope that it does. Geopolitically, no less than financially, the stakes of these midterms could hardly be higher.

There is another reason why foreign audiences will be parsing the midterm results. He is not on a single ballot, but Donald Trump hovers over these elections far more than anyone who is. If candidates bearing the stamp of the former president do well, his already strong chances of winning the Republican nomination in 2024 will go up. Otherwise — and his record as an endorser is mixed — GOP donors and apparatchiks, if not the base, will cast around for an alternative, such as Florida governor Ron DeSantis. Or, at least, that is the hope.

It is a hope that should be kept in check. Trump is already a provable electoral drag on the Republicans. He led them to a midterm rout four years ago and lost the White House in 2020. His approval rating as president was consistently poor. And still activists love him while the establishment, whatever its private qualms, indulge him. It is entirely possible that Trump will cost his party lots of votes at the midterms and still emerge unscathed.

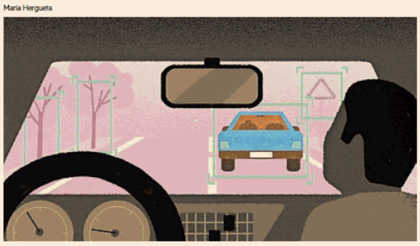
> What a Republican Congress will do is change Washington. Biden will see his domestic agenda slow and, perhaps, end

He has a habit of endorsing candidates and then disowning them when it suits him. For instance, if Mehmet Oz, that purveyor of quack science, fails to become senator for Pennsylvania, expect him to be written off as insufficiently Maga. The same is true of JD Vance in Ohio. If Brian Kemp does not hold on to the governorship of Georgia (another key state in 2024), Trump will blame it on his deviation from the populist path. It is the nature of political cults to interpret real-world information to confirm existing biases. Bad health, criminal charges: these things might derail Trump before 2024. The results on November 8, whichever way they go, are unlikely to be as decisive.

Opinion Technology

Driverless car revolution is stuck in the slow lane

Maria Hergueta



Elaine Moore

The hype cycle of driverless cars is on yet another depressing downswing. Last week, Tesla boss Elon Musk admitted that full self-driving software was not yet ready to be used without someone sitting behind the wheel. Mobileye, Intel's autonomous driving unit, cut its valuation expectation from $50bn down to $16bn. Multiple media outlets have published stories mocking the sector for its failings after billions of dollars of investment.

The peculiar thing is that this has all happened just as robotaxis arrive on the streets of San Francisco. For $10 or so, you can catch a driverless car from

2010. Last year, funding of autonomous vehicle companies exceeded $12bn, according to CB Insights.

Development has been much slower than expected, too. The dream of driverless cars has been around for almost as long as the automobile itself. The modern era dates back to Google's self-driving project, now Waymo, which began in 2009. By the time I arrived in San Francisco in 2018, it seemed as if driverless cars would surely be on every road in a matter of months. Uber claimed that it would soon do away with human drivers, while Waymo and Lyft were launching robotaxi schemes in Phoenix and Las Vegas. Everyone from SoftBank to Apple was investing in autonomous vehicles.

Since then, however, the sector's fortunes have waned. The same year, an Uber self-driving car killed a woman who was crossing the street in Arizona. Tests were stopped and optimism collapsed. Two years later, Uber

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NHS spends a pittance on prevention and that must change

Research carried out for the NHS Confederation shows that increased NHS investment would stimulate economic growth ("NHS boosts wider UK economy, study suggests", Report, October 17).

However, it's not what you spend but how you spend it that determines whether investment is productive, and the evidence is clear about how to achieve the greatest impact in reducing disease, disability and premature death: prevent illness in the first place.

Investment in treatment is necessary but not sufficient. It needs to be accompanied by prevention and public health. The Health Foundation has estimated that public health interventions cost three to four times less than that of NHS interventions for each additional year of good health achieved in the population. Yet this is where the cuts have fallen to date, with the public health grant falling by a quarter in real terms between 2015 and 2021, and funding for tobacco control by a third, while NHS spending continued to grow in real terms.

Restoring the public health grant to its historical real-terms per capita value is estimated by the Health Foundation to require an additional £1.4bn a year in 2021-22 price terms by 2024-25. Yet, rather than increased funding, local authorities are facing real-terms further cuts to already threadbare budgets.

The NHS long term plan stepped up to help fill the gap, recognising that the NHS can take important action to "complement" — but not replace — the role of local authorities and the contribution of government. It contained a crucial prevention strand, supporting behaviour change, to tackle the leading modifiable risk factors of smoking, poor diet, high blood pressure, obesity and alcohol and drug use. The plan also promised that action on inequalities would be central to everything that the NHS does.

Where integrated care systems are working collaboratively with local authorities, the prevention and inequalities strands of the plan are beginning to bear fruit. But unless these strands become fully embedded in NHS culture, there are risks that funding will fall away once the plan comes to an end.

The pittance spent on prevention must be nurtured, not neglected, or NHS investment will fail to deliver the economic growth that is being promised.

Deborah Arnott
Chief Executive, Action on Smoking & Health, London SE11, UK

Industrial policy is a lens on superpower rivalry

Robin Harding misunderstands the motivation of the US ("Slowing Chinese growth is a recipe for global instability", Opinion, October 14) when he argues that America's policy is aimed at slowing China's ascent to becoming the world's largest economy. This description of policy simply fuels greater stress dynamics in the relationship between the two countries, and reinforces China's paranoia. While it may be argued that China's geopolitical ambitions are at the core of America's overall concerns, this doesn't work so well as a motivation for its policies on semiconductors and other advanced technologies.

Another and perhaps more accurate way to look at the competition between the world's economic superpowers is through the lens of industrial policy

A superyacht linked to sanctioned Russian oligarch Roman Abramovich

UK Tel Aviv embassy plan fits a Trumpian world view

Your report "Truss urged to drop review into moving Tel Aviv embassy" (October 14) cites the widespread opposition to moving our embassy to Jerusalem on foreign policy and international law grounds. But there is also a simple truth underneath the rationality and the law. Moving the embassy would be going down Donald Trump's road of putting rightwing Israeli wishes above Palestinian rights and, more broadly, of setting the principle that all peoples have equal rights under international law at nought.

Trump moved the US embassy to Jerusalem in May 2018. That was intended as the first instalment of his self-styled "deal of the century" plan to solve the Israeli-Palestinian conflict. The plan would basically have given

If there is to be an LDI inquiry, here's a suggestion

Congratulations to Michael Tory ("UK pension fund crisis shows there is no capitalism without capital or risk", Markets Insight, FT Weekend, October 1) for highlighting the 30 years of regulatory mismanagement which has culminated in the debacle of the Bank of England having to intervene to save UK pension funds from their liability-driven investments' margin calls.

In the unlikely event that there is a government inquiry into the UK pensions system, as Tory calls for, might I add one item to the agenda?

What I have long termed the "unholy trinity" of the accountant, the actuary and the regulator have forced UK pension funds to disinvest from UK equities because of the use of volatility as a measure of "risk-adjusted returns", whereby volatility in daily priced

Alamo Square to the bars of Nob Hill, watching from the back seat as the wheel turns itself to manoeuvre the car through traffic.

The test scheme was launched by Cruise, an autonomous vehicle business majority owned by General Motors. Like Uber, it has an app you can use to call a car to meet you. Prices are similar, too, though presumably the rides should be cheaper if it takes off.

There is still no consensus on how autonomous vehicles should work

It is disconcerting to see a driverless car pull up beside you and listen as a robotic voice tells you to put on a seat-belt and enjoy your ride. But every journey I have taken has been perfectly smooth. The cars are cautious drivers when they spot obstacles, which is very reassuring for nervous passengers. This could also be why there have been reports of cars stuck in the road and blocking traffic. After a crash with a speeding vehicle, Cruise recalled its robotaxis and updated the software. It now plans to expand the scheme to Austin and Phoenix.

Hailing a driverless car to get from one part of town to another feels like living in the future. It can sometimes seem as if all the money in tech is being poured into digital advertising, cryptocurrencies and consumer apps. Live in San Francisco for long enough your phone will fill up with apps for every conceivable convenience. But autonomous vehicles, an ambitious, difficult and potentially life-changing sector, offer a more tangible example of tech progress.

It has been an outrageously expensive endeavour. McKinsey put the total invested at over $100bn since sold its driverless car unit to local start-up Aurora.

The challenge remains substantial. Driverless cars do not just have to control the mechanics of a vehicle, they have to understand the mind around them and make rapid decisions when circumstances change. There is still no consensus on how they should work, either. Cruise maps the roads it drives by mixing road data collected by both cameras and lidar — laser-based sensors. Tesla has called lidar a "crutch".

If it was possible to build the infrastructure for driverless cars from scratch things would be simpler. Roads are busy and messy. They are full of different users making irrational decisions. Cars must not just see the obstacle ahead but know whether it is about to move and, if so, in what direction.

Cruise's robotaxi test is a fairly conservative one. The cars can only drive between 10pm and 5.30am. If I want to show visitors the wonders of autonomous vehicles, I have to wait for night-time and make sure I'm in the right part of the city.

Still, the money keeps coming. Either driverless cars are an example of sunk cost fallacy or their slow start is not seen as a hindrance to eventual adoption. Uber has signed a deal with Motional — the start-up that works with Lyft to offer autonomous vehicle rides in Vegas. Volkswagen's automotive software subsidiary Cariad is investing $2bn in a partnership with Chinese chipmaker Horizon Robotics. Waymo is planning to expand its robotaxi service to Los Angeles and Cruise hopes to get regulatory approval for robotaxis without pedals or steering wheels.

It has been a slow and expensive road. It may still be years before the cars are widespread. But for many of the biggest companies in the world, driverless vehicles are still inevitable.

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and technological dominance.

Whereas the US and its western allies were generally asleep in the wake of the 2015 "Made in China" report that detailed the sectors in which China aimed to establish its industrial and technological dominance, this has now changed. As a result of supply chain shortages, the pandemic and a re-evaluation of the advantages of reshoring, some countries have woken up to the economic challenge.

Semiconductor legislation and technology curbs seen in this light are a stronger explanation for recent US actions than a more sinister goal of halting China's rise. In an environment of rampant mistrust between the two countries, it would be better to attribute policy causation properly.

Danny Leipziger
Professor of International Business
George Washington University
Washington, DC, US

Banks need quality data to combat sanctions scrutiny

The sanctions landscape has been transformed this year by the actions against Russian individuals and companies.

The latest plans by the US Treasury to collaborate more closely with the UK's Office of Financial Sanctions Implementation is likely to increase the scrutiny that financial institutions face ("US and UK strike accord to boost sanctions co-operation", Report, October 18).

Building on the recent executive order from the US Treasury department's Office of Foreign Assets Control requiring funds and derivatives to be screened for sanctioned securities — on top of the screening that applies to equity, debt and structured products — an already complex area has become even more important from a compliance perspective.

For financial institutions, the only way to overcome this challenge is to provide more transparency into their portfolios, with thorough sanctions data spanning all jurisdictions and multiple asset classes.

Failure to meet the demands of government bodies such as Ofac and OFSI with respect to sanctions screening may result in costly fines but also will have an impact on the returns financial institutions can generate, should they hold sanctioned securities in their portfolios.

This is the reason the quality of the underlying sanctions data is pivotal for efficient monitoring and compliance, as the sanctions landscape continues to evolve at a rapid pace.

Oliver Bodmer
Senior Product Manager, SIX Group (Owners of the Swiss and Spanish Stock Exchanges), Zurich, Switzerland

Tory sniping and gallows humour won't be forgiven

The brutal comments made by unnamed Conservative MPs about Liz Truss (Big Read, October 15) may be entertaining but they do little to repair the dim view of the party.

Dogmatic triumphalism may finally have given way to an acceptance that experts (and the markets) need to be listened to, but MPs who criticise the government without sticking their heads above the parapet appear craven.

It is time for any Conservative MP who is willing to place the interests of the country above those of the party to openly declare the need for a general election. Anonymous snipes and efforts at gallows humour are no substitute for integrity. The nation deserves better and voters will not forget the names of those who permit the current inadequacy to continue.

Adam Cole
Guernsey, The Channel Islands

America's carte blanche to Israel to incorporate all of Jerusalem and annex everything it wanted in the West Bank. The Palestinians would have been left with between 15 and 20 disconnected enclaves. Even that Palestinian "statehood" was to be contingent on Israeli and US approval. The plan dripped with condescension towards Palestinians.

It was consigned to Washington's archives after Joe Biden became president but it hasn't been forgotten. If the Tories persevere with moving the embassy, they will be associating this country with Trump's plan and his view of the world.

Arthur Goodman
Parliamentary and Diplomatic Officer
Jews for Justice for Palestinians
London TW11, UK

This is the kind of boring banking I had in mind

I couldn't agree more with Bill Harris, who wrote about how fintechs have made life too complicated (Opinion, FT Financial Literacy and Inclusion Campaign, October 13).

In the graduate course on emerging markets finance that I taught during the 2000s, I suggested to my students that people would not be able to sleep peacefully at night until "banking becomes boring again". The kind of boring I had in mind was what I saw in the 1950s and 1960s when my father was a lawyer with Citibank in New York checking the fine print of loan contracts with Greek shipowners.

The opposite of boring was what my son was doing in the 2000s with a hedge fund based in Greenwich, Connecticut. We can only hope that cryptocurrencies are the last of this madness.

Lex Rieffel
Former US Treasury Department Economist; Former Brookings Institution Scholar, Washington, DC, US

equities is deemed to denote risk.

For long-term savings vehicles such as pensions or life assurance products, daily volatility or, indeed, liquidity is irrelevant. Yet the use of volatility as a definition of "risk" has forced these long-term investors to disinvest from quoted equities and thus from funding UK businesses. Private equity is awash with cash and buying quoted companies every month precisely because their business model does not require them to price their holdings daily, but on an irregular basis — marking their own homework in valuations.

Their funds are deemed less volatile and hence more attractive to pension funds, which have sold quoted equities to invest in private equity funds on a massive scale, despite the significantly higher fees involved.

Please could we remove daily volatility from the definition of risk, in risk-adjusted returns?

This could bring billions back to fund quoted companies, which surely would be in line with the government's growth agenda.

Richard Buxton
Fund Manager, Jupiter, London SW1, UK

Finding a rhyme for Boris might be the challenge

We are not quite out of the woods on the title. But the chorus almost works, to the tune of Paul Simon's "50 Ways to Leave Your Lover":

Just slip out the back, Sunak,
Make a new plan, Braverman,
Try a new stunt, Hunt,
Just get yourself free.
Hop on the bus, Truss,
You don't need to discuss much,
Just drop off the key, Kwasi,
And get yourself free . . .

Perhaps the editorial staff at the FT can fine-tune the rest.

Irene Schaudies
Antwerp, Belgium

Opinion

China's economy will long struggle to overtake the US

MARKETS
Ruchir Sharma

As he embarks on a third term, Xi Jinping's goal is to make China a mid-level developed country in the next decade, which implies the economy will need to expand at a rate of about 5 per cent. But underlying trends — bad demographics, heavy debt and declining productivity growth — suggest the country's overall growth potential is about half that rate.

The implications of China growing at 2.5 per cent have yet to be fully digested anywhere, including Beijing. For one thing, assuming that the US grows at 1.5 per cent, with similar rates of inflation and a stable exchange rate, China would not overtake America as the world's largest economy until 2060, if ever.

Growth in the long term depends on more workers using more capital, and using it more efficiently (productivity). China, with a shrinking population and declining productivity growth, has been growing by injecting more capital into the economy at an unsustainable rate.

China is now a middle-income country, a stage when many economies naturally start to slow given the higher base. Its per capita income is now $12,500, a fifth that of the US. There are 38 advanced economies today, and all grew past the $12,500 income level in the decades after the second world war — most quite gradually. Only 19 grew at 2.5 per cent or faster for the next 10 years, and did so with a boost from more workers; on average the working age population grew 1.2 per cent a year. Only Lithuania and Latvia had a shrinking workforce.

China is an outlier. It would be the first large middle-income country to sustain 2.5 per cent gross domestic product growth despite working-age population decline, which began in 2015. And in China this decline is precipitous, on track to contract at an annual rate of nearly 0.5 per cent in the coming decades. Then there's the debt. In the 19 countries that sustained 2.5 per cent growth after reaching China's current income level, debt (including government, households and businesses) averaged 170 per cent of GDP. None had debts nearly as high as China's.

Before the 2008 crisis, China's debts held steady at about 150 per cent of GDP; afterwards it began pumping out credit to boost growth, and debts spiked

If anything, 2.5 per cent is an optimistic forecast that plays down the risks, including trade tensions

to 220 per cent of GDP by 2015. Debt binges normally lead to a sharp slowdown, and China's economy did decelerate in the 2010s, but only from 10 per cent to 6 per cent — less dramatically than past patterns would predict.

China avoided a deeper slowdown thanks to a tech sector boom and, more importantly, by issuing more debt. Total debt is up to 275 per cent of GDP, and much of it funded the property bubble, where all too much of it went to waste.

Though capital — largely property investment — helped pump up GDP growth, productivity growth fell by half to 0.7 per cent last decade. The efficiency of capital collapsed. China now has to invest $8 to generate $1 of GDP growth, twice the level a decade ago, and the worst of any major economy.

In this situation, 2.5 per cent growth will be an achievement. Sustaining basic productivity growth of 0.7 per cent will barely offset population decline. To hit 5 per cent GDP growth, China would need capital growth rates near those of the 2010s. Most of that money went into physical infrastructure: roads, bridges and housing. Given the scale of the housing bust, it's likely overall capital growth will fall back to about 2.5 per cent.

Of course, the consensus is that China can achieve whatever target the government sets, but consensus forecasts have fallen short of recognising the pace of China's slowdown in recent years, including this one, when growth is likely to fall below 3 per cent. Around 2010, many forecasters thought China's economy was going to overtake the US's in nominal terms by 2020. By 2014, some economists were claiming China was already the world's largest economy by purchasing power parity — a construct based on theoretical currency values with no meaning in the real world. These theoreticians said the yuan was grossly undervalued and bound to appreciate against the dollar, revealing the dominance of China's economy.

Instead, the Chinese currency depreciated, and its economy is still a third smaller than the US's in nominal terms. If anything, 2.5 per cent is an optimistic forecast that plays down the risks to growth, including tensions between China and its trade partners, growing government interference in the most productive private sector — technology — and concerns about the debt load.

China at 2.5 per cent growth has major implications for its ambitions as an economic, diplomatic and military superpower. A lesser China is more likely than the world yet realises.

The writer is chair of Rockefeller International

The perils of 'productivity paranoia'

Matt Kenyon

BUSINESS
Rana Foroohar

Blue-collar workers are used to being monitored 24/7. Lean manufacturing facilities often have productivity screens right by work stations to see progress in real time — and gauge whether staff should get a bit extra at

eye movements they make, or when their screens go dark.

In some ways, this is the next step from existing workplace software programs such Google Workspace or Microsoft 365, which gather certain kinds of data but don't track keystrokes or take screenshots. Such programs are part of the surveillance economy, no question, but they may obscure individual workers' identities or limit the time period in which data can be tracked.

Either way, the rise of workplace surveillance represents what Microsoft chief executive Satya Nadella has called a new "productivity paranoia" on the

ings blog post on the topic cited a case in which a retail store worker used an office computer to check her personal email and bank account occasionally

Privacy and labour advocates would like to see clear notifications for employees about when surveillance software is being used (some US states,

newbie managers, who — perhaps driven by their own desire for visibility — hold almost a third more meetings than more seasoned peers.

Mapping the path to a Labour landslide

Lewis Baston

In the final days of the 1997 general election campaign, Tony Blair told a crowd of supporters that Britain is "not a landslide country". Despite his generous lead in opinion polls, most agreed — Labour would win, but surely not win big. The consensus was proved wrong within hours: Blair secured a Commons majority of 179.

A quarter century later, caution about the idea of a Labour landslide endures, despite a large, consistent lead in the polls and the highly volatile political climate. But it is time to consider a comprehensive victory for Sir Keir Starmer.

Expert opinion since 2019 has stressed the lack of historical precedents for Labour winning a majority in one go. The geography also looked very difficult: the party's votes are inefficiently distributed, largely concentrated in urban strongholds. For two reasons, psephologists won't be pouring cold water on Labour's chances this time. First, the recent polling leads of 30 points and more have only one parallel — Blair's ascendancy in 1994-97. Over 20 points is usually enough to presage a change of government, even if, as in 1997, the margin is less dramatic on polling day.

The other reason is how the vote translates into seats. Opinium (one of the UK's more cautious pollsters) has produced a model election result for the TUC using the MRP statistical technique and based on only a 15-point national Labour lead. Contrary to the effects of a uniform national swing, which would deliver a small Labour majority, Labour would win a huge 1997-style majority.

The model showed the Conservative

Starmer's personal ratings are far below Blair's at his peak but there are plenty of echoes of that era

vote falling proportionately to previous support, endangering vast swaths of the party's territory. In a "safe seat", secured with about 60 per cent support in 2019, the end of the day or be docked for not working hard enough.

Likewise, low-wage service staff working in restaurants or retail chains often have their lives upended by algorithmic software that co-ordinates their schedules to customer demand, making it difficult to look after children or plan very far in advance. Upper-level white-collar workers have historically enjoyed more humane evaluation methods; but now, thanks to surveillance capitalism, their progress is being tracked minute by minute, too.

The number of employers using data surveillance software to monitor employees has doubled since the start of the pandemic. Nearly two-thirds of medium to big companies in the US (and many elsewhere) now use such systems, which do everything from monitoring email and web browsing, to tracking workers' location and movement, to recording what keystrokes and part of employers. Clearly, the work-from-home trend and many employees' reluctance to give it up has managers desperately seeking new performance metrics. But digital Taylorism isn't the way forward, for three reasons.

First, just as office face time was an imperfect productivity metric, tracking keystrokes is too. White-collar jobs, particularly the kind that won't eventually be done by technology, tend to be about creative thinking, relationships, teamwork and soft skills. Indeed, the very productivity-enhancing things that managers cite when trying to get people to come back into the office, such as accidental idea exchanges and trust-building at the water cooler, are exactly the activities that can't be tracked by surveillance software.

Second, while there's no proof these metrics do a good job at gauging productivity, research shows they increase stress and resentment. A recent Brook- (who hasn't?), and subsequently found out that another employee had seen the information. When she informed her employer, she was fired.

While you could argue she made a bad judgment call to use a work computer for a personal task, the anecdote reflects something bigger, which is that there are barely any lines between work life and personal life these days. Post-pandemic, with employees often logging in to corporate systems from their own computers at home, or doing weekend Zooms because they can, there is a need for stronger protections about how and where employees can be monitored.

While there's no proof these metrics do a good job, research shows they increase resentment

such as Connecticut, Delaware and California, already have this in place). The EU mandates this via GDPR, though in practice, many workers simply box-tick the consent rules since they can't do their jobs if they don't sign off on data monitoring.

I'd argue that surveillance of employees working from home should be illegal, and that surveillance in the workplace should be done only for limited time periods, with full transparency and a clear purpose (measuring the success of a new project, for example).

Perhaps the best way for managers to improve productivity would be to turn the data lens on themselves. Managerial meetings are ripe for study: consider that the number of meetings attended by employees rose 13.5 per cent during the pandemic, even though research shows that 70 per cent of all meetings keep employees from doing more productive work. Much of the blame goes to

Aside from cutting meetings, companies may do well to cut managers. One recent NBER paper by Daron Acemoglu, Alex He and Daniel le Maire found that business managers in particular (meaning MBA types, rather than those with sectoral expertise) tend to lower worker wages without increasing output, investment or employment growth. The authors conclude these types of bosses do exactly what they are taught to do at business school, which is to cut labour, cut costs and maximise share price.

But they also find that in doing so, such companies tend to lose the most highly skilled workers, who leave for greener (and perhaps kinder) pastures. Perhaps the lesson here is that managers themselves are often the key differential in corporate productivity. Perhaps they should practice less surveillance, and more self-examination.

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the Tory vote share was down 25 points, enough to jeopardise it. In areas of lower support, say 25 per cent in 2019, the fall was just 10 points. In this case, Labour needs to be only about 8 points ahead for a majority.

If Labour prevails in 2024, it will have an electoral alliance of old (the metropolitan seats it won in 2019), new (some lasting additions to its coalition on the south coast, affluent suburbs and commuter towns, and posh bits of London), borrowed (the traditional marginals and the "red wall", which will eventually swing back) and blue (weird gains in normally safe Tory areas).

If 2017 is any guide, Labour will also claw back some seats from the SNP in Scotland if the party can demonstrate momentum across Britain as a whole. And it could break through, at last, in rural England. YouGov found a 13-point Labour lead in rural seats in September. Even in 1997 Labour did not make much progress in the countryside, but Opinium's model had Labour ahead in counties never previously in contention.

The other change is the deepening cracks in the Tory home counties. In 2019, Labour and the Liberal Democrats gained affluent, educated constituencies and reduced margins in Tory strongholds. Conservatives sustained punishing losses in London in 1997 from which they never recovered. As the South East becomes more like London in its economy and demographics, politics may follow.

Lib Dem support in national polls has not changed much since a disappointing result in 2019, hovering around 10 per cent. But they could still make significant gains. One reason is arithmetic — if Conservative support drops sharply, they win seats. Another is politics; when Lib Dem and Labour voters trade tactical votes, the electoral system behaves as if there was one anti-Tory party and rewards both. A Labour landslide, as in 1997, could easily bring in about 40 Lib Dems, even on a falling vote share.

While Starmer's personal ratings are well below those of Blair at his peak, there are plenty of echoes of that era — vast polling leads, tactical voting potential, a chaotic and divided Tory party. It would be bold to predict a crushing Labour win, but foolish to discount the possibility. Britain could be landslide country again.

The writer is a psephologist

A political backlash against monetary policy is looming

ECONOMICS

Martin Sandbu

Three weeks ago, Sanna Marin, Finland's prime minister, retweeted a link to an article by a Finnish academic with the following quote: "There is something seriously wrong with the prevailing ideas of monetary policy when central banks protect their credibility by driving economies into recession."

Defenders of those prevailing ideas predictably pushed back, warning against second-guessing independent central banks or not valuing their credibility. But defensiveness is the wrong response. Not just because Marin didn't actually criticise any central bank actions. But, more profoundly, because avoiding a debate over whether our macroeconomic regime is fit for purpose is more perilous than having one.

Comparisons with the 1970s often fail to notice one important lesson of that decade: a macroeconomic regime that cannot justify itself will be toppled, first intellectually, then politically. It was from the ashes of 1970s monetary chaos that theories were born justifying independent central banks with a mandate to keep inflation low. Before the century was out, independent inflation-targeting was *de rigueur* in most advanced economies.

Forty years on, a new intellectual and political reckoning would be less surprising than the absence of one. The "great moderation" produced by the 1980s monetary revolution has in many countries long been accompanied by stagnant wages for the low paid.

The glacial recovery from the global financial crisis prompted the world's two biggest central banks to revise their policy framework during the pandemic. In 2020 and 2021, the Federal Reserve and the European Central Bank vowed to tolerate a period of higher inflation if employment had further to rise or there would be little room to loosen policy in case of a downturn. But this new attitude fell at the first hurdle.

With cost of living crises biting and recessions looming in key advanced economies, what are the odds of avoiding a more profound reckoning for much longer? Marin is not the only national leader expressing unease about central banks. French president Emmanuel Macron recently worried aloud about "experts and European monetary policymakers telling us we must crush European demand to contain inflation better".

Defenders of independent central banks must think about their democratic legitimacy

Precisely because central bankers are independent, it falls to political leaders to tell their citizens why it is right to meet Russian energy blackmail with actions to clamp down further on incomes and jobs. They would be remiss if they did not question whether this is the best we can do.

In comparison, central bankers have it easy. They have legally imposed inflation-fighting mandates, which are not for them to question. And they have an argument: that losing their "credibility" — by which they mean people no longer believe they can keep inflation low — will cost even more jobs and lost income.

But the credibility of central banks itself is only as good as the credibility of the macroeconomic regime as a whole. That is not to say central bank independence should be jettisoned, but to ask openly whether it actually works for the economy. In pursuit of individual mandates central banks may be collectively overtightening, as Maurice Obstfeld has suggested. Or monetary policy uncoordinated with fiscal policy may be making matters worse, as Marin hinted in follow-up comments.

The IMF has warned governments against budgeting "at cross-purposes" with monetary tightening. But raising interest rates puts monetary policy at cross-purposes with fiscal policy priorities such as investing in the green transition or, indeed, in energy infrastructure that would itself remedy energy-induced inflation. Even if monetary considerations should take priority, such monetary dominance is undoubtedly something to be democratically debated, not technocratically imposed.

It may even be that central bankers are not independent enough but cave in to the political pressure arising from each new monthly record in current inflation, rather than coolly focusing on their benign medium-term forecasts.

Like in the 1980s, in time bright economists will suggest better ways of designing monetary policy against energy price shocks. And unless we have a lucky escape from a sharp downturn this winter, a political backlash is surely coming too. The alternative to openly debating these issues in a democratic space is to let that backlash fester until it breaks out in the more radical and dangerous form of a populist assault on institutions. Central banks' credibility would not be worth much then.

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FT SPECIAL REPORT

FT Health

Communicable Diseases

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Austerity will dilute pandemic efforts

Cuts in donations pose threat to projects that curb spread of diseases, writes *Andrew Jack*

When leading industrial nations at the UN pledged fresh support to tackle some of the world's most lethal infections last month, two nations stood back.

That hesitancy — by Italy and the UK — to provide more money to the Global Fund to Fight Aids, TB and Malaria, which supports prevention, diagnosis and treatment in poorer countries, was a signal of the difficulties ahead in tackling existing and emerging communicable diseases.

The coronavirus pandemic is estimated to have killed at least 16mn people globally, left millions more with debilitating illness, and wreaked lasting economic damage. It continues to claim lives every day, and should be a sobering reminder of the resurgent risks of infection alongside the underlying — and interrelated — growth in non-

health regulations and continued reflection on a future pandemic agreement.

He also cites a pledge by countries to provide more core funding to his agency, as well as a new pandemic fund being developed under the auspices of the World Bank.

Yet, as the most visible effects of coronavirus fade, nationalistic attitudes in some countries — combined with belt-tightening amid an economic slowdown — mean many policymakers are turning their attention elsewhere.

Broader issues that help fuel the spread of communicable diseases remain poorly addressed, such as global warming and deforestation, and some may be competing for the same funding.

For example, a recent commission convened by medical journal The Lancet on the pandemic concluded that policymakers must do more to regulate the trade in domestic and wild animals that spread infection to humans. But pandemic issues must fight for attention. The Rockefeller Foundation recently folded its Pandemic Prevention Institute into its wider activities, with its head departing the organisation.

Government austerity also risks dilut-

Inside

communicable diseases.

But, despite pledges to learn the lessons of Covid-19, caution is already waning. And recent reminders of the need for vigilance are failing to have the impact they warrant. They include growing antimicrobial drug resistance, outbreaks of Ebola in Africa, cholera in Haiti, and polio and monkeypox in the US and other developed countries.

Nina Schwalbe, adjunct assistant professor at Columbia University's Mailman school of public health, says that, during the UN general assembly in New York, where the Global Fund's replenishment took place: "You got a feeling almost that Covid never happened. At the UN, people were slammed together in the elevators and the pandemic was not a core part of the debate."

Against a backdrop of waning engagement, she argues for a system to build resilience against future pandemics overseen by heads of government to ensure accountability.

"It's remarkable that we went through Covid and didn't come out with better data systems or better access to preventive healthcare," she says. "I don't get a sense from what we're seeing from polio or monkeypox that we've really learned any lessons."


Outbreak: Red Cross workers prepare to bury a child suspected of dying from Ebola in Uganda — Luke Dray/Getty Images

There is, however, still willingness to provide financial support. Peter Sands, head of the Global Fund, says that, in spite of hesitancy from a few large donors, the $14bn pledged in September suggests "there is clear recognition in both a moral priority to save lives and a self-interested priority to contain infectious diseases and preserve socio-economic stability". He adds: "It's very difficult for countries and communities to prosper and thrive if they are under a very heavy disease burden."

Technological advances have been made since the start of the Covid-19 pandemic, with implications for other less severe infections. There is fresh investment in vaccines, and the application of mRNA technology provides scope for a range of more effective, targeted and rapid ways to shield against illness and death.

But far less progress has been made in establishing better funding, procurement and distribution systems to ensure more equal global access to vaccines. Without such progress, the risks remain of a continued cycle of mutation and a return of pandemic diseases in developed countries.

Hans Kluge, regional director for Europe at the World Health Organization, argues there has nonetheless been promising recent political momentum, including strengthened international

ing efforts around disease prevention, from measures to reduce salt and sugar in food to broader programmes designed to limit cardiovascular diseases and other underlying conditions that made many vulnerable to other illnesses, such as Covid.

Like many of his peers, Sands stresses the prime importance of strengthening existing health systems to tackle communicable and non-communicable diseases alike.

"The priority should be to fight existing big disease threats — and do it in a smarter way that explicitly builds in multi-pathogen capability and surge capacity," he says.

Kluge agrees. One of his greatest concerns is the current stress on healthcare systems around the world, as workers retire or burn out and quit, while the pipeline of replacements is thin.

"The health and care workforce is a ticking time-bomb," he says. "There is a medical desert. But we have to invest in the health workforce and reserve capacity. We see the battle is not won in hospitals, it's won in primary healthcare."

Monkeypox recedes but has not gone away
Doctors urge engagement with at-risk communities
Page 3

Polio danger for next generation
Return of disease to US highlights impact of anti-vax campaigners
Page 3

Evidence builds of viruses' role in Alzheimer's disease

Dementia

Researchers examine pathogens including Covid, herpes and Epstein-Barr virus, writes *Clive Cookson*

For more than 30 years, Professor Ruth Itzhaki has been accumulating evidence that viruses — and particularly the common herpes virus HSV-1 — are involved in Alzheimer's disease.

But persuading the scientific world to take seriously the idea that viral infection plays a big role in degenerative brain conditions has been a struggle for Itzhaki and like-minded researchers. Now, though, she feels the tide of biomedical opinion is turning in their favour, at last.

"So many more observations have emerged recently," says Itzhaki, who works at Oxford university's Institute of Population Ageing. Five hundred studies using different approaches have supported the view that viruses play a role in Alzheimer's disease, she points out.

Susan Kohlhaas, research director of the charity Alzheimer's Research UK, acknowledges the relationship between viruses and the disease "is an active field of investigation, with lots of things happening". But she adds: "The jury is still out on quite what the role of viruses is."

Itzhaki's most recent study, carried out with colleagues at Tufts University in the US and published in the Journal of Alzheimer's Disease, demonstrated how HSV-1 could trigger the early stages of dementia by interacting with the related varicella zoster virus (VZV), which causes chickenpox and shingles.

As Itzhaki originally showed in the early 1990s, HSV-1 lies dormant within the brains of many elderly people. Using Tufts's three-dimensional neural tissue culture to model the brain, researchers found that VZV could activate HSV-1, leading to an accumulation of tau and amyloid proteins and loss of neuronal function — hallmarks of Alzheimer's. On its own, VZV had little effect.

"Our results suggest one pathway to Alzheimer's disease: a VZV infection which creates inflammatory triggers that awaken HSV-1 in the brain," says Dana Cairns of Tufts. "While we demonstrated a link between VZV and HSV-1 activation, it's possible that other inflammatory events in the brain [such as head trauma] could also awaken HSV-1 and lead to Alzheimer's disease."

Clinical trials at Columbia University and New York State Psychiatric Institute, are gathering more direct evidence for the role of HSV-1 in Alzheimer's. Participants who are in the early stages of the disease and infected with HSV-1 are receiving either valacyclovir, an antiviral herpes drug, or placebo. Completion is expected in December 2023.

'Our results suggest one pathway to Alzheimer's disease — a varicella zoster virus infection'

Interest in the links between dementia and viruses has also been increased by the Covid-19 pandemic, as evidence accumulates that Sars-Cov-2, the virus responsible for Covid, can affect the brain in some patients.

An extensive study of Sars-Cov-2's persistent neurological and psychiatric effects was published in August by other researchers at Oxford university. They analysed the electronic health records of 1.25mn people diagnosed with Covid and a matched control group who had other respiratory infections. Among people aged 65 and over, 4.5 per cent of Covid patients developed dementia over the subsequent two years, compared with 3.3 per cent of the control group.

But, as Kohlhaas points out, the first cases of Covid were recorded less than three years ago — and it can take longer for the initial neural triggers to lead to symptoms of Alzheimer's disease. "We haven't had enough time to follow through and understand what the implications of Covid are for people who may one day develop dementia," she says.

Itzhaki suspects that Sars-Cov-2, like VZV, increases the risk of Alzheimer's by reactivating latent HSV-1 in the brain. People with the gene ApoE4 appear particularly vulnerable. In an effort to assess this, neurologists from 25 countries have set up a global collaboration: the Alzheimer's Association Consortium on Chronic Neuropsychiatric Sequelae of Sars-Cov-2 Infection.

"No available evidence supports the notion that cognitive impairment after Sars-Cov-2 infection is a form of dementia, whether it is Alzheimer's disease or related dementias or some other cause," says the consortium's leader, Gabriel de Erausquin of the University of Texas Health Science Centre at San Antonio. "The . . . multinational initiative will provide data to answer this question as clearly as possible in a globally diverse set of participants."


Dementia mainly affects the elderly

Researchers are exploring links between viruses and other neurological conditions, too. "Several papers have appeared recently about viruses and Parkinson's disease," says Itzhaki. "And Epstein-Barr virus [EBV] has been implicated in multiple sclerosis."

A team led by Alberto Ascherio from the Harvard TH Chan School of Public Health studied more than 10mn US military personnel from 1993 to 2013, who had blood samples taken every two years as part of routine medical screenings. The results appeared in the journal Science last January. They compared samples from 800 people who developed MS with 1,500 matched controls who were free of MS. People infected with EBV were 32 times more likely to develop MS than uninfected people. There was no association between MS and other human viruses. "This is the first study providing compelling evidence of causality," Ascherio says.

We must stop always being one step behind

OPINION

Richard Hatchett

As we approach a third year of Covid-19, pandemic fatigue is setting in. Governments have several crises demanding their attention and, with the development of vaccines, we can see a misguided belief set in that the pandemic is over.

However, the real issue we now face is how we manage the persistent and evolving threat that endemic Covid and other viruses represent. While it's undeniable that most countries have moved into a different phase of their coexistence with the virus Sars-Cov-2, it's still killing thousands of people every week globally and remains in the top five causes of death in the US alone.

The virus has also shown its evolutionary potential on multiple occasions and could mutate further to become more virulent or resistant to vaccines.

And the global viral picture grows ever more complex. We have seen: a resurgence of polio in wealthy countries; the global spread of monkeypox; and the outbreak of Ebola virus in Uganda — all reminders that viral threats are everywhere, and they don't respect borders. These are all viruses or closely related cousins of viruses we already know and have some form of vaccine or treatment for. Yet we are still on the back foot.

These multiple and constant threats are a symptom of today's world, where climate change, the destruction of animal habitats by expanding human populations, and the growth of vast transportation networks have created perfect conditions for viruses to jump between species and potentially evolve into epidemics. Without doubt, we have entered a new era of infectious disease, demonstrated in the increasing speed and spread of pathogens.

But, despite the record-breaking pace at which Covid vaccines were developed, as well as great steps forward in the development of vaccines against malaria and other persistent infectious diseases, we always seem to be one step behind whichever virus comes for us next.

The 100 Days Mission involves a prototype-vaccine 'library' that can be quickly adapted for new pathogens

What's clear is the world needs to get faster and smarter in its ability to respond to outbreaks of new infectious diseases. We need to be able to move at a pandemic-preventing pace when something new emerges, whether it is a more transmissible or virulent Covid variant, a rare strain of Ebola or influenza, or a pathogen never seen before in human populations.

My organisation, the Coalition for Epidemic Preparedness Innovations (CEPI), was created specifically to promote the creation of vaccines against emerging infectious diseases.

Continued on page 2

Dangers of invading nature become ever starker

Zoonotic diseases

Infections that jump from animals to people are on the rise, as Covid has shown. By *Zesha Saleem*

Urbanisation, climate change and intensive agriculture are among the factors driving a startling rise in zoonotic diseases — infections that jump from animals to people.

Covid-19 and monkeypox are among recent examples of zoonotic diseases, or zoonoses. And three out of four new or emerging infectious diseases now come from animals, according to the US Centers for Disease Control. These diseases can spread through contact with animals or places where they live and roam; "vectors" such as mosquitoes and ticks; and contaminated food or water.

Kris Murray, Gambia-based associate professor of environment and health at the London School of Health & Tropical Medicine, says urbanisation is a major driver of zoonoses. Half of the world's population live in cities and this is expected to reach two-thirds by 2050, according to the UN.

"[Urbanisation] might typically remove natural habitats and reshape landscapes," Murray says. "It also often leads to increases in population density of people. All of these can have potential impacts on host/vector species ecology. This can lead to new opportunities for human-animal contact to occur and thereby the risk of disease spillover."

But there is "a lot" that could be done to mitigate and reduce the risks, he suggests. "We need to make drastic changes to how we manage the planet, in order to bring so many other crises, like climate change and biodiversity loss, under control," he explains.

"The way we manage our ecosystems will always provide opportunities for contact with animals and the spread of disease. So, if we change the way we manage them, we can not only protect biodiversity but we can probably also reduce the risk of spillover and possibly pandemic risk."

Climate change has been shown to be a driver of the increase in zoonotic diseases. This July, a report by the World Health Organization found that rising temperatures increase the population of hosts of zoonotic diseases — such as the *Aedes albopictus* mosquito — by "facilitating survival in higher latitudes and altitudes".

Changing weather can cause migration, too, altering the natural balance between species in a given area. That could cause an increase in the population of some species that might be carriers of diseases that could infect people.

Climate change also creates a higher likelihood of heavy rainfall, floods and hurricanes, increasing the risk of waterborne disease outbreaks and threatening biodiversity, which is important for controlling zoonotic diseases.

Researchers are seeking ways to combat this. Sara Rooney, a doctoral student at the Liverpool School of Tropical Medicine, is working on a project to block virus infections within the mosquito, thereby disrupting zoonotic transmission. "My team and others are looking at [the project's] ability to block viruses that are emerging across the UK and Europe, namely West Nile and Usutu," she says. "It's incredibly promising, and the hope is this can be used more extensively to prevent and limit outbreaks of vector-borne diseases."

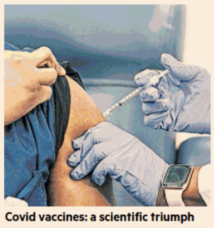
Factory farming and wildlife markets are additional drivers of zoonoses, says Justine Butler, head of research at Viva!, a veganism campaign group. "Ebola and Mers are all examples of zoonotic diseases that spread to humans from animals," she notes. "These [are known as] spillover events, which occur when humans invade wildlife habitats, at wet markets and in factory farms."

Factory farming is an industrialised system of rearing livestock by intensive methods, with the aim of maximising production while minimising costs. But a report commissioned by campaign group Compassion in World Farming found the risk of E. coli and salmonella infection is "often greater" in intensive production systems, while excessive use of antibiotics on otherwise healthy animals to speed their growth is contributing to the rapid growth and spread of antimicrobial resistance.

A big concern for Butler is bird flu. "Before Covid, most scientists thought the next pandemic would be caused by an avian influenza strain emerging from a poultry or pig farm," she says.

About 160 cases of a "highly pathogenic" strain of avian influenza, H5N1, have been reported in the UK among poultry and captive birds since late October 2021. This resulted in the culling of 3.2mn birds, and an "avian influenza prevention zone" was imposed last week across large parts of eastern England that requires indoor housing of all poultry and captive birds.

For Butler, a vegan diet is one practical way to cut the risk of more zoonotic diseases emerging. "People keep saying they want to get back to normal, but it was normal that got us here," she says.


Covid vaccines: a scientific triumph

We must stop always being one step behind

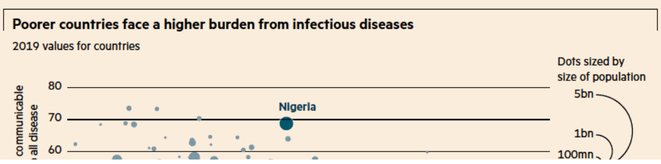
Continued from page 1

Having played a critical role in the swift development of Covid vaccines, we are now pioneering the vital work needed to help the world get ahead of future epidemic and pandemic threats.

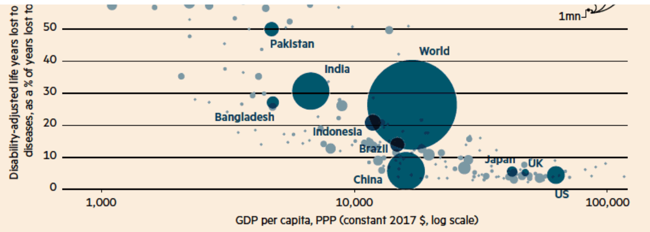
To do this, CEPI, along with G7 leaders and G20 nations, has an ambitious plan — the 100 Days Mission — that will dramatically reduce the time it takes to develop new vaccines against emerging viral threats.

Coupled with improved surveillance, and with swift and effective use of non-pharmaceutical interventions, such as social distancing, delivering a vaccine within 100 days of a new viral threat emerging would give the world a

Covid lessons for a reset of



the world's health systems



Sources: IHME; World Bank: Our World in Data

Reforming care Flaws were exposed in hospital design, training and funding, writes *Sarah Neville*

The Covid-19 pandemic has, in many ways, been healthcare's finest hour. Clinicians performed miracles as they battled to understand a new disease, learning as they went along the techniques and approaches that gave patients the best chance of survival.

But, for all this quiet heroism, the crisis also turned a harsh spotlight on the deficiencies of health systems. In the west, at least, the burden of infectious disease has receded in recent decades and, as populations have aged and obesity has become a global scourge, the focus of many policymakers has been on the importance of primary care and prevention services.

Covid underlined the crucial role a well-resourced secondary care sector must continue to play. And, in the process, it revealed fundamental problems in the way some hospitals are laid out and equipped — while raising questions over whether staff have the skills they need to navigate this new pandemic era.

Nigel Edwards, chief executive of Britain's Nuffield Trust, who has recently led work on the lessons from the pandemic for hospital design, argues that successive administrations sought to build hospitals as inexpensively as possible. This led to decisions that proved highly problematic when hospital staff were forced to deal with a tsunami of infected patients.

In the tax-funded UK system, a "focus on minimising the capital cost, as opposed to thinking about the long-term lifecycle costs of buildings, means that buildings built in the 1960s, 1970s and, to some extent, the 1980s have narrow corridors and low ceilings, meaning they have insufficient space to put in ducting and ventilation", he says. This made it harder, for example, to pipe in sufficient oxygen for Covid patients who needed respiratory support.

As governments sought to keep costs down, hospitals were often built without decent facilities for staff, and few single bays for patients, which complicated the task of controlling the spread of infection. These conditions may explain "some of the relatively high levels of in-hospital transmission that were seen in the UK", Edwards says.

Research in the developing world similarly points to the importance of securing sufficient supplies of oxygen and other low-cost interventions. Researchers led by the Center for Global Development (CGD), a non-profit think-tank in Washington and London, and the London School of Hygiene & Tropical Medicine, used Tanzania as a case study. They found the approaches that were successful and cost-effective included: monitoring patients' vital signs to identify critical illness; providing oxygen therapy and intravenous fluids; and positioning unconscious patients to maintain a free airway.

The study estimated that treating patients in this way cost $10.83 and $32.84 a day for severely and critically ill patients respectively. "This compares with our estimated $297.30 per patient-day for treatment of critical patients with advanced critical care," such as ventilation and a stay in intensive care, the researchers say.

Work under way in Kenya suggests similar comparative savings will be achieved there.

"Most of the benefit of treatment is treating a large number of people with moderate Covid early, so they never get to [the intensive care unit]," says Peter Baker, a CGD policy fellow and assistant director who was part of the research team. "You save huge amounts of money and a lot of lives with that."

Providing appropriate hospital care, however, will also make new demands on clinical staff, he adds. They will be required to spot when a patient needs to be escalated to intensive care.

Across the world, Baker explains, "we learnt that the skill sets of many of our staff were not adequate in relation to the identification and treatment of the acutely ill." He says: "It's not necessarily about staffing. It's about soft skills and training."

As ever in healthcare, though, hard decisions will be needed about where to direct scarce funding in the years to come. "In most countries, they've only got so many dollars to spend and they have to choose between investing in hospital expansion or primary care expansion. And that's quite a difficult choice," Baker notes.

However, there are signs that pandemic-battered nations are looking for ways to inject more public money into healthcare — potentially easing that dilemma. Robert Yates, executive director of the Centre for Universal Health at Chatham House, a London-based think-tank, is encouraged by a new drive among governments towards providing universal health coverage.

> 'You cannot run an effective health system on a public health spend in the order of 1 per cent of GDP or less'

"A number of countries are recognising that you cannot run an effective health system on a public health spend in the order of 1 per cent of gross domestic product or even less," he says. On the back of the pandemic, the case for publicly financed healthcare "has never been stronger", argues Yates, who is leading a commission designed to press that case around the world.

He cites the example of Egypt, which has recently announced that it will accelerate universal health reforms. Meanwhile, Malaysia, which has, until now, relied on a patchwork of health insurance schemes, "has realised, at the end of the day, the state needs to finance primary healthcare", Yates says. The country has recently published a white paper in which it says it is "going to increase public spending to 5 per cent of GDP, which is great — you can do a lot with that", suggests Yates.

In many respects, he argues, the Covid pandemic has catalysed a new generation of publicly financed universal health reforms, which should improve healthcare across the board, from prevention to secondary care.

"We're seeing countries at all income levels looking to increase healthcare coverage, recognising that public financing is the only way to do it," Yates notes. "Thankfully, health systems and politicians and populations have learnt lessons from the pandemic."

fighting chance to extinguish its potential to spawn a deadly pandemic.

A crucial part of the 100 Days Mission is the building of a library of prototype vaccines — ideally, at least one each against the 25 or so viral families that are known to infect people. These families include: the coronaviruses, which produced Sars and Mers before Covid; the filoviruses, including Ebola and its Sudan strain now spreading in Uganda; and orthopoxviruses, which both smallpox and monkeypox belong to. The vaccines in the library should also draw on rapid-response technologies tested and ready to be adapted to make shots against newly emerging threats.

The progress in research and development in infectious diseases over the past few years has been extraordinary. Developing vaccines against a previously unknown virus in less than 11 months was a scientific triumph. However, the work to prepare for future threats is nowhere near done. The project of building the global vaccine library is in its infancy, and not being tackled systematically, with at best only a few viral families partially covered at present. As we see Covid news replaced by reports of other virus outbreaks, we must recognise that now is the time to intensify investment in pandemic prevention and protecting global health security. With focus and international co-ordination of effort, the global vaccine library could be largely completed in five to 10 years.

CEPI is well aware the 100 Days Mission is bold. But we also believe that with the right kind of leadership and with sustained investment, it is achievable. Ultimately, global progress towards the 100 Days Mission will depend on the political will to rise to the challenge of protecting the world from another devastating event like Covid — and the challenge of creating a future free of pandemics.

The writer is head of the Coalition for Epidemic Preparedness Innovations

Vaccine market failures will hinder us in next pandemic

OPINION

Seth Berkley

As governments roll out the latest round of Covid-19 vaccine boosters — bracing themselves for potential resurgences and possible dangerous new variants — it should be clear that this pandemic is far from over. But, even when we do reach that point, it is important to remember that the kind of threats this virus poses will not end.

The latest research suggests the risk of Covid-scale pandemics is rising by as much as 2 per cent each year. Rather than being an outlier event, Covid could be a taste of things to come.

Driven by climate change, migration and other global trends, infectious disease is a growing threat to our lives and economies. Vaccines are our strongest defence by far. However, as we have seen with Covid, even if science can develop and rapidly produce them, geopolitical and economic factors can still determine whether people actually receive them. Indeed, one of the largest barriers to global, equitable access to vaccines — and arguably one of the biggest chinks in our pandemic-preparedness armour — is market failure.

We had our first taste of how market failure can hinder vaccine access in a pandemic in 2009, when a few wealthy governments rapidly bought up almost the entire global supply of H1N1 swine flu shots, leaving little for the rest of the world, regardless of ability to pay.

This was a key reason why Covax was created when Covid came along. It created a mechanism for global, equitable access to vaccines — to ensure ability to pay did not determine whether people received the protection they needed. To a large extent, it has been incredibly successful, getting Covid vaccines to lower-income countries just 39 days after people in high-income countries received their first jab. More than 1.8bn doses so far have been delivered through Covax to people in 146 economies. Almost all — 1.6bn — have gone to people in lower-income countries that would otherwise have struggled to afford them.

But it hasn't been an easy journey: the scale of vaccine hoarding, export restrictions, and the complete lack of transparency among manufacturers seriously hindered the global supply of

Covid revived vaccine development

vaccines, even when money was available to pay for them. This created delays, which ultimately has cost lives and prolonged the pandemic.

Market failure is not unique to pandemics. When Gavi, the organisation I run, was created in 2000, millions of children were dying every year from diseases that could be entirely prevented through vaccination because of inherent market failures. Gavi's solution was to pool demand from 73 lower-income countries. This meant we could buy in bulk on their behalf and negotiate lower, more affordable prices. And, by giving manufacturers demand certainty — hence reducing their risk — there was an incentive from them to scale up manufacturing, helping to bring down the cost of doses.

At the same time, Gavi helped shape markets by encouraging other vaccine makers to enter the business or develop new shots. This stimulated innovation and competition, helping bring prices down further. Since then, this unique public-private partnership model has enabled us to help vaccinate more than 1bn additional children and prevent more than 16mn deaths.

In the coming years, we will need more interventions. Covid has triggered a renaissance in vaccine development, with mRNA technology revolutionising the speed and the way in which vaccines can be developed. Because of this, and other advances, there are now many exciting, new and much-needed vaccines in the pipeline. We already have two cancer vaccines in widespread use and others are on their way. For any of these future blockbusters to make it to market, there must be viable markets for all parts of the world.

Another market failure that must be addressed concerns regional supply, particularly in Africa. Currently, only about 0.1 per cent of the global supply of vaccines is produced in Africa. This is one reason why African nations faced such delays in obtaining Covid vaccines, and ultimately it cost lives.

But, with more than 30 vaccine manufacturing initiatives across Africa, there is an opportunity to remedy that, to create vaccine supply resilience, and improve health security across Africa.

Gavi is playing its part, including looking at how a new financial mechanism might help new manufacturers enter markets sustainably and without destroying the global vaccine ecosystem that has allowed us to produce quality vaccines at scale and at low prices.

The increasing risk posed by infectious diseases means equitable access to vaccines must become a global priority. We have to look at existing market failures and anticipate future instances. This needs to happen now because, if we can't prevent millions of people from dying from a vaccine-preventable disease like Covid-19, what hope do we have of protecting people from future threats? When science delivers, markets must too.

The writer is chief executive of Gavi, the Vaccine Alliance

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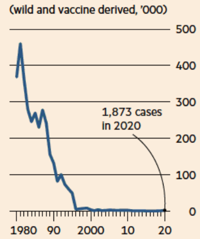
Disease control Health threat re-emerges globally as jab coverage misses targets. By *Jamie Smyth*

Polio returns to the US after decline in vaccine uptake

Polio

Estimated cases of paralytic polio (wild and vaccine derived, '000)



Source: Our World in Data/World Health Organization

Resurgent: In July the US diagnosed its first polio case since 2013
Angela Weiss/ AFP via Getty Images

'Polio is spreading in Rockland county. Our new generation is in danger," warns

which is given to children in much of the developing world. If this weakened virus is then able to circulate a lot,

nisation campaign, financed by the public and private sectors. It failed to meet that ambitious goal but, by spend-

sible to eradicate," says Dr Zulfi Bhutta, chair of child global health at Hospital for Sick Children, Toronto.

year-olds in the county average 60 per cent and drop to 37 per cent in some postcode areas. This is significantly

Israel. Rockland authorities have started auditing schools to ensure they are complying with a legal requirement

I a poster pasted to the wall of a supermarket in Pearl River, a commuter town on the fringes of suburban New York.

It records the re-emergence of the disease as a public health threat, four decades after US authorities had eliminated its transmission with a nationwide childhood vaccination scheme. Last month, New York state's governor, Kathy Hochul, had to declare a disaster emergency after the virus was detected in several counties' wastewater, prompting fears that there could be thousands of asymptomatic infections.

It followed the diagnosis, in July, of the first polio case in the US since 2013 in an unvaccinated man in his twenties, who went to doctors in Rockland with his legs partly paralysed. His infection has since been linked via genetic sequencing with the detection of vaccine-derived polio (VDP) in wastewater in London and several infected children in Israel, although he did not travel abroad during the incubation period.

VDP is an illness that occurs when there is poor vaccination coverage. It is caused by the weakened poliovirus that is contained in the oral polio vaccine, because of low vaccination rates, it can mutate and lead to VDP, which sometimes causes paralysis. In most of the developed world, including the US, an injectable vaccine containing inactivated poliovirus is given, which does not carry the risk of mutation.

Experts say the VDP cases in rich countries — alongside recent outbreaks of wild polio in Afghanistan, Pakistan, Malawi and Mozambique — show how the virus is exploiting disruption to inoculation programmes caused by Covid-19, rising vaccine hesitancy, war, and climate-related disasters. They warn this is a wake-up call for health authorities, which initiated a global campaign in 1988 to eradicate a disease that can kill and disable children.

"As long as polio is anywhere in the world, it poses a threat everywhere — especially with international travel picking up again," says Carol Pandak, director of Polioplus, which is part of an organisation spearheading the Global Polio Eradication Initiative.

Gpei, which was founded in 1988 through a World Health Assembly resolution, targeted eradication of polio by 2000 through a global childhood immunising about $19bn on buying and distributing 2.5bn vaccines, the initiative has slashed the number of polio cases by 99.9 per cent and saved an estimated 20mn children from paralysis.

Gpei's work has helped eradicate two of the three wild poliovirus strains in the past decade. And the virus is now endemic in only two countries — Afghanistan and Pakistan — compared with 125 when its vaccination campaign began.

Yet experts now warn this progress could be squandered unless governments and donors can find an extra $4.8bn to fund a five-year plan for boosting vaccination rates, which have been flagging following the pandemic.

Some 7mn more children missed their third dose of polio vaccine last year, compared with the pre-pandemic year of 2019, according to World Health Organization data released in July. The fall in overall childhood vaccinations in 2021 was the biggest in 30 years, with at least 25mn infants missing out on routine immunisations.

"Polio is becoming a big threat again and the risk is that, if it spreads across too many geographies, it will be impos-

He co-ordinated the publication this month of a global declaration on polio signed by more than 1,000 scientists, urging support for Gpei. "You cannot do science on thin air — you have to have the resources," says Bhutta, who cited vaccine hesitancy as a key challenge to overcome.

Rockland, a county about 30 miles north-west of New York City, has become a case study in how poor vaccination rates can leave communities vulnerable to outbreaks.

> 7mn more children missed a third dose of polio vaccine last year compared with 2019, according to the WHO

About 325,000 people live in the commuter town, which is home to a large and growing Orthodox Jewish community that has become the target of increasingly vocal anti-vaccine campaigners.

Childhood vaccination rates for two- below the 80 per cent level that the WHO says is required to provide herd immunity for polio and the 95 per cent level required for measles.

"This is not a religious issue," says Dr Patricia Ruppert, Rockland's health commissioner. "It is an issue that, in some insular communities, we are seeing misinformation being propagated over a number of years, unfortunately — so it is a lot to tackle and is a great challenge." The "politicising" of vaccine efforts during the pandemic has deterred a lot of people from getting inoculated, she says.

Authorities have established pop-up vaccination clinics, stepped up education campaigns, and told medical centres to be on alert for polio — which can present as flu-like symptoms, or often no symptoms at all.

"There is not really any treatment for polio so it's prevention that is key in this case," says Ruppert, adding that 7,000 polio vaccines have been administered in Rockland since July 21.

Wastewater surveillance is a crucial tool that has tracked the spread of the polio virus to several counties — and linked the Rockland case to the UK and that all pupils are vaccinated. This was introduced in 2019 following a measles outbreak, which made hundreds of children unwell and also centred on the Orthodox Jewish community.

In developing countries, particularly Pakistan and Afghanistan where wild polio remains endemic, the challenge of vaccine hesitancy is compounded by poor infrastructure, conflicts, and climate-related disasters.

But Dr Jay Wenger, who leads a polio programme at the Bill & Melinda Gates Foundation, says Gpei could achieve its eradication goal if the $4.8bn it is seeking is raised.

The recent development and roll out of a new oral polio vaccine called nOPV2, which is more stable and less likely to cause VDP outbreaks, had provided a new tool for prevention, he says.

More funding could complete the vaccination rollout in Pakistan and Afghanistan, mop up outbreaks of VDP and eliminate the risk of the virus spreading. Wenger says: "The longer we go with virus still floating around somewhere, the longer we have this risk of it popping into places that are under-vaccinated and causing problems."

Monkeypox recedes as doctors draw lessons for future outbreaks

Epidemic

Engagement with at-risk groups forms a vital part of any response, writes *Donato Paolo Mancini*

'We have to accept uncertainties': infections doctor Jake Dunning — Anna Gordon

Earlier this year, Dr Jake Dunning, who has studied infectious diseases all his working life, was catching up with a colleague about monkeypox in the Central African Republic. Then, a phone call caught him by surprise: a cluster of cases had been identified in the UK.

"We had often talked about transmission during sex, but I had never considered we would have an outbreak in the UK, let alone internationally, affecting people with a shared characteristic — men who have sex with men, where most transmission occurs during sex," he recalls. "I never heard anyone else propose it as a likely scenario, either."

As the outbreak developed, many patients were admitted to his communicable diseases unit at London's Royal Free Hospital, says Dunning, who is also a senior researcher at Oxford university. "We all realised we had to prepare."

Cases of monkeypox, a disease that had only been seen in sub-Saharan Africa, surged in May. But, five months later, Room 0, where the first patient was admitted, is no longer used for monkeypox patients. Global case numbers have tumbled from 7,477 in the week to August 14 to 2,167 as of October 17, according to the World Health Organization. The main theory for the fall is behavioural change among men who have sex with men, helped by a vaccination campaign.

Fears that the disease might move into other, more vulnerable population categories, such as children or the elderly, have not materialised. But, while the experience of caring for the sickest patients gave Dunning and his team some clues on how to manage a disease not frequently seen in the global north, big questions remain as to the future trajectory of monkeypox.

It is possible cases could rise again if there is another change in behaviour in the communities affected. That could lead to a low but stubborn level of disease that becomes near impossible to eradicate, leaving the virus endemic where it had not been before 2022.

In Britain, in August, the LGBT+ groups of the five main political parties criticised the UK Health Security Agency's approach to vaccine buying, saying it risked making the disease endemic. But, in October, the government rejected advice from the agency to buy extra vaccine doses on value-for-money grounds.

Poorer countries, in some of which monkeypox has been endemic for decades, also remain severely underserved in terms of diagnostics, therapeutics and vaccines.

Nobody has died of monkeypox in the UK and there have been 29 deaths worldwide compared with 73,000 cases. However, clinicians say the illness can be extremely painful and require hospital treatment. Dunning and his colleagues have seen some "very complicated disease", affecting the eyes and throat in some cases. Some patients have needed heavy painkillers.

Speaking in August, Dunning said hospitalised cases were tapering off, though he was not fully sure why. "It may be because treatment of monkeypox outpatients has improved," he said. "It could be that people are having less high-risk sex."

Scientists are still looking for a definitive origin of the 2022 outbreak. "Clearly, we know there are zoonotic [animal-to-human] reservoirs in some countries in Africa," says Dunning. "I've always been concerned about monkeypox because I was concerned the sub-Saharan burden [of the disease] was greater than we thought."

But he never thought he could see the outbreak happening in men who have sex with men. "It's found a niche, an opportunity — it spreads through close contact," he says. "It's the fact that it's a closed sexual network, because gay and bisexual men who have sex with men have sex with other gay and bisexual men who have sex with men."

One challenge in hospital has been treating patients before full evidence on monkeypox drugs became available, notes Dunning.

Jessica Joyce, a sister and ward manager, says the team was able to respond quickly, and that staffing has been the "biggest" challenge. "Patients have been incredibly tolerant," she says. "It's hard being in isolation and being told you can't go home yet." She says the team tries to reassure them.

Antonia Scobie, a consultant in infectious diseases, says one difficulty has been navigating stigma and helping patients to disclose their diagnosis easily. In the early stages of the epidemic, patients being transferred to another ward would be wrapped in sheets to prevent skin shedding into the environment. "One patient told me it brought to mind how HIV patients, in the past, may have felt stigmatised by their illness," she says.

The ward had a total of 35 inpatients in the current outbreak, most of whom were admitted for medical purposes, rather than because they were unable to safely isolate at home.

Dunning says the most important lesson is to involve affected communities in the response. "Get representative bodies on board," he says. "You make mistakes, you correct them." But he cautions: "We are not at zero new cases in the UK. It's at a low level currently and there could be a long, low tail on the epidemic curve . . . We have to accept uncertainties. With all these things we do get surprises."

Doctor
Salim S.
Abdool Karim

Pandemic preparedness requires proactive PPPs

Just as the world has experienced epidemics of Zika virus, Ebola, and Monkeypox, and pandemics like Covid-19, we should expect more pandemics in the future, as humans encroach on animal habitats and climate change takes its toll. The best opportunity to prevent a pandemic is when it is still a localised initial outbreak. Early detection and response are therefore critical. In Covid-19, the role of government public health agencies, academic research laboratories, and private biotechnology diagnostic and vaccine companies were essential in the early response. An effective early response requires established research, surveillance and epidemic intelligence infrastructure, which often requires public private partnerships. For example, the partnership between the company, Moderna, and the US government' s National Institutes of Health led to the Moderna vaccine becoming available within a year of the first reported case of Covid-19. It is imperative that governments, academia and private companies initiate and establish these partnerships now in anticipation of the next pandemic.

Professor
Quarraisha
Abdool Karim

Covid-19 and HIV: Mapping a path forward

In 2021, there were 38.4 million people living with HIV, 650,000 HIV deaths and 1.5 million new infections worldwide. Much progress has been made globally towards the 2020 target of 90-90-90 and the development of simplified treatment regimens; but treatment as prevention is not having the population impact needed for epidemic control, underscoring the need to enhance primary prevention efforts. Reaching key and vulnerable populations is key to reaching the UN 2030 goal. Programmatic scale-up of pre-exposure prophylaxis/PrEP has increased but adherence remains a challenge. Several new provider-initiated technologies are in development. Covid-19 has negatively impacted HIV testing and treatment services and we have seen persistent infection in immune-compromised individuals including emergence of SARS-CoV-2 variants. Staying focused on the SDG of ending AIDS as a public health threat by 2030 remains an important pathway to endemic HIV infection but we need to have flexibility to take into account new challenges and opportunities. This will need more than the 2025 target of 95-95-95, provide initiated PrEP and customised combination prevention that addresses stigma and inequality; targeted prioritisation and evidence-based approaches. This is possible with global solidarity and shared responsibility.

Guinea Worm
Eradication
Program

Adam Joseph
WEISS, *M.P.H.*

Support us in this historic eradication campaign

The Carter Center leads the international campaign to eradicate Guinea worm disease and works closely with ministries of health and local communities, the U.S. CDC, the WHO, UNICEF, and many others. Guinea worm disease could become the second human disease in history, after smallpox, to be eradicated. It would be the first parasitic disease to be eradicated and the first disease to be eradicated without the use of a vaccine or medicine. In 1986, the disease afflicted an estimated 3.5 million people a year in 21 countries in Africa and Asia. Today, thanks to the work of The Carter Center and its partners, cases have been reduced by more than 99.99% to 15 human cases in 2021.

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