FINANCIAL TIMES

TUESDAY 31 OCTOBER 2023 | EUROPE

Making sense of dementia's surprising fall
BIG READ, PAGE 15

The threat of a wider war in the Middle East
GIDEON RACHMAN, PAGE 17

Gaza conflict
Israel rescues first hostage

The Israeli military said yesterday it had rescued soldier hostage Ori Megidish, centre, as its ground operations against the Palestinian Islamist group Hamas drove deeper into the Gaza Strip.

Megidish was one of more than 230 hostages seized by Hamas during its brutal assault on Israeli communities on October 7 in which more than 1,400 people died. Four hostages were previously freed. Hamas released a video of three other hostages, one of whom said Israel should free Palestinian prisoners in exchange for those held in Gaza.

Prime Minister Benjamin Netanyahu has rejected calls for a ceasefire in Gaza, where Palestinian officials say more than 8,000 have died. He said it would be "to surrender to terror, to surrender to barbarism. That will not happen."

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Israel Security Agency/via Reuters

Briefing

▸ Broadcom and VMware await regulators' go-ahead
Chipmaker Broadcom and cloud software company VMware have delayed completion of their $69bn merger as they await approval by Beijing regulators, a process made complex by US rules on China's access to semiconductors.— PAGE 5

▸ War fuels oil price threat
Crude prices might soar past $150 a barrel if the Middle East conflict escalates, the World Bank has warned, risking a repeat of the 1970s oil price shock if producers cut supplies.— PAGE 2; LEX, PAGE 18

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Mourners have flocked to Li Keqiang's childhood home to pay their respects to China's former premier, posing a challenge to Beijing as it contends with a slow economic recovery.— PAGE 2

▸ Ukraine battle rages on
Russia has suffered heavy losses after launching an offensive two weeks ago against the eastern city of Avdiivka, aiming to overwhelm Ukrainian forces while the world focused on strife in Gaza.— PAGE 3

▸ HSBC upbeat on property
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▸ ArcelorMittal assets shift
The steelmaker is to transfer ownership of its operations in Kazakhstan to the government following several fatal accidents, including a coal mine fire at the weekend that killed 44.— PAGE 6

Big Four firm PwC elevates head of advisory business to be global chair

● Kande chosen to replace Moritz ● First consulting partner to fill post ● No split to business expected

STEPHEN FOLEY — NEW YORK
MICHAEL O'DWYER — LONDON

PwC has picked the head of its international advisory business to be its next chair, putting the Big Four accounting firm in the hands of a consulting partner for the first time.

Mohamed Kande's selection by PwC's global board was disclosed to partners yesterday, according to people familiar with the internal message. It will need to be ratified by member firms in individual countries in the coming weeks, after which Kande would take over from current chair Bob Moritz, whose tenure expires in June.

Kande came to PwC 12 years ago via its purchase of consulting firm PRTM; he holds the title of vice-chair of the US consulting unit as well as global advisory leader. The race for global chair was thrown open last month when Tim Ryan, PwC's US senior partner, unexpectedly took his name out of contention, breaking the tradition of the head of the US firm being elevated to the job.

Some partners outside the US had queried whether Ryan's hands-on and demanding management style was suited to a global role that involves marrying the sometimes competing interests of PwC member firms across the world. In common with its Big Four rivals, PwC operates as a network of locally owned partnerships, with the global operation largely limited to imposing common standards and managing the brand.

> Mohamed Kande is a naturalised American who grew up in Côte d'Ivoire and moved to France at 16

One person familiar with the selection process said Kande had demonstrated an "ability to bring collaborative solutions for our network".

PwC employs about 364,000 staff globally and generated revenues of $53.1bn in the 12 months to June. Like each of the other Big Four accounting firms — Deloitte, EY and KPMG — it audits the financial statements of close to a quarter of the world's biggest companies and generates tens of billions of dollars from consultancy and tax advice.

The new global chair will have to wrestle with the fallout from a scandal in Australia after it was revealed that a former partner had misused confidential data on Canberra's tax plans. The incident exposed the limits of the global leadership's oversight of member firms.

There are also persistent questions over the structure of the Big Four firms, which marry audit and tax work with giant consulting businesses. The global leaders of rival EY pushed to split that firm in two but the plan was blocked by opposition in its US audit business.

Moritz had consistently ruled PwC out of making a similar attempt, and people familiar with the selection process said that all the candidates to replace him affirmed their commitment to keeping audit and consulting together.

Kande, a naturalised American who grew up in Côte d'Ivoire and moved to France aged 16, has spoken about his diverse background and how what might be considered obstacles could instead add useful perspective to a business career.

"I am a black man. I am an immigrant. I speak English with a French accent. And my name is Mohamed," he wrote in 2021.

"Given these factors, success, or even a presence, in corporate America was far from preordained, to say the least."

PwC said the global board "undertakes a thorough succession planning, assessment, and ratification process to appoint the network chair. That process is still under way, and we do not plan to comment on the outcome until it is concluded later this year."

Wood's Ark embarks on voyage to capture Europe

Seeking to conquer ▸ PAGE 7

AfD member blocked from taking seat after arrest for keeping Nazi materials

SAM JONES — BERLIN

A newly elected far-right German politician has been arrested for sedition and possession of Nazi materials after a tense manhunt over the weekend.

Daniel Halemba, 22, had been set to take up his seat in Bavaria's state parliament when it began its new five-year term yesterday, which would have given him immunity from prosecution.

Halemba is one of the 32 parliamentarians elected for Alternative for Germany (AfD) in state elections this month, in the hardline party's best ever result in Bavaria. AfD is now the largest opposition party in the state.

Prosecutors in the city of Würzburg issued a warrant for his arrest on Friday, ahead of the new parliamentary sitting. Halemba could not initially be found, leading to fears he would evade capture and attempt to take up his seat to complicate any prosecution.

Police caught him in Stuttgart, in the neighbouring state of Baden-Württemberg at 8am yesterday. Halemba's lawyer, Dubravko Mandic, said that he petitioned Bavaria's constitutional court to have the arrest of his client reversed.

Halemba had been in prosecutors' sights for weeks. In mid-September police in Würzburg raided the premises of student fraternity Teutonia Prag after neighbours complained of regularly hearing members shouting "Sieg Heil".

Halemba, a fraternity member and leader of AfD Würzburg, was on site during the raid. Police said they confiscated a large volume of materials and that their raid "confirmed the allegations" made by neighbours.

Halemba told the Süddeutsche Zeitung newspaper after the raid that no "incriminating material" had been found. He is one of five Teutonia Prag members accused of sedition and possession of Nazi memorabilia, deemed a crime under the German constitution.

Katrin Ebner-Steiner, leader of the AfD group in the Bavarian parliament, accused investigators of pursuing a "politically motivated" agenda and of arresting Halemba "on flimsy grounds".

AfD's support in Bavaria has surged amid rising anger over immigration, inflation and a stagnant economy. The party won 14.6 per cent of the vote on October 8, up from 10.2 per cent in 2018.

The far-right party has previously struggled to gain traction with voters outside its east German heartland. In those same October elections, AfD faired even better in neighbouring Hesse, gaining 18.6 per cent of the vote.

German inflation slows page 2

Austria	€4.50	Morocco	Dh50
Bahrain	Din1.8	Netherlands	€4.50
Belgium	€4.50	Norway	NKr45
Croatia	Kn33.91/€4.50	Oman	OR1.60
Cyprus	€4.20	Pakistan	Rupee350
Czech Rep	Kc125	Poland	Zl 25
Denmark	DKr46	Portugal	€4.20
Egypt	E£80	Russia	€5.00
France	€4.50	Serbia	NewD530
Germany	€4.50	Slovenia	€4.20
Greece	€4.20	Spain	€4.20
Hungary	Ft1450	Switzerland	SFr6.70
India	Rup220	Tunisia	Din7.50
Italy	€4.20	Turkey	TL110
Luxembourg	€4.50	UAE	Dh24
Malta	€4.20		

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World Markets

STOCK MARKETS

	Oct 30	Prev	%chg
S&P 500	4150.84	4117.37	0.81
Nasdaq Composite	12766.90	12643.01	0.98
Dow Jones Ind	32775.78	32417.59	1.10
FTSEurofirst 300	1712.50	1705.85	0.39
Euro Stoxx 50	4028.32	4014.36	0.35
FTSE 100	7327.39	7291.28	0.50
FTSE All-Share	3954.67	3933.17	0.55
CAC 40	6825.07	6795.38	0.44
Xetra Dax	14716.54	14687.41	0.20
Nikkei	30696.96	30991.69	-0.95
Hang Seng	17406.36	17398.73	0.04
MSCI World $	2731.99	2740.96	-0.33
MSCI EM $	919.78	910.91	0.97
MSCI ACWI $	629.46	630.65	-0.19
FT Wilshire 2500	5304.96	5334.26	-0.55
FT Wilshire 5000	41300.70	41533.10	-0.56

CURRENCIES

Pair	Oct 30	Prev	Pair	Oct 30	Prev
$/€	1.062	1.058	€/$	0.942	0.945
$/£	1.216	1.214	£/$	0.823	0.823
£/€	0.874	0.871	€/£	1.145	1.148
¥/$	149.015	149.605	¥/€	158.247	158.267
¥/£	181.136	181.687	£ index	80.289	80.317
SFr/€	0.958	0.955	SFr/£	1.096	1.096

CRYPTO

	Oct 30	Prev	%chg
Bitcoin ($)	34505.95	34534.47	-0.08
Ethereum	1812.92	1795.64	0.96

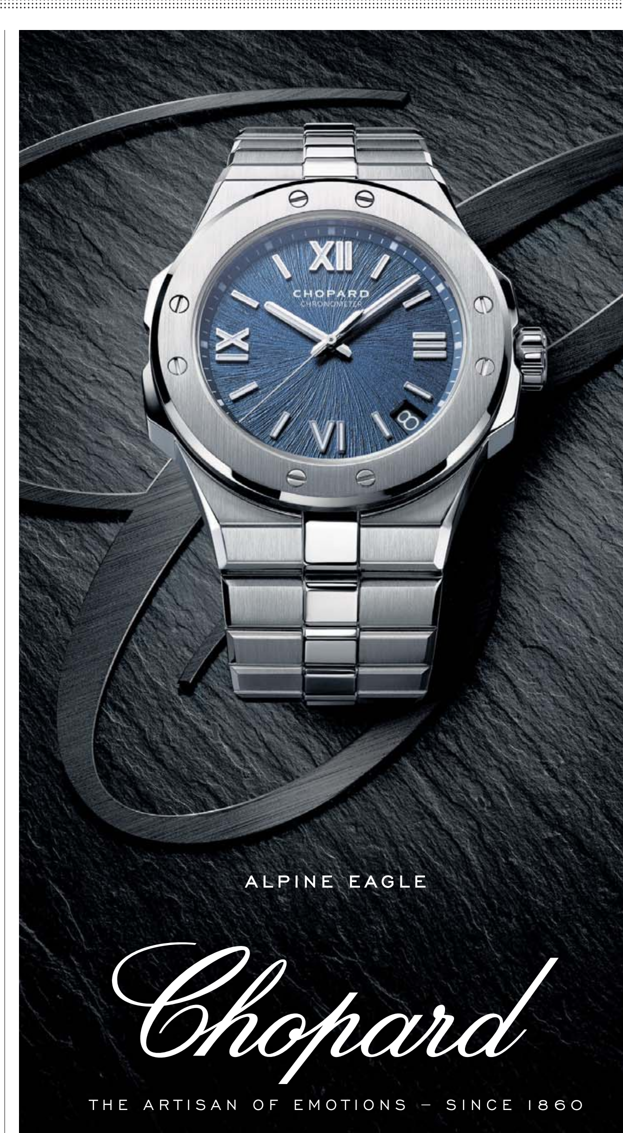
COMMODITIES

	Oct 30	Prev	%chg
Oil WTI $	82.63	85.54	-3.40
Oil Brent $	86.49	89.20	-3.04
Gold $	1982.90	1975.00	0.40

GOVERNMENT BONDS

Yield (%)	Oct 30	Prev	Chg
US 2 yr	5.05	5.05	0.00
US 10 yr	4.89	4.85	0.04
US 30 yr	5.06	5.02	0.04
UK 2 yr	4.77	4.74	0.03
UK 10 yr	4.73	4.71	0.02
UK 30 yr	5.03	5.03	0.00
JPN 2 yr	0.10	0.08	0.02
JPN 10 yr	0.89	0.87	0.02
JPN 30 yr	1.86	1.84	0.02
GER 2 yr	3.02	3.05	-0.03
GER 10 yr	2.82	2.83	-0.01
GER 30 yr	3.10	3.12	-0.02

Prices are latest for edition
Data provided by Morningstar



INTERNATIONAL

Commodities

World Bank warns of $150-a-barrel oil

Lender says energy and food costs likely to surge if Mideast conflict escalates

SUSANNAH SAVAGE — LONDON

Crude oil prices might surge beyond $150 a barrel if the conflict in the Middle East escalates, the World Bank warned yesterday, risking a repeat of the 1970s price shock if producers cut supplies.

In its quarterly commodities report, the multilateral lender said a prolonged Israel-Hamas war could drive rises in energy and food prices in a "dual shock" for commodity markets still reeling from Russia's invasion of Ukraine.

"The latest conflict in the Middle East comes on the heels of the biggest shock to commodity markets since the 1970s — Russia's war with Ukraine," it said.

Under the bank's baseline forecasts, overall commodity prices are predicted to fall 4.1 per cent in the next year, with oil prices declining to an average of $81 a barrel, down from a projected $90 a barrel in the current quarter, as world economic growth slows.

But the report said this outlook could quickly reverse if the conflict in the Middle East intensified. In a worst-case scenario, global oil supply could shrink by 6mn to 8mn barrels a day, sending prices to between $140 and $157 a barrel, if leading Arab producers cut exports. Under small and medium disruption scenarios, prices could hit $102 to $121 a barrel. Current global oil demand is about 102mn b/d.

The conflict threatens to spread beyond Israel and the occupied Palestinian territories, with energy analysts warning that global exports could be hit if leading crude producers such as Iran became actively involved.

Benchmark Brent crude prices fell more than 3 per cent to about $87 a barrel yesterday, having exceeded $89 after the outbreak of the latest conflict. Crude prices hit a record $147 a barrel in 2008 on the eve of the global financial crisis.

The World Bank said the global economy was in a better position to withstand a supply shock than in October 1973, when Arab members of Opec cut exports to the US and other countries that supported Israel in the Yom Kippur war, quadrupling crude prices.

The Middle East accounts for around 30 per cent of global oil exports, down from 37 per cent in the 1970s.

But 30 per cent is still a big share, warned Ayhan Kose, the World Bank's deputy chief economist. "When you think about oil prices, what happens in the Middle East does not stay in the Middle East. It has huge global repercussions."

The report warned that there had not yet been a full recovery from Russia's invasion of Ukraine in February 2022, which Kose described as "traumatic for commodity markets".

He told the Financial Times that a "really negative outcome" will come if an escalation in the Middle East conflict drives a persistent rise in commodity prices, which would unleash "another wave of inflation" and force central bankers to act.

This would have severe consequences for food security in poorer countries that are already facing rising levels of hunger, according to the bank. Increases in oil and gas prices would also drive up shipping and fertiliser costs, making agricultural commodities more expensive.

See Markets

Eurozone

Inflation in Germany at 28-month low as prices fall across Europe

MARTIN ARNOLD — FRANKFURT

German inflation has fallen faster than expected to 3 per cent, its lowest annual rate since June 2021, as a broad-based slowdown in prices brought some relief to consumers in Europe's largest economy.

September's deceleration in price growth, which the federal statistical agency said mainly reflected the first drop in energy prices since early 2021, came as separate figures revealed the economy shrank in the third quarter.

The stagnating economy is helping price pressures to cool rapidly after the biggest surge in the cost of living for a generation last year, underlining why the European Central Bank decided to hold its main interest rate at 4 per cent last week after a series of recent rises.

Figures for the wider eurozone to be released today are expected to show inflation in the bloc has fallen to 3.1 per cent this month, down sharply from 4.3 per cent a month earlier and a peak of 10.6 per cent a year ago.

"This likely marks the end of the rapid part of disinflation," said Salomon Fiedler, an economist at German bank Berenberg, adding that inflation may even rise "again in December before moving on a more gradual downward path towards 2.5 per cent in the second half of 2024".

The drop in the harmonised index of consumer prices in Germany from 4.3 per cent in September was bigger than forecast by economists, who had predicted a rate of 3.3 per cent in a Reuters poll.

The core rate of inflation, excluding more volatile energy and food prices, fell to 4.3 per cent from 4.6 per cent. Month-on-month inflation turned negative for the first time since May as prices fell 0.2 per cent.

"The price drops in tourism and hospitality services could be a leading indicator for a broader trend that the time for bargain-hunters has come," said Carsten Brzeski, an economist at Dutch bank ING.

There were further signs of an easing in the cost of living crisis that has hit European households. Spanish inflation was below forecast, despite hitting a six-month high of 3.5 per cent in October, while price growth slowed sharply in Ireland and Belgium.

Falling inflation is yet to provide much of a boost to German economic activity, as consumers and businesses continue to grapple with rising borrowing costs, falling house prices and lower exports to China.

German gross domestic product fell 0.1 per cent in the three months to September on the previous quarter, the federal statistical agency said yesterday. That was a milder contraction than the 0.2 per cent drop forecast by economists, but it confirmed Germany's place as one of the weakest major economies.

Germany's key manufacturing sector has also been hit by a jump in energy costs linked to a shift from Russian gas imports after Russia invaded Ukraine.

"Despite falling inflation and stronger wage increases, private consumption is unlikely to recover for the time being," said Jörg Krämer, chief economist at Commerzbank, pointing to a recent fall in already weak consumer confidence.

EU donation

Ghana given 105 military vehicles from seized ship

AANU ADEOYE — LAGOS
HENRY FOY — BRUSSELS

The EU has donated more than 100 armoured military vehicles to Ghana that were originally seized from a ship off the coast of Libya, as part of efforts to shore up the west African nation's security.

Josep Borrell, the EU's chief diplomat, formally handed over the 105 vehicles to Ghana's armed forces on Saturday during a visit to the country.

The military equipment, which includes armoured cars, was seized from a Libya-bound ship last year by an EU maritime task force, two senior EU officials told the Financial Times. The task force inspects vessels suspected of breaching the UN arms embargo on Libya. The EU has not disclosed the origin of the shipment or the previous owners of the cargo.

The donation to Ghana comes as the EU seeks to increase support for friendly states in west Africa amid fears that the decade-long insurgency crisis in the Sahel, the semi-arid strip south of the Sahara, will spill into the relatively peaceful coastal countries in the region.

The transfer of the confiscated vehicles — which were stored in the port at Marseille after being captured as part of one EU initiative and then donated by another — is the first time such a mechanism has been used, according to one of the EU officials, who said member states agreed this was a better outcome than destroying them.

Borrell, who met Ghana's president Nana Akufo-Addo and senior security officials during the trip, said the vehicles were part of a €20mn support package for the country's military.

"Further equipment will also be delivered in the future: aerial surveillance, electronic warfare [systems] and river crafts," Borrell added.

"We are confident that this support will benefit not only Ghana but the entire subregion [of the Gulf of Guinea] as well."

Sahelian states such as Mali, Burkina Faso and Niger have been battling al-Qaeda and Isis affiliates for more than a decade in a conflict that has killed thousands and displaced millions more.

Li Keqiang

Outpouring of grief for 'people's premier'

Floral tributes: bouquets pile up outside the childhood home of the late Li Keqiang in Hefei, Anhui province — Kyodo

Hundreds of mourners have flocked to Li Keqiang's childhood home to pay their respects to the former Chinese premier, creating a potential political challenge for President Xi Jinping.

The popular outpouring for Li, who died suddenly last week aged 68, was mirrored in cities across the country and on Chinese social media, with many contrasting the late premier's relatively down-to-earth style with that of his more aloof colleagues.

The public outburst of grief for the reformist politician who many saw as the "people's premier" presented a delicate situation for the ruling Communist party as it contends with a slow economic recovery and geopolitical tensions, analysts said.

"We have a lot of other leaders who are corrupt but he wasn't one of them," said one woman who attended the same school as Li and had joined a crowd of mourners, watched over by rows of guards, placing flowers around the home where Li spent part of his childhood in Hefei in Anhui province.

"He cared for the poorest of society," she added, wiping back tears.

A trained economist who headed Xi's cabinet for a decade between 2013 and 2023 before he was replaced in March, Li was once seen as a possible contender for president. During his tenure as premier, China's second-highest role, Li advocated for market-oriented reform and anti-poverty programmes. But he was gradually sidelined under Xi.

The death of a senior leader is often a sensitive moment for the Communist party, which must balance paying respects to former officials and defining their legacy with preventing the occasion from encouraging protests or an opportunity to draw unfavourable comparisons with the current leadership.

"Sometimes to praise the path not taken is to make a comment on the path that was taken," said Wen-Ti Sung, a fellow at the Atlantic Council Global China Hub. "For some, Li Keqiang represented a relatively more laissez-faire attitude towards state-society relations, and he stood for allowing more space for societal and market forces."

Xi faced a similar situation in November when former president Jiang Zemin, who presided over a period of high growth and relative economic openness, died aged 96.

Jiang's death coincided with the outbreak of "white paper protests" against Xi's stringent zero-Covid lockdowns, where demonstrators held up pieces of blank paper in an allusion to censorship and intolerance of criticism of the pandemic controls. Soon thereafter, Xi abandoned the policy.

At Li's former residence in Hefei, an elderly woman angrily claimed that the provincial and city governments should be doing more to honour Li. Beijing has yet to announce plans for a state funeral.

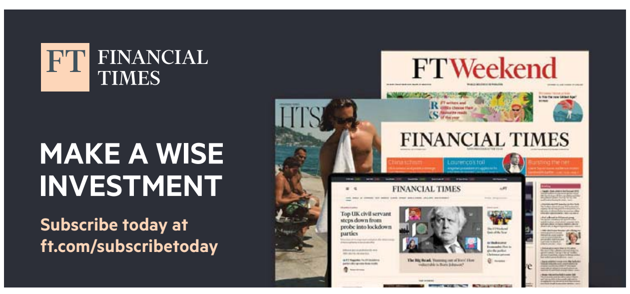
Bystanders were reluctant to discuss the current government. "We can't say much because of the overall situation here. All we can say is, people love Premier Li," the elderly woman said.

At Jiuzi village, an hour and a half from Hefei and the site of Li's ancestral home, hundreds of people added bouquets to a sea of flowers in front of a simple, thatched-roof farmhouse. One bouquet, donated by a construction company, quoted a line that Li used last year during the pandemic to try to reassure investors that China would not close its doors to the outside world.

"The Yangtze River and Yellow River will not flow in reverse," it said. "China's open door will definitely not be closed."

The card concluded: "Good premier of the people, rest in peace."

Sun Yu and Joe Leahy in Hefei



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Regulation

Biden orders tech groups to share AI safety test results

STEFANIA PALMA — WASHINGTON
GEORGE HAMMOND — SAN FRANCISCO

Companies with artificial intelligence models that threaten US national security will have to share how they are ensuring their tools' safety, under an order by Joe Biden intended to curb the risks posed by the technology.

The order, which the US president issued yesterday, is the broadest step taken by the administration so far in tackling AI threats, from national security to competition and consumer privacy. The measure seeks to mobilise agencies across Washington, including the departments of commerce, energy and homeland security.

"President Biden is rolling out the strongest set of actions any government in the world has ever taken on AI safety, security and trust," said Bruce Reed, White House deputy chief of staff.

"It's the next step in an aggressive strategy to do everything on all fronts to harness the benefits of AI and mitigate the risks."

The order comes as countries across the world grapple with how to regulate AI companies and models not captured by individual watchdogs. Gary Gensler, chair of the US Securities and Exchange Commission, told the Financial Times recently that a financial crisis was "nearly unavoidable" within a decade if regulators failed to manage AI risks.

The measures come two days before vice-president Kamala Harris, the Biden administration's AI tsar, is set to give a speech in London about US policy, before attending the UK's Bletchley Park summit, where world leaders and tech company executives will discuss potential ground rules for the development of "frontier AI".

The EU has moved rapidly, drafting tough measures over the use of the technology in a groundbreaking law that is set to be fully approved by the end of the year. But the US is still assessing which aspects of it require new regulation and what is subject to existing statutes.

Leading industry figures, including OpenAI co-founder Sam Altman, have toured the globe this year to discuss the potential impact of the tools they are developing. Altman and others have struck a conciliatory tone with regulators but resisted calls to stall or slow the development of AI. In May, Altman said his company could "cease operating" in Europe if Brussels' efforts to regulate the technology were overly stringent. He later withdrew the comments.

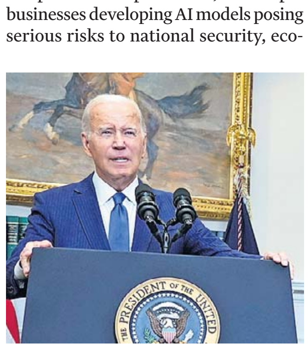
Biden's order escalates US AI policy after 15 companies — including Amazon, Google, Meta, Microsoft, and OpenAI — made voluntary commitments this year to manage the risks.

The White House will use the Defense Production Act, a cold war law used at the peak of the pandemic, to compel businesses developing AI models posing serious risks to national security, economic security or public health to notify the government when training these systems and to share their safety test results. To date, companies vying for AI dominance have typically preferred to keep the designs of their models private.

"If organisations don't adhere to that law, we could bring Department of Justice actions in appropriate manner to enforce that," said the senior official. But he stressed that these requirements would "primarily" capture the next generation of the world's most powerful AI tools and would not "catch any system currently on the market".

Under the order, the commerce department must craft guidance on adding watermarks to AI-generated content in a bid to tackle "fraud and deception", including deepfakes.

The order addresses privacy risks, urging Congress to pass data privacy legislation while seeking an assessment of how agencies collect and use "commercially available information". It also calls for measures to curb harms caused by AI on workers and medical patients as well as "algorithmic discrimination" in housing, healthcare and justice.



Security move: President Joe Biden aims to 'mitigate the risks' from AI

Elaine Moore see Opinion

Fresh Russian offensive targets key eastern city ahead of winter

Moscow suffers heavy losses of troops and equipment in battle for Avdiivka

CHRISTOPHER MILLER — KYIV

While much of the world's gaze turned to the conflict in the Middle East, Russia launched a ground offensive in Ukraine, seeking to gain momentum in a war that has devolved into a gruelling fight of attrition.

For more than two weeks, Russian forces have zeroed in on the eastern industrial city of Avdiivka, using so-called human waves, air-dropped bombs and heavy artillery to try to overwhelm Ukrainian forces and encircle them. If successful, this offensive would mark a rare battlefield victory for Russia this year.

US and Ukrainian officials estimate that Russia has deployed at least three battalions with thousands of soldiers in the fight for Avdiivka, which started on October 9 and comes at a crucial moment as both sides seek to seize the initiative before winter sets in and temperatures plunge below freezing.

The Russian offensive threatens to draw Ukrainian attention and resources away from its counteroffensive in the south, where Kyiv still hopes for a breakthrough after months of limited success against Russia's heavily fortified defences.

Ukrainian officials and military analysts say the offensive, which is Russia's largest since February, has come at huge cost, with Russian forces suffering huge

> 'We have information the Russian military has been executing soldiers who refuse to follow orders'

losses in manpower and weaponry for the small gains they were able to make.

According to Ukraine's military, some 5,000 Russian soldiers have died or were injured near Avdiivka in the past two weeks, with more than 1,000 personnel, 55 tanks and 120 armoured fighting vehicles lost on October 19 alone. Figures could not be independently verified by the Financial Times.

But Ukrainian armed forces posted several videos showing the destruction on the Russian side, including footage of Ukrainian suicide drones and artillery hitting infantry soldiers and destroying dozens of tanks and other weaponry.

White House National Security Council spokesman John Kirby said on Thursday that Russia suffered "thousands of casualties in their effort to conduct this offensive" as it throws swarms of untrained soldiers into the fight.

"We have information that the Russian military has been actually executing soldiers who refuse to follow orders . . . [or] seek to retreat from Ukrainian artillery fire," Kirby said.

As was the case during Moscow's previous winter offensive, Kirby added, Russian forces appear to again be employing "human wave tactics", when troops storm head-on in repeated surges to overrun frontline positions.

Ukrainian president Volodymyr Zelenskyy told UK prime minister Rishi Sunak during a call on Friday that Russia had lost "at least a brigade" trying to besiege and capture Avdiivka.

"Our soldiers stopped them and pushed them back, causing painful losses," Zelenskyy said. He added that he expected the attacks to continue and "Russia will continue to try to occupy the entire Donbas", referring to the eastern regions of Donetsk and Luhansk.

General Oleksandr Syrskyi, commander of Ukraine's ground forces and architect of last year's successful counteroffensive, described the current conditions along the 600-mile front line as "difficult" and "challenging". His troops were also facing Russian attacks around Bakhmut, the city captured by Wagner troops in May after 10 months of relentless fighting, he told Ukrainian media.

Kirby noted that Russian forces had also stepped up attacks in the north-eastern towns of Lyman and Kupiansk, both of which had fallen under Russian control in the first weeks of the full-scale invasion before being retaken by Ukraine last autumn. In recent weeks, Russian artillery has pounded both towns, further reducing them to rubble.

Avdiivka had a prewar population of 30,000 people, including some 2,000 employees who worked at the city's coke factory. The factory is now closed and its employees evacuated. The city has been in Russia's crosshairs since the war in eastern Ukraine first broke out in 2014. Several civilians were killed by Russian artillery barrages in 2017 but Ukrainian forces did not cede ground.

Dubbed "the gateway to Donetsk" as it sits just five miles north-west of the regional capital, which was captured by Russia in 2014, Avdiivka has been crucial to Ukraine's efforts to keep pressure on Russia's supply lines in the area.

Positioned in a tight crescent around Avdiivka, Russian forces first attacked from the north-west near the village of Krasnohorivka and south-west near the villages of Sieverne and Opytne.

"Russian gains have been modest over the past two weeks and with high costs, but the problem is that Russia controls the flanks of the city," said Rob Lee, a senior fellow at the Foreign Policy Research Institute.

Particularly worrying is the fact the Russians have managed to narrow the gap allowing Ukrainian troops to enter and leave the city to just 7km. "Even further advances of one to two kilometres from the flanks could make it more difficult to resupply the city," Lee said.

A Ukrainian reserve officer who operates the analytical group Frontelligence Insight said Russian forces had been using air-dropped bombs to severely damage Avdiivka, including its civilian infrastructure.

Konrad Muzyka, director of Rochan Consulting, a Poland-based group that tracks the war, said Russia's overall objective in Avdiivka was to gain access to the M-04 highway and restore train traffic on the Yasinovata-Donetsk railway line that was severed in 2014. That could allow Russia another supply route for its forces further south. "Without a properly functioning logistic system, the Russian ability to sustain its forces in the Donetsk and Zaporizhzhia [regions] may face some hurdles during the upcoming winter," he added.

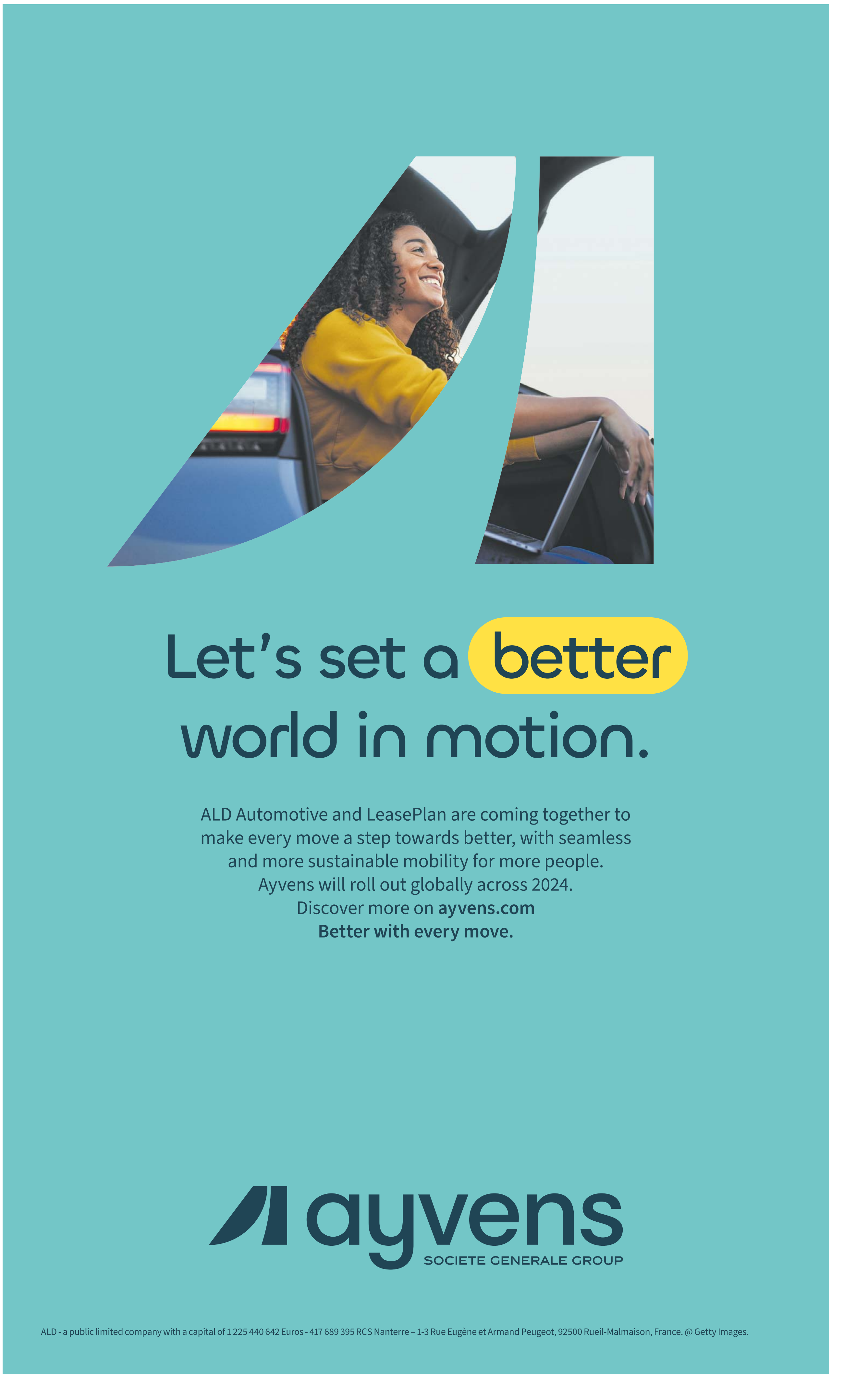
Some observers and analysts fear the situation in Avdiivka could turn into another Bakhmut — a gruelling, months-long battle that turned the city into a hellscape.

Zelenskyy and Ukraine's top military brass justified the decision to defend Bakhmut to the bitter end by arguing they managed to also force Russia to use up crucial munitions and tie up its best units. With Ukraine putting up a strong defence of Avdiivka, Russia will almost certainly need to pour in even more resources.

Kirby said the US expected more Russian assaults. "This is a dynamic conflict and we need to remember that Russia still maintains some offensive capability and may be able to achieve some tactical gains in the coming months."

> 'Our soldiers stopped them and pushed them back, causing painful losses'

War damage: a woman stands with her cat on the balcony of a partially destroyed building in Avdiivka. Below, a statue of a Soviet soldier remains intact after a Russian rocket strike
Vlada Liberova/Libkos/Getty Images; Kostya Liberov



IDF advance

Israeli forces push into Gaza as first hostage rescued

Soldier freed from captors amid 'systematic progress one step at a time'

JAMES SHOTTER AND GUY CHAZAN — JERUSALEM
MAI KHALED — GAZA

Israeli ground forces drove deeper into the Gaza Strip, rescuing a hostage held by Hamas, as the war threatened to escalate on multiple fronts.

The Israeli military said yesterday that it had deployed additional "infantry, armour, engineers and artillery" in Gaza and had killed dozens of Hamas militants in the territory, while Palestinians said Israeli forces had reached the outskirts of Gaza City.

At a time of mounting concern about the fate of more than 230 hostages captured by Hamas, Israeli military and intelligence authorities said an Israeli soldier, Ori Megidish, had been freed during ground operations by the Israel Defense Forces.

At the start of a war cabinet meeting, Benjamin Netanyahu, Israeli prime minister, said the IDF was expanding its presence in Gaza "in measured, very powerful steps, making systematic progress one step at a time".

He added: "Calls for a ceasefire are a call for Israel to surrender to Hamas, to surrender to terror, to surrender to barbarism. That will not happen."

Megidish is the first hostage to be rescued to date, although Hamas released four abductees last week. Hamas released a video of three other hostages in what Netanyahu described as an act of "brutal psychological propaganda". In the video, a woman identified as Danielle Aloni, a 44-year-old from the town of Yavneh, said Palestinian prisoners should be released by Israel to allow her and the captives to return home.

Netanyahu, who has been criticised by the families of some hostages, later said Israel was "doing everything to return the hostages and missing home".

The death was also confirmed of Shani Louk, a 22-year-old German-Israeli woman believed to have been abducted by Hamas.

The IDF said it was ratcheting up its activities in Gaza, although it declined to provide details of troop locations.

However, footage posted online appeared to show an Israeli tank and bulldozer on the outskirts of Gaza City on Salah al-Deen Road, the main inland north-south axis in the territory. Bashar, a freelance cameraman travelling with the person who filmed the video, said the tank had shelled a private car in front of them as well as a "small bus".

The IDF says it has hit more than 600 targets in Gaza in recent days, including weapons depots. The UN's humanitarian arm said yesterday that some strikes over the weekend had been in the vicinity of hospitals. Israel has also severely limited supplies of electricity, water, fuel and food to the enclave, prompting aid agencies to warn of a burgeoning humanitarian catastrophe.

US secretary of state Antony Blinken spoke to Qatari prime minister Mohammed bin Abdulrahman Al Thani yesterday about the humanitarian crisis in Gaza and efforts to release the hostages.

Diplomats are seeking to prevent the hostilities from spilling over into a broader regional conflict, with the US warning Iran and its proxies to stay out of the fighting.

But Israel's air force bombed "military infrastructure" in Syria overnight after rockets were launched from the country, and one of its jets targeted militants in the city of Jenin in the West Bank. Palestinian health ministry officials said four Palestinians had died.

See The FT View/Opinion/Lex

FT More on FT.com
For live updates and analysis, plus the conflict in maps
ft.com/israel-hamas-war

Dwindling resources

Enclave doctors operate without anaesthetics

MAI KHALED — KHAN YOUNIS
HEBA SALEH — CAIRO

Omar Ahmed was injured in an Israeli strike. The 25 year-old's treatment at the Nasser hospital in Khan Younis, southern Gaza, is the story of a medical system close to collapse.

During his five days on the ward, he has never had a moment without pain. His burns were cleaned without anaesthetic and he was left to recover with painkillers that "are not strong enough".

The overcrowded room he shares with five other serious burns patients has power cuts for long periods. Without cooling, the heat made him sweat, which he said inflamed his wounds.

His stay may be cut short. "The hospital asks people to leave when they are 60 or 70 per cent cured," said Ahmed, whose leg was also broken in a blast as he tried to flee northern Gaza. "I don't know what I would do if I had to go."

The 350-bed Nasser hospital in Khan Younis is no outlier. After three weeks of heavy Israeli bombardment, medical services in Gaza are on the brink. But exhausted staff are doing what they can with the fast-dwindling resources.

> 'We cannot deal with difficult cases or where there is no hope of saving a life'

Israel has cut mains electricity to Gaza and the Nasser hospital is low on fuel for its generators. Medical supplies are also running out. Surgery is sometimes performed without routine anaesthesia, say doctors. The priority is to keep stocks in reserve for difficult cases.

"We have performed C-sections on pregnant women who were injured in the bombardment without anaesthesia and we have also had to clean up severe burns without it," said Nahhed Abou Taima, director of the Nasser hospital. "We are extremely short [of supplies]."

Taima fears that the fuel needed to keep the generators going is also running low. "We need between 200 and 300 litres every hour. We get what we can from petrol stations, but we can run out any minute," he said. The generators are also at risk of breaking down.

About 2.3mn people are packed into Gaza, living under what UN officials call disastrous humanitarian conditions. Ashraf al-Qudra, from the Hamas-run health ministry, said 12 hospitals and 32 medical facilities had been shut since the conflict started this month.

"The fact that hospitals remain open does not mean they are capable of offering services to the floods of injured and sick who go there," said al-Qudra.

Israel has also issued evacuation orders for some hospitals, including Dar al-Shifa in Gaza City, that are still running, claiming that the medical sites are used by Hamas as military staging posts.

Médecins Sans Frontières, the international medical charity, described the demands on an already overwhelmed hospital system as "impossible and dangerous". The International Federation of Red Cross and Red Crescent Societies said it was "deeply alarmed" by reports that medical teams at al-Quds hospital in Gaza City had been ordered to immediately evacuate.

"Evacuating patients, including those in intensive care, on life support and babies in incubators, is close to, if not impossible in the current situation," the IFRC said. "Our teams also report violent attacks and shelling close to the hospital, further endangering people."

More than 8,000 Palestinians have been killed by Israeli strikes on Gaza, the health ministry claims. Israel launched the retaliatory strikes after Hamas militants killed at least 1,400 Israeli civilians and soldiers on October 7, according to the government.

At the Nasser hospital, ambulances deliver the wounded to an emergency department so overwhelmed that doctors treat patients on the floor. Many are covered in dust and ashes after being pulled from bombed homes.

Adults carry in wounded children crying or shaking from shock. Families learn of the death of relatives. The injured scream with pain.

During Israel's heaviest night of bombing last Friday, communications were cut across the territory. Ezzeddin Mekheimar, an ambulance worker at Nasser hospital, said delays in reaching injured people on that night "definitely added" to the number of deaths.

"We just headed in the direction of smoke plumes or fires," he said. "Sometimes people who brought the wounded in cars told us where to go."

Ashraf al-Shanty, another paramedic, said nothing he had seen in past conflicts had been as intense. "We go to places that have been bombarded to find entire families killed or injured."

Hospital director Taima said they had had to squeeze in an extra 100 beds to cope. The surgery department has also been expanded. "Eighty per cent of our beds now are for surgery," he added. "There isn't a single empty bed."

The hospital has also had to expand its intensive care to help the severely injured. "Anyone who comes now with a heart attack has to be treated in an ordinary room without the necessary equipment," said Abd Rabbo al-Atrush, head of the intensive care unit.

"We cannot deal with difficult cases or where there is no hope of saving a life."

Contracts & Tenders

ΕΣΠΑ 2014-2020 Partnership Agreement 2014 - 2020
European Union European Regional Development Fund
gastrade

Invitation to a Tender (ITT) for the Supply of Commissioning Cargo and Relevant Services at Alexandroupolis INGS for the construction of the Alexandroupolis Independent Natural Gas System (Alexandroupolis INGS) Project:

The Project is being developed by the Greek utility company GASTRADE S.A. and comprises an offshore floating, storage and regasification unit ("**FSRU**") for the reception, temporary storage and regasification of LNG, a spread mooring system and a system of a HP subsea and onshore gas transmission pipelines, through which natural gas will be delivered to the Greek Transmission System ("**NNGTS**") and onwards to the final consumers.

The FSRU will be located in the sea of Thrace, 17.6 km SW of the town of Alexandroupolis in NE Greece at an offshore distance of approximately 5.4 n.m. (10 km) from the nearest shore. For the Terminal to become operational, quantities of LNG must be injected into the Terminal and the NNGTS, to be used for the testing and commissioning activities. The Supplier will provide the Company with the Services of such activities.

The Project is expected to be financed through own resources with co-financing from public funds. Public funds will be provided through the Greek Public Investment Programme (codes: 2021ΣΕ17510003 and 2021ΣΕ175100040, partly through national participation and partly through the European Regional Development Fund (ERDF), within the 2014-2020 programming period and under the Operational Programme "Competitiveness, Entrepreneurship and Innovation 2014-2020 (EPAnEK)".

Commercial Operation Date for the Project is planned for **Q1 2024.**

Participants wishing to submit their proposals in this Tender are kindly requested to send an email to i.lysaridis@gastrade.gr and v.galiotou@gastrade.gr to the attention of Mr. Iraklis Lysaridis in order to receive the Tender Documents.

Deadline for receipt of proposals is: **05/12/2023, 12:00 CET**

Military. Strategy

Hard-hitting: Israeli tanks and bulldozers take part in manoeuvres inside the Gaza Strip on Sunday — Evelyn Hockstein/Reuters

Tactics of caution and minimising losses guide Israel's ground offensive

Limited initial foray means troops can more easily be provided with air support

FT REPORTERS

Israel responded to Hamas's assault on October 7 with the biggest mobilisation in the nation's history, but when its tanks and troops finally entered Gaza at the weekend, it was not the full-scale invasion some had expected.

Current and former officials said the seemingly limited scope of Israel's initial incursion, which Prime Minister Benjamin Netanyahu has dubbed the "second stage" of Israel's war with Hamas, reflected a complex mix of factors. But above all, Israel wanted to maximise its firepower advantage over Hamas and minimise its own casualties, while attempting to avoid drawing other adversaries into the war.

On a tactical level, the smaller than expected footprint meant ground troops could more easily be provided with close air support; crucial cover for entering parts of northern Gaza where Hamas has spent years preparing defences, according to one person familiar with Israel's battle plans.

"We are not taking any chances," said Amir Avivi, former deputy commander of the Gaza Division of Israel's military. "When our soldiers are manoeuvring we are doing this with massive artillery, with 50 aeroplanes overhead destroying anything that moves."

Officials say the fighting in Gaza will be intense: Hamas has trained for urban combat and has built a network of tunnels, dubbed the Gaza Metro, which helps move fighters and weapons undetected. The militants also have an arsenal of anti-tank weapons and improvised explosive devices.

In a taste of battles to come, Israel's military on Sunday engaged with Hamas militants who emerged from a tunnel near the Erez border crossing.

"The only thing worse than combat in urban terrain is combat in the rubble of urban terrain. There are so many places where they can hide and carry out ambushes," said Eyal Hulata, who was head of Israel's National Security Council until earlier this year.

"When the Israeli military becomes static, they are more vulnerable. That's why you see them in slow but constant movement, [being] very careful in securing the places they are already in."

The Israel Defense Forces has been tight-lipped about the deployments for one of its most important operations in decades, but officials say the gradual build-up of forces aims to reduce the likelihood of Hizbollah, the Iran-backed Lebanese militants that fought with Israel in 2006, joining the conflict.

Committing fewer troops in Gaza would also mean manpower could be deployed more easily to the north if Hizbollah, which has been engaged in escalating cross-border skirmishes with Israeli forces, did enter the war, said a person familiar with Israel's plans.

"The messaging for the Israelis [on the land offensive] is very deliberate," said a western diplomat. "They have been worried that Hizbollah and Iran might see the land invasion as a trigger for some sort of escalation, that's why they have not called it a land invasion."

The limited initial incursion was also a reflection of Netanyahu's pledge to destroy Hamas and remove it from Gaza being too big to complete quickly, said Yaakov Amidror, a fellow at the Jewish Institute for National Security of America and ex-national security adviser.

"The goal is not a tactical one that we will achieve tomorrow," he said, adding that he expected the operation to last between six months and a year.

"What you are seeing is cautiousness on a tactical level — why should we lose more soldiers than necessary? — and an understanding that the goal is so big that it cannot be achieved in the next week."

Others think the scale of the initial foray is a sign that Israel is aiming for something less ambitious.

"It seems that their aims are short of completely eliminating Hamas from Gaza. It seems instead they are in the space of wanting to degrade both the military infrastructure and kill the leadership," said one western diplomat. "But they still have not really spelt out what the end objective is, maybe because they haven't really worked it out."

Israeli officials insist they will not be swayed by international pressure to rein in their armed forces before they have decisively defeated Hamas, whose militants killed more than 1,400 on October 7, the government has said. Ministers also add the initial incursions will raise pressure on Hamas to release the more than 230 hostages captured that day.

"In this war there is no 'diplomatic hourglass', but an operational clock and a human commitment for the return of the kidnapped," Benny Gantz, a member of Israel's war cabinet, said on Saturday. "We will listen to our friends, but we will do what is right for us."

Others are less sure. Former prime minister Ehud Olmert, who oversaw major ground operations in Gaza and Lebanon, said Israel probably had less time than the war cabinet believes to realise its goals, given the images of destruction emanating from Gaza.

Israeli strikes have killed 8,005 in Gaza and injured more than 20,000, claim Palestinian officials. The UN has warned that Israel's decision to severely restrict supplies of electricity, fuel, water and goods to Gaza has brought it to the brink of a humanitarian collapse.

"The time is shorter than [the war cabinet] think," said Olmert. "Until now, [the US] gave us 'presents'. In future, they may give us orders."

Israel's initial moves into Gaza came near Beit Hanoun in the north of Gaza and Bureij in the centre. Analysts say the approach suggests Israel may try to slowly surround Gaza City, which Israeli officials claim is the base for much of Hamas's military infrastructure.

Amos Harel, a military correspondent and author of a book on the Israeli-Palestinian conflict, said Israeli forces had moved 3km to 4km inside Gaza, but were not yet engaged in urban combat. "The logic seems to be to apply pressure, force Hamas fighters out [of their tunnels] and then strike them," he said.

The person familiar with Israel's battle plans said that as of Sunday morning the resistance Israel had encountered had not been "major" and it was unclear why Hamas had not fired more anti-tank missiles at the IDF's armoured vehicles as they entered Gaza.

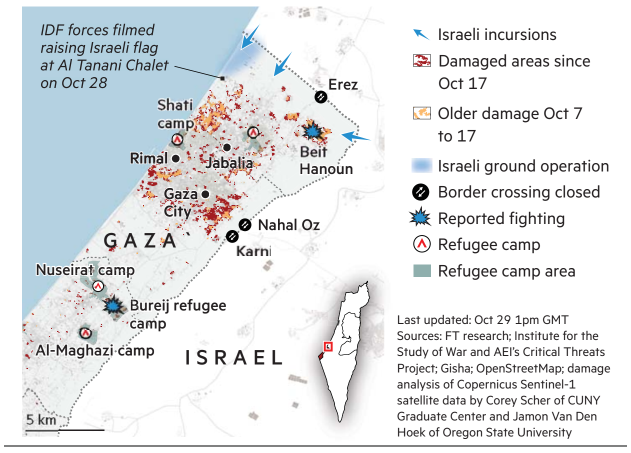
But others cautioned against reading too much into Hamas's response at this early stage, especially since Israel's intelligence misjudged the group's capabilities and intentions earlier this month.

"Everything that has happened since October 7 has been a huge surprise," pointed out Hulata.

"So I would be very careful in making assessments of what Hamas can and cannot do."

Reporting by James Shotter in Jerusalem, Neri Zilber and Mehul Srivastava in Tel Aviv, and Andrew England in London

Israel's ground offensive in Gaza so far



Last updated: Oct 29 1pm GMT
Sources: FT research; Institute for the Study of War and AEI's Critical Threats Project; Gisha; OpenStreetMap; damage analysis of Copernicus Sentinel-1 satellite data by Corey Scher of CUNY Graduate Center and Jamon Van Den Hoek of Oregon State University

Deceleration Softer demand than expected for electric vehicles causes US carmakers to pause expansion plans ➔ PAGE 6

Companies & Markets

Beijing stalls $69bn tie-up of Broadcom and VMware

- Groups expect deal to close 'soon'
- US-China friction linked to impasse

BY FT REPORTERS

US chipmaker Broadcom and cloud software company VMware have delayed completion of their $69bn merger, which had been scheduled to close yesterday, as they await approval from China.

The companies said they maintained their "expectation that Broadcom's acquisition of VMware would close soon, but in any event prior to the expiration of their merger agreement", which set a deadline of November 26.

Chinese regulators have considered holding up the deal, announced in May 2022, after the US tightened rules to block Chinese access to high-performance semiconductors.

> 'Never before has there been such uncertainty over the fate of such a large acquisition'

Broadcom and VMware did not mention China directly but said they expected to "close [the] transaction promptly following satisfaction of [a] remaining condition". China was not listed among the territories that have approved the deal, which include the EU, Japan, South Korea and the UK.

There was "no legal impediment to closing under US merger regulations", indicating that US antitrust authorities had not objected. That leaves China as the last big market from which Broadcom is yet to receive approval.

People close to the matter in China have said geopolitical friction between Washington and Beijing hung over the deal's approval.

Ahead of the deadline, both companies had proceeded as if closing was imminent. VMware shareholders last Monday faced a deadline for deciding to take payment in Broadcom shares or cash of $142.5 per share at closing, and about 96 per cent chose Broadcom shares.

These shareholders have in effect been unable to touch their shares since then and trading in VMware shares has dried up to a fraction of its regular volume.

Shares in Broadcom and VMware were broadly flat in early afternoon trading yesterday.

Mark Kelly, chief executive of MKP Advisors, an advisory company, said yesterday's statement was the "first public admission by the companies that they cannot close as planned".

He added: "Never before has there been such uncertainty over the fate of such a large acquisition so close to a supposed deadline for it to be closing."

The delay will leave investors hoping that a thaw in US-China relations could open a path to approval. Xi Jinping, Chinese president, is expected to meet Joe Biden, his US counterpart, in San Francisco next month for the Asia-Pacific Economic Cooperation summit.

China's State Administration for Market Regulation did not respond to requests for comment.

Moving forward without China's approval could be highly damaging for Broadcom. The San Jose group derives about a third of its revenue from shipments to China and lawyers say it could face fines of up to 10 per cent of revenues for closing without China's sign-off.

In 2018, Donald Trump, then US president, blocked Broadcom's $142bn bid for Qualcomm, the chipmaker, citing national security concerns.

Reporting by Tim Bradshaw, Arash Massoudi and Maxine Kelly in London; Cheng Leng and Qianer Liu in Hong Kong; Ryan McMorrow in San Francisco; and Ding Wenjie in Beijing

Return to sender Deutsche Bank to close almost half of Postbank's branch network

Deutsche says it will significantly improve Postbank's digital offering while closing branches — Schoening/Alamy Stock Photo

OLAF STORBECK — FRANKFURT

Deutsche Bank is preparing to axe almost half its Postbank branches as Germany's biggest lender embarks on a shake-up of the group's lacklustre retail operations.

Claudio de Sanctis, Deutsche's new head of private banking, said the lender planned to close as many as 250 of Postbank's 550 remaining branches over the next two years.

Postbank, which serves Germany's mass retail market, has been a problem for Deutsche since it took full control of the group in 2010. The decision to make deep cuts to the branch network comes as the bank tries to appease angry customers after a botched IT migration disrupted services over the summer.

De Sanctis insisted that Deutsche would significantly improve Postbank's digital offering. With 19mn customers, Deutsche is one of Germany's largest retail banks but the business has historically been a drag on the overall group's performance.

While higher interest rates have recently helped the retail business, Deutsche has resolved to make changes. Its separate network of Deutsche-branded branches will also be scaled back, said de Sanctis, while declining to say how many would go.

Despite a deep-rooted habit of using cash in Germany, the country's dense network of branches has shrunk by 43 per cent over the past decade as customers move online. Lenders have closed more than 15,000 branches since 2013.

The drawn-out and messy migration of Postbank's 12mn customers to Deutsche's IT platform, which finished over the summer, has injected greater urgency into efforts to improve online banking.

Shortly after the migration was completed, thousands of Postbank customers were locked out of their accounts and the bank's helplines were overwhelmed. Germany's financial watchdog BaFin rebuked the lender over the failures and has installed a special monitor to oversee how it fixes the issues.

"At the moment, we're dealing with a peak of problems that is going to be resolved by the end of the year," said de Sanctis, adding the bank had already made "significant progress".

De Sanctis previously ran Deutsche's wealth management business before being appointed to lead its retail operations earlier this year.

Many Postbank branches have long been unprofitable but Deutsche was unable to close them because of a long-term contract with postal service Deutsche Post DHL, which previously owned Postbank. Deutsche has renegotiated the contract with Deutsche Post DHL, which means it can cut the branch network by mid-2026.

BlackRock warns mining aversion will hit transition

HARRY DEMPSEY

BlackRock, the world's largest asset manager, has warned that investor reticence towards mining risks starving the sector of capital and stymying the energy transition by creating shortages of metals vital for green technologies.

Evy Hambro, global head of thematic and sector-based investing at the US group, said funding needed to flow into the industry to ensure an adequate supply of materials for products from wind turbines to electric cars as well as to upgrade power grids. "If people don't give this sector a chance, then the energy transition is going to be impeded by the scarcity of materials to build everything required," he said.

The mining sector remains unloved by investors despite record profits for many big companies last year, and despite expectations of a boom in demand for metals such as copper, iron and nickel to supply the technologies and infrastructure required to reduce the world's dependence on fossil fuels.

Valuation multiples for miners have been languishing, according to Hambro. BHP, Rio Tinto, Glencore, Anglo American and Vale have an average price to forward earnings ratio of 8.5 times versus 18.5 for the S&P 500, according to S&P Capital IQ and Refinitiv.

"The further you get away upstream from the renewable power companies, the lower the multiples go," said Hambro. "But you can't have the renewable power companies . . . without everything upstream of them. There's this massive gap in valuation."

Mining companies are often excluded from environmental, social and governance investment frameworks but the sector's contribution to decarbonising the global economy has been "overlooked", said Hambro, who co-manages the BlackRock World Mining Trust.

Many investors are still wary of the sector because of its inherently cyclical nature and since the industry squandered billions of dollars on ambitious projects and takeovers during the commodities boom to feed the rise of China during the 2000s.

The New York-based asset manager yesterday warned in a report that metals needed for the "monumental" shift from an economy based on fossil fuels to a green system had been vastly underestimated. "The demand for metals and materials is poised to surpass all prior estimates," it said.

Success of a Goldman alumnus highlights bank's talent challenges

INSIDE BUSINESS
FINANCE

Sujeet Indap

David Solomon started at Goldman Sachs in 1999, joining in his mid-30s from the scruffy Bear Stearns, as a partner in the junk bond group of the investment bank he now runs. Alan Waxman came to Goldman's 85 Broad Street headquarters a year earlier with an undergraduate degree from the University of Pennsylvania. Their career journeys since the late 1990s have developed in an intriguing way.

Waxman is the co-founder and chief executive of Sixth Street Partners, the private capital firm he launched in 2009 after his Goldman departure and that now manages more than $70bn. Sixth Street just acquired GreenSky, a consumer lending business, from Goldman for a song, less than $500mn.

The deal marked comprehensive retrenchment in Goldman's main street ambition — the bank had bought GreenSky for $1.7bn at the closing price for the deal last year, in a move championed by Solomon himself.

Solomon's tenure can be characterised as rocky, at best. Turnover of staff at Goldman Sachs is common but the pace of senior departures in recent years has struck even jaded Wall Street hands as unusually brisk.

More generally, with the rise of private capital and Silicon Valley, the top brains in finance, whether young or seasoned, have increasingly compelling options outside big banks, which are facing the unyielding demands of regulators, politicians, shareholders and the general public.

Shareholders of Goldman Sachs could fairly wonder if they would have preferred to have kept Waxman instead of Solomon. But the related question is: if someone had the obvious talent of Waxman, why would they want to ply their trade at Goldman Sachs for decades? Are the big banks then otherwise stuck with a pool of executives who simply could not get a better job elsewhere?

This may be a false dichotomy. Waxman starred in Goldman's famed special situations group that managed distressed debt and made complex loans. He left Goldman just as it became a bank holding company and before the introduction of the Volcker rules on proprietary trading — changes that tamped down on risky activities. Sixth Street itself then has benefited from growth in so-called shadow banking that happens outside the traditional banking regulatory oversight.

> Are the big banks then otherwise stuck with a pool of executives who simply could not get a better job elsewhere?

An executive at a big bank is probably better suited for somebody who is interested in taming complex organisations, managing risk diversification and gladhanding disparate constituencies.

James Gorman of Morgan Stanley and Jane Fraser of Citigroup are former McKinsey management consultants. JPMorgan's Jamie Dimon got his start out of business school wheeling and dealing in regional banks as the apprentice of Sandy Weill.

One longtime Goldman executive now in private equity said being a successful banker or trader was far different to being an effective manager, even if usually one could rise to a leadership post only by first being a respected producer. Solomon, as previous head of investment banking for Goldman, maintained its dominance in securities underwriting as well as mergers and acquisitions advisory.

"Alan could never run the 45,000 people at Goldman," said this person, who maintained he was a huge admirer of Waxman's accomplishments. "He is an investor first."

Waxman would probably not want to be, either, given that Sixth Street investment returns have made him a tycoon without any byzantine bureaucracy to master. The Sixth Street founder recently poached from Goldman a former close colleague, Julian Salisbury, who like Waxman, is a highly accomplished investor. Waxman declined to comment.

Goldman insiders dispute any talent deficit. One 30-year veteran said that its core trading and investment banking businesses were more profitable and dominant than ever. Moreover, the level of commercial and social prestige from carrying a Goldman business card remained unmatched by almost any other employer. This insider also noted wryly that there were plenty of Goldman veterans who had underwhelmed professionally after leaving the firm.

Still, among the important tasks of any chief executive is the allocation of shareholder capital. And in the GreenSky transaction, Waxman will almost certainly get the better of Solomon, though perhaps it will be of some comfort to Goldmanites that the Sixth Street founder is an alumnus of a bank that taught him much of what he knows.

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Banks

HSBC sees end to China property woes

Chief says worst is over for stricken sector as lender announces $3bn buyback

KAYE WIGGINS AND HUDSON LOCKETT
HONG KONG
STEPHEN MORRIS — LONDON

The chief executive of HSBC said he believed China's property sector has hit its lowest ebb and can begin to recover, even as banks take hundreds of millions of dollars in charges over their exposure to a crisis in the sector.

Speaking as the bank announced its third-quarter earnings, which included a $500mn provision related to commercial property in mainland China, Noel Quinn said Beijing's most dramatic actions to rein in excesses in the industry were over. "If you look at the policy correction that took place . . . they went very deep and hard over a short period of time," he said. "The sector itself has bottomed and it now has to recover from that new lower position."

"Does that mean that there aren't any further issues to emerge? No, there's always a risk of some developers having further problems," Quinn added.

China's real estate sector tipped into crisis two years ago when indebted developer Evergrande defaulted.

HSBC has twin bases in the UK and Hong Kong, which gives it closer ties to China than other western banks. It has $13.6bn in total exposure to commercial real estate in the country. Last week, HSBC's smaller rival Standard Chartered announced higher than expected charges, largely due to its China exposure, causing its shares to tumble.

Separately, HSBC yesterday announced a further $3bn in share buybacks as it continued to benefit from higher global interest rates.

The London-listed lender reported pre-tax profit of $7.7bn, less than the $8.1bn analysts had estimated due to higher than expected costs, though still far greater than the $3.2bn profits of a year earlier. The shares fell 2.3 per cent.

"We have had three consecutive quarters of strong financial performance," said Quinn, adding that the bank's "good broad-based growth" was "supported by the interest rate environment".

The latest buyback means HSBC has pledged to repurchase $7bn of stock this year and paid three quarterly dividends of 10 cents a share. The returns to shareholders have addressed a key concern of its largest investor, Chinese insurer Ping An, which had been agitating for the group to break itself up.

Ping An suspended its campaign after other shareholders rejected its proposals at the bank's annual meeting in May.

HSBC, one of the world's largest banks with $3tn of total assets and $1.6tn of customer deposits, has been a big winner from higher interest rates, which have helped it earn more on the difference between what it pays on deposits and what it charges to lend.

HSBC did make strategic concessions in the wake of Ping An's challenge, and is close to selling businesses in several countries on the periphery of its network. The $10bn sale of its Canada unit to Royal Bank of Canada, and the disposal of its French retail business to US private equity group Cerberus, are both due to be completed early next year.

Andrew Coombs, Citi analyst, said the buyback was "encouraging", but noted expenses were set to rise more than expected because of tech investments and integration costs related to the rescue of Silicon Valley Bank UK in March.

Technology

Western Digital to split after ending merger talks with Kioxia

TIM BRADSHAW — LONDON

Western Digital has announced plans to split in two, more than a year after activist investor Elliott Management pushed the US data storage company to make such a move.

The $14bn tech group said yesterday it would spin off its flash memory unit from its hard drive business. The announcement comes days after it emerged that Western Digital had abruptly abandoned long-running merger talks with Kioxia of Japan, formerly Toshiba's semiconductor unit, which is owned by a consortium led by Bain Capital.

South Korean chipmaker SK Hynix, another investor in the Kioxia consortium, said last week it opposed a merger with Western Digital, dealing a blow to Bain's ambitions to create a US-Japan memory chip champion.

Shares in Western Digital, which fell as much as 16 per cent on Thursday after news broke on its Kioxia talks, were up 8 per cent in early afternoon trading yesterday.

Silicon Valley-based Western Digital has spent more than a year conducting a strategic review after shareholder Elliott wrote to its board urging it to consider a split in May 2022. It reached a settlement with Elliott in June last year.

> The plan to spin off the flash memory unit from the hard drive business will 'unlock significant value'

The group said its plan to form two independent public companies would "unlock significant value" for shareholders and "also provides strategic optionality for both businesses". The transaction is expected to be completed in the second half of 2024.

David Goeckeler, Western Digital's chief executive, said that spinning off its flash business was "the best executable alternative at this time", after evaluating "material opportunities for each of our businesses".

He added: "Given current constraints, it has become clear to the board in recent weeks that delivering a standalone separation is the right next step in the evolution of Western Digital."

The decision comes as trading conditions in the memory chip market begin to improve after a protracted downturn caused inventories to stockpile. Western Digital added yesterday that fiscal first-quarter sales fell 26 per cent year on year to $2.75bn.

The hard drive business, which will retain its current name after the split, primarily serves cloud computing customers. Its Nand flash memory unit also sells to consumers, including via its SanDisk brand and by bundling its storage technology into laptops and smartphones.

Goeckeler, a former Cisco executive, created a separate business unit focused on each technology soon after he took over as chief in 2020. He has also sought to stabilise its finances by paying down debt, suspending its dividend, settling a longstanding tax dispute and, earlier this year, making job cuts.

Elliott said yesterday it supported the decision, which it described as a "value-accretive transaction that would enable both HDD and flash [businesses] to take full advantage of their industry leadership positions as storage demand normalises".

Additional reporting by Leo Lewis in Tokyo

See Lex

Automobiles. Sales outlook

Shine comes off electric cars for US consumers

Softer demand than expected prompts Ford, GM and Tesla to pause capacity growth plans

CLAIRE BUSHEY — CHICAGO

Ford, which posted a $1.3bn loss in its EV division in the third quarter, is waiting to invest about $12bn to build out EV output capacity. That includes cutting some production of the Mustang Mach-E
Tobias Schwarz/AFP

US carmakers are pausing plans to expand their electric vehicle manufacturing capacity, as consumers buy battery-powered cars and trucks at slower rates than expected.

Ford, General Motors and Tesla have pumped the brakes on expanding EV production capacity in recent weeks.

GM will delay building electrified versions of its Chevrolet Silverado and GMC Sierra pick-up trucks at a Michigan plant until 2025, instead of next year.

Tesla chief executive Elon Musk said his company was studying macroeconomic conditions "before we go full tilt" to open a factory in Mexico.

Ford, which recorded a $1.3bn loss in its electric vehicle division in the third quarter, is waiting to invest about $12bn to build out EV production capacity. That includes cutting some production of the Mustang Mach-E and delaying construction on one of two joint-venture battery plants planned in the state of Kentucky.

"The narrative has taken over that EVs aren't growing," Ford chief financial officer John Lawler said this week. "They're growing . . . It's just growing at a slower pace than the industry, and quite frankly we, expected."

Softer demand means Ford needed "less capacity in certain areas in the near term, and so we'll push out that investment until the time we need to put that capacity in place".

Tesla was founded as an EV company and has said that it wants to sell 20mn vehicles a year in 2030, a more than tenfold increase in output. GM plans to sell 1mn EVs a year by the end of 2025 and Ford has set a target of 600,000 in 2024.

Anxieties over electric vehicle manufacturing — which requires fewer workers than internal combustion cars — have featured in contract talks with the United Auto Workers trade union, which went on strike at Ford, GM and Stellantis last month and agreed a tentative deal with Ford this week.

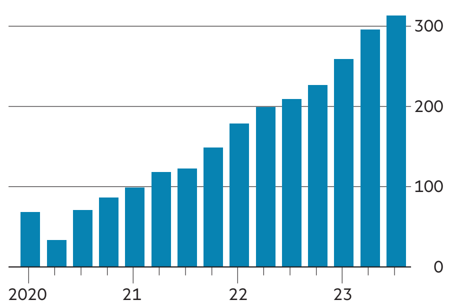
A record 313,000 electric vehicles were sold in the US in the third quarter, according to data group Cox Automotive. Electric cars climbed to 7.9 per cent of industry sales in the third quarter, up from 6.1 per cent a year ago, Cox Automotive found.

Even so, the pace of growth is slowing. Year-on-year sales growth for the third quarters of 2021 and 2022 was about 75 per cent; this year the increase was a cooler 50 per cent, according to Kelley Blue Book, a research company owned by Cox Automotive.

EVs are lingering longer on dealership lots. Dealers are taking 88 days to sell their supply of electrified cars and trucks, compared with 39 days in October 2022, according to Cox. Petrol-powered vehicles are selling in 60 days.

Only a third of US consumers say the next car or truck they buy is likely to be electric, according to a survey from Yahoo Finance/Ipsos. The most common concerns were charging infrastructure, driving range, and the expense of EVs compared to cars with combustion engines.

Growth of US electric vehicle sales starts to slow
EVs sold ('000)



Source: Cox Automotive

"It feels like the early adopters have adopted," said Fitch ratings analyst Steve Brown. "Now it's shifting to a point where it needs to get to a more mainstream consumer, and for a variety of reasons, it seems like mainstream consumers are more hesitant."

Pricing is a vital factor.

The Biden administration's Inflation Reduction Act, which sought to stimulate domestic EV production, has narrowed the number of EVs eligible for a $7,500 tax credit to models that meet thresholds for assembly and component sourcing in the US. The credit is meant to make the vehicles more affordable, and from next year buyers can receive it at the point of sale, rather than waiting to file their tax returns.

Electric vehicles have typically been more expensive than cars with traditional engines, but price cuts at Tesla earlier this year had "moved the market", according to Kelley Blue Book. The average transaction price of a new vehicle last month was $47,900. The price for an electric vehicle averaged $50,700, down 22 per cent on a year earlier.

Still, Musk said high interest rates were hurting demand for the company's cars as they swelled owners' monthly car payments. The company delivered fewer vehicles in the third quarter than Wall Street expected.

The roughly 50 electric models selling in the US — of which 14 qualify for the full tax credit — were priced similarly, with no distinction between mainstream and luxury, car and truck, said Tyson Jominy, JD Power's vice-president of data and analytics. Roughly another 30 were scheduled to come to market next year.

> 'Early adopters have adopted. It's shifting to a point where it needs to get a more mainstream consumer'

"The market cannot absorb all these entries," Jominy said. There were "too many entries fighting for too few sales at that same price point".

GM chief executive Mary Barra said this week that "moderating the pace of our EV acceleration" would allow the company to maintain strong pricing.

But executives at Ford said they expected to see the premium commanded by EVs to fade. There was "tremendous" pricing pressure in electric vehicles, Lawler said, and "going forward, it's really a cost game in EVs".

It was not unusual for adoption of new technologies to plateau, and some states, such as Colorado, had recorded no slowdown, said Nick Nigro, founder of consultancy Atlas Public Policy.

Slowing sales nationally was "not an indicator that the market is struggling, but the industry is making clear that they need to see greater consumer demand in order to turn the spigots back on".

One industry expert echoed that point, declaring that demand for EVs was still good but that the supply was better.

Industrials

Tesla dip dims Panasonic battery outlook

DAVID KEOHANE — TOKYO
PETER CAMPBELL — LONDON

Panasonic, the Japanese electronics group, cut its full-year profit outlook at its battery unit by 15 per cent, blaming slower than expected sales of high-end electric vehicles at Tesla, one of its most important customers.

The downgrade by Panasonic, which lowered its full-year operating profit forecast for its battery unit to ¥115bn ($771mn) from ¥135bn, was spurred by slowing demand in North America for Tesla EVs, which do not qualify for tax incentives under the Inflation Reduction Act.

"The IRA has a price ceiling up to $80,000 and since the high-end models exceed that level, demand decreased," Hirokazu Umeda, Panasonic's chief financial officer, said yesterday.

Umeda said Panasonic had cut motor battery production in Japan, where it produces the batteries for the more expensive Tesla models including the Model S and Model X, by 60 per cent compared with the first quarter as it tried to bring inventories to normal.

Tesla has also placed less emphasis on its flagship models, withdrawing them from right-hand drive markets such as the UK, in order to push its more affordable Model 3 and Model Y cars.

"We can expect some recovery. Still, we did not expect big growth like what we see in the US plant. So we'll be running the Japan factory based on that assumption," Umeda added.

The company also produces batteries for cheaper Teslas, which are benefiting from the IRA, at its Nevada factory. Panasonic is investing billions to build a plant in Kansas.

US President Joe Biden's IRA has led to a flurry of investments in US battery manufacturing, but most new EVs made there do not yet qualify, either because they are too expensive or because their batteries are still imported.

The cuts by Panasonic follow other warnings about EV demand globally. Tesla, General Motors and Ford have slowed EV factory expansions as higher financing costs and weaker than expected economic growth in China and Europe reduce demand.

Last week, LG Energy Solution, the South Korean battery producer, echoed Tesla chief Elon Musk and warned EV sales were expected to weaken as a result of higher interest rates.

Earlier in the month, Tesla's third-quarter revenue fell short of Wall Street's reduced expectations and its core profit margins sagged, as planned factory shutdowns and price cuts dented the US electric car maker's performance.

Mining

ArcelorMittal to hand over its Kazakh assets

SYLVIA PFEIFER — LONDON

ArcelorMittal has agreed to transfer ownership of its operations in Kazakhstan to the government following several fatal accidents in recent years, including an underground coal mine fire at the weekend that killed at least 44 workers.

The world's second-largest steelmaker said it had been in talks with the government over the future of its subsidiary, ArcelorMittal Temirtau, for several months and had only recently signed a preliminary agreement to transfer ownership to the state. The company's operations in Kazakhstan span iron ore and coal mines, as well as a steel plant.

ArcelorMittal said 252 people were underground at the time of Saturday's fire at the Kostenko coal mine near Karaganda, south-east of the capital Astana. The fire is believed to have been caused by a methane blast.

The company said yesterday that 44 workers were confirmed dead, with one miner still missing. It is the country's worst mining disaster for more than a decade.

Aditya Mittal, chief executive, said that operating the mines had "involved inherently high safety risks owing to their complex geology, and this has led to a number of fatal accidents over the past two years".

Aditya Mittal: CEO says the group worked to improve safety before the latest deadly incident at the unit

"It is little consolation to say that the company expended considerable effort, further reinforced since 2020, in improving the safety performance of the ArcelorMittal Temirtau operations," said Mittal.

The company, he added, had signed a "principle agreement" to transfer ownership last week before the fatal accident. ArcelorMittal yesterday declined to comment on the details of the agreement and whether or not it would be compensated for the assets.

The government has been pushing for nationalisation of the assets for some time. Kazakhstan's prime minister and president visited the site of the accident on Saturday where they confirmed they would be looking to complete the transaction as soon as possible.

ArcelorMittal has come under pressure over the safety of its Kazakh facilities several times in recent years. The group acquired the operations in 1995.

The steel plant at Temirtau produced 3.4mn tonnes of the metal last year.

COMPANIES & MARKETS

Wood's Ark funds seek to conquer Europe

ETF group is pushing into the region it sees as a 'tough nut to crack' as the once high-flying US business faces challenges

CHRIS FLOOD AND EMMA BOYDE

Chief executive Cathie Wood acknowledges that her quest to bring Ark Investment Management to Europe via its acquisition of Rize is a daunting one — Brendan McDermid/Reuters

Armed with messianic conviction and social media savvy, Cathie Wood has built a lucrative career pitching disruptive companies to US retail investors.

But even the 67-year-old acknowledges that her quest to bring Ark Investment Management, the firm she set up in 2014 and that is headquartered in the Florida beachside town of St Petersburg, to Europe is a daunting one.

Europe is a "tough nut to crack," Wood told the Financial Times. "We knew, as an American company, that Europe and the UK is the most complicated region in the world. We needed local talent and local leadership."

Wood has long harboured ambitions to break into the $1.5tn European exchange traded fund market, but it was only last month that Ark took its first step with the acquisition of Rize ETF, a London-based company that manages more than $450mn across 11 ETFs. Rize will be renamed Ark Invest Europe.

With ETFs built on such concepts as the future of food, Rize mimics the investment themes that attracted US retail investors to Ark and, at its peak in early 2021, turned it into a group with $60bn in assets.

But for many incumbents in Europe's ETF industry that is where the similarities with the US market end.

"The US is one market with one currency, one language and one tax system," said Deborah Fuhr, founder of the ETFGI consultancy, drawing a contrast with the far more fragmented picture in Europe.

European countries are marked by their own distinct dynamics that are vital for a new entrant to understand, according to Howie Li, the head Legal & General Investment Management's $15bn ETF arm.

None of which has stopped BlackRock, Vanguard, State Street and Invesco, the powerhouses in the $7.5tn US market, from tapping demand in Europe for low-cost index-tracking funds. The US companies now go head-to-head with big European operators such as Amundi, DWS, an asset manager majority owned by Deutsche Bank, and UBS in their own backyard.

Ark's European ambitions are more modest and its outlay smaller. The group paid just £5.5mn for a 70 per cent stake in Rize, acquiring the business from AssetCo, an investment firm founded by Martin Gilbert, an asset management industry veteran.

AssetCo has admitted Rize's path to profitability has been "slower" than hoped. The group reported a £2.5mn pre-tax loss in the 12 months to September 2022. Wood believes she can turn that around. Roughly a quarter of the subscriptions to the research published by Ark on its website are from Europe, according to her. Ark's founder believes this is evidence of underlying demand from investors in the region.

"The top question we have [received] from investors is 'why can't we access your strategies in Europe'," said Wood. Ark specialises in actively managed ETFs, which aim to pick stocks rather than simply track an index.

Actively managed ETFs are a niche within the nascent European market. Assets in such funds hit $28.4bn at the end of September after inflows of $6bn in the first nine months of the year, according to ETFGI. That is up from $2.8bn of inflows for the whole of 2022.

Ark is seeking regulatory approval to roll out European versions of its range of ETFs, spanning themes from artificial intelligence to genomics, before the end of the year.

> 'We knew, as an American company, that Europe and the UK is the [world's] most complicated region'

Simon Klein, global head of Xtrackers sales at DWS, Germany's largest asset manager, said that the continued appeal of thematic ETFs was attracting more providers in the US and Europe.

"Financial advisers and self-directed retail investors are finding thematic ETFs can provide them with access to ideas that cut across traditional sectors," said Klein.

Providers of such ETFs, including Ark, fill the fund with companies they say reflect the theme. Unlike mutual funds, the ETFs disclose all the companies they hold.

But even if European investors do want more exposure to groups promising disruption and innovation, that is no guarantee of success for Wood, according to analysts and industry executives.

Kenneth Lamont, a senior analyst at data provider Morningstar, said Ark's sales pitch was crafted for US millennial investors eager to take a punt on the next Tesla or Amazon.

The approach paid off for Ark in 2021 when sober financial analysis of company valuations was discarded.

But in Europe the growth of the ETF market has been driven by big institutional investors, with retail investors playing a far smaller role than in the US.

"You can't just pitch up from the US and expect it will work in Europe," said Lamont. The move into Europe "smacks a little bit of desperation".

Despite an improved performance during the past 12 months thanks to a resurgence in tech shares, Ark's performance over the past three years has been painful for investors. Seven of the eight funds in Ark's US-listed ETF range have recorded losses in the period.

Investors have pulled more than $1.3bn from Ark's US listed ETFs this year, reducing the firm's overall assets to $25bn, according to ETFGI.

Ark's funds have a negative rating from Morningstar, which cites concerns over performance, risk management and the outsized role of Wood, who is chief executive and chief investment officer. "Everything goes through Cathie Wood," said Lamont.

Wood has been characteristically defiant, using television appearances and social media to promote her credentials as an investor. "Ark's platform is full of Amazon-like names," Wood said in October, referring to companies that she claims have the same disruptive potential as the online retailer.

Alongside questions over whether her evangelism could misfire in Europe, Wood and Ark will need to overcome several hurdles.

In many European countries, asset managers can pay financial advisers a commission to recommend an actively managed mutual fund. ETF providers do not pay any similar incentives, which has slowed their adoption in Europe.

ETF trading in Europe is conducted across multiple exchanges, dividing liquidity and increasing transaction costs. Meanwhile, distribution channels for selling ETFs also vary across the continent, which will require Ark's salesforce to win orders from a mix of fund supermarkets, banks, brokers, wealth managers and financial advisers, alongside individual retail investors.

Unlike in the US, ETFs do not offer tax advantages in Europe. Ark has recently highlighted to its US investors the expected capital gains tax write-offs given the losses its funds have accumulated.

Despite Europe presenting multiple challenges to Ark, MJ Lytle, co-founder of two European ETF businesses, said choosing to enter the region through an acquisition was a sensible move.

"The deal will allow Ark to leapfrog into Europe's ETF market without spending years trying to build a meaningful presence from scratch," said Lytle, chief executive of Tabula Investment Management.

> 'The deal will allow Ark to leapfrog into Europe's ETF market without spending years trying to build'

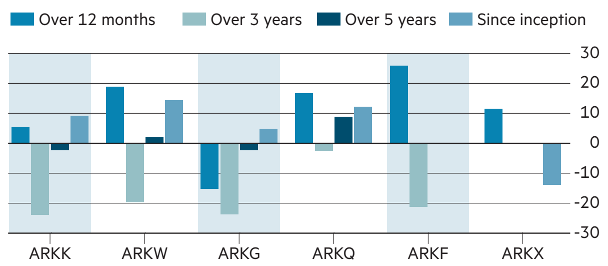
Since acquiring Rize, Ark has remained tight-lipped over which European countries it will target. In a sign of the dangers of expanding too quickly, Vanguard, the world's second-largest asset manager, has concentrated its push on the UK, Germany and Switzerland — a move that keeps its costs as low as possible.

Gilbert's decision to sell Rize two years after buying it points to the obstacles in breaking the dominance of the 10 performers who control more than 90 per cent of Europe's ETF market.

Amin Rajan, chief executive of the consultancy Create Research, cautioned that almost every small ETF manager had failed to gain critical mass in Europe, before adding that "if there is anyone that can, then it is Cathie Wood."

Ark active ETFs

Annualised % returns



ARKK - Ark Innovation; ARKW - Ark Next Generation Internet; ARKG - Ark Genomic Revolution; ARKQ - Ark Autonomous Technology & Robotics; ARKF - Ark Fintech Innovation (launched April 2019); ARKX - Ark Space Exploration & Innovation (launched March 2021)

Source: company

Financials

Insurance body to set up infrastructure vehicle

IAN SMITH — LONDON
KENZA BRYAN — NEW YORK

The Insurance Development Forum, a World Bank and UN-backed partnership of insurers and international bodies, plans to raise an infrastructure fund of hundreds of millions of dollars to help developing countries deal with the effects of climate change.

Speaking ahead of next month's COP28 climate summit in Dubai, IDF secretary-general Ekhosuehi Iyahen said the fund would seek to help countries already "feeling the brunt" of climate change.

"Many around the world are having to deal with the impact of climate change already," she said. "There is an urgency to deal with that." The objective was to fund "resilient and sustainable infrastructure in emerging and developing economies", she added.

Global efforts to combat climate change have faced setbacks in recent months as some governments temper their transition plans and industry initiatives to collaborate on net zero policies have met political opposition.

Michel Liès, chair of the IDF's steering committee and of insurer Zurich, said the climate summit would be an opportunity to spread the message that it would be better to spend money on prevention measures, "instead of waiting for the catastrophe to happen, waiting for the terrible news on the TV".

He said it was considerably more efficient to spend money before a disaster than after and that the fund, backed by insurers, would be designed as an infrastructure debt fund and start off at a few hundred million dollars.

Liès said there was a need to bring "neutrality and objectivity" to the climate discussion, and that the industry could provide that via its expertise in modelling and pricing risk. "The debate is becoming tense, which doesn't make the debate more efficient," he added.

The IDF, which was launched at the Paris climate summit in 2015, draws on a broad membership, from insurers, reinsurers and insurance brokers to regulators and international institutions such as the World Bank.

The chance of hitting the target of limiting the rise in global temperatures to 1.5C since pre-industrial times has dwindled, experts say, as greenhouse emissions continue to rise.

The question of how to fund adaptation to extreme weather events, including widespread changes to the way land and buildings can be used, has been drawing increasing attention. But talks on a so-called "loss and damage" fund to help poorer countries suffering from the effects of climate change came close to failing this month.

Fixed income. Inflation fight

‘Range of uncertainties’ faces Fed at rate-setting meeting

Tight spot: US Federal Reserve chair Jay Powell has seemingly erected a high bar for raising rates further
Graeme Jennings/Washington Examiner/Bloomberg

Bond yield surge and Gaza war cloud decision over whether to tighten monetary policy again

COLBY SMITH — WASHINGTON

Just days before US Federal Reserve officials hunkered down to prepare for this week's policy meeting, chair Jay Powell conceded that the central bank's already difficult job had become even trickier.

"A range of uncertainties, both old and new, complicate our task of balancing the risk of tightening monetary policy too much against the risk of tightening too little," the Fed chair told an event hosted by the Economic Club of New York.

Among the curveballs pitched at it are the deepening conflict in the Middle East that now looms over global oil markets, surging long-term interest rates, and stronger than expected economic data that has raised questions about how quickly inflation will moderate.

The Federal Open Market Committee is poised to keep its benchmark interest rate at a 22-year high of 5.25 per cent to 5.5 per cent when its two-day meeting ends tomorrow, extending the pause in its monetary tightening campaign that has been in place since it last raised rates in July.

That will give central bankers more time to assess not only the mixed signals about the US economy's health but also how the Fed's past rate rises and a recent tightening of credit conditions are influencing consumer and business demand.

Market participants broadly wager that these cross-currents mean the Fed is done with the rate-raising phase of its fight against inflation — and will now shift the debate to how long rates should be kept at their current restrictive levels.

Officials themselves suggested this month that, with price pressures still percolating, it remained too early to rule out additional tightening, even as they insisted they would proceed carefully with policy decisions.

Powell and influential governors such as Christopher Waller have seemingly erected a high bar for additional tightening — suggesting recently that it would need fresh evidence that economic growth was not meaningfully slowing and that the disinflation process had either stalled or reversed.

But many economists argue that further tightening should not be ruled out altogether.

"Having recently faced high inflation, I think the Fed wants to err on the side of hawkish communication about the future until it has greater confidence that it has been addressed," said Kris Dawsey, head of economic research at DE Shaw.

From continued signs of resilient consumer spending to the possibility of "spicier" inflation readings for the rest of the year, the data "could serve to reduce one's conviction that the economy is actually going to continue cooling and inflation is going to be moving back towards 2 per cent," he said.

Not only is a December rate rise a "very plausible outcome" without a more substantive let-up in inflation but, if economic conditions warrant further tightening, it could well mean more increases beyond that, Dawsey added.

As recently as September, officials projected that one more quarter-point notch higher in the fed funds rate would be necessary to deem the Fed's policy settings "sufficiently restrictive". They also forecast fewer cuts next year.

This embrace of a higher-for-longer policy approach helped to ignite a sharp sell-off in bonds that is seen both at the Fed and by others as doing some of the work for the central bank — by raising borrowing costs.

According to economists at Nomura, the surge in long-term yields is roughly equivalent to one or two quarter-point rate rises, which they said made it a "reasonable substitute" for the final increase officials had pencilled in at their September meeting.

Julia Coronado, a former Fed economist who now runs MacroPolicy Perspectives, cautioned that such a substantive move higher in borrowing costs would soon bite.

"We are not in a world awash in stimulus and liquidity. We are in a world of extremely expensive money," she said.

Any remaining froth is going to get "killed by higher rates" and if officials "go too hard, then they might end up having to reverse course too fast", Coronado added.

Former Fed governor Laurence Meyer — who expects the central bank to skip a December rate rise but is "reluctant" to say the Fed has finished tightening — added that next year's debate will be tricky, focusing more on the "duration" of higher rates than their level.

The task will be for Fed officials to calibrate the fed funds rate such that as the pace of consumer price growth moderates, the real, inflation-adjusted policy rate does not become prohibitively restrictive for the economy.

Jonathan Pingle, who used to work at the Fed and is now chief economist at UBS, said he expected the central bank to slash its main interest rate in March 2024.

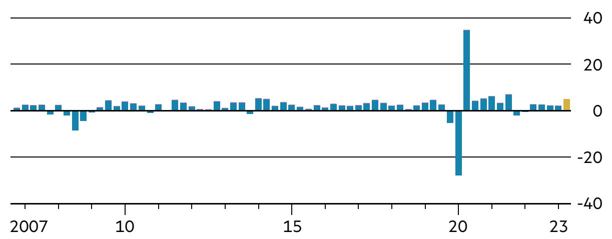
This is earlier than traders in futures markets are betting — and then by the middle of next year to have reduced it by 0.75 percentage points as the economy tips into a recession.

"At the end of the day, it's really the data that's going to drive this," Pingle said. "They would like a slower economy and, if they get [that], then they are going to have to start thinking about how restrictive they really want to let policy get as inflation falls."

'We are not in a world awash in stimulus and liquidity. We are in a world of extremely expensive money'

Growth jumped to highest rate in nearly 2 years in the third quarter of 2023

Quarterly change in real GDP (annualised, %)



Source: Federal Reserve Bank Of St Louis; Bureau of Economic Analysis

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Commodities

Norsk Hydro warns China EVs threaten aluminium demand

HARRY DEMPSEY

A major European aluminium producer has warned that the increasing numbers of imported electric cars from China could have a big impact on regional demand.

Hilde Merete Aasheim, chief executive of Norsk Hydro, said the company was paying attention to this risk.

"The fear when it comes to [electric vehicles] is imports into Europe and the impact on European car manufacturers. There is quite a steep curve right now," she told the Financial Times in an interview.

"That is a threat that we are following: if European automakers start reducing their demand [for aluminium] because they are outcompeted," she said.

Her comments highlighted the ripple effects from growing Chinese EV imports for businesses in Europe from the car supply chain, including raw material producers.

Aluminium is used in electric cars for battery pack casings and other components to help cut weight and offset the heavy battery, allowing EVs to travel further on a single charge.

The average EV produced in Europe in 2022 contained 283kg of aluminium compared with 169kg for combustion engines, according to a study commissioned by European Aluminium, a trade body.

'The fear when it comes to EVs is imports into Europe and the impact on European manufacturers'

In September, the EU announced plans for an anti-subsidy probe of Chinese EVs that it said was "distorting" the European market and "flooding" global markets.

China is building battery plants far beyond the levels needed to meet its own domestic demand, backed by regional subsidies and lending, and manufacturers are seeking to channel the excess supply into overseas markets.

European carmakers are responding to the threat in different ways. Stellantis, which owns brands including Peugeot and Jeep, said this week that it would invest €1.5bn in a 20 per cent stake in Chinese EV start-up Leapmotor in an attempt to profit from the influx of cheaper China-made EVs into Europe.

In the first seven months of 2023, China exported \$13.1bn of EVs to Europe compared with \$15.4bn in the whole of the previous year, according to Chinese customs data.

However, the majority of the vehicles are China-made versions of western brands such as Tesla.

The worries about aluminium demand in Europe come after the sector was hit by surging energy prices following Russia's invasion of Ukraine last year, which forced smelters including Hydro's Slovalco smelter in Slovakia to close.

Commodities

Wintershall chief Mehren cautions over European energy complacency

PATRICIA NILSSON — FRANKFURT

The chief executive of Wintershall Dea has warned of European "complacency" over energy security in the wake of the escalating war in Gaza as the German company continues to grapple with the loss of its Russian gasfields.

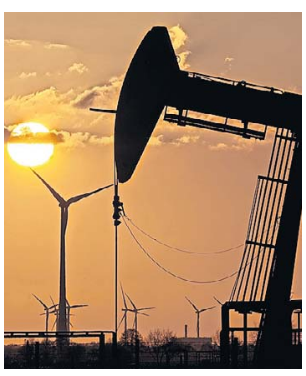
Mario Mehren yesterday said Europe faced a "fragile situation with multiple potential supply risks, including the current Middle East conflict," adding that policymakers and industry alike should be aware of "winter looming".

His comments came as Wintershall, which is majority owned by chemical group BASF, embarks on a cost-cutting programme after the Kremlin in January expropriated its joint ventures in Russia — which before the war made up half of its output — and confiscated €2bn from its bank accounts.

The loss of control over its Russian business prompted Wintershall to announce in January that it would exit the country, having been one of the last western oil and gas explorers to continue doing business there after the invasion of Ukraine.

The decision led to a €5.3bn writedown of its business as well as the deconsolidation of its Russian assets.

Wintershall said yesterday that it would complete the "legal separation" of its remaining energy exploration and production, carbon management and hydrogen businesses from its Russian assets — including its stake in the Nord Stream pipeline as well as its joint ventures with Kremlin-controlled Gazprom — by mid-2024.



Wintershall has blamed lower oil and gas prices for recent losses

The company's oil and gas revenues in the first nine months of 2023 nearly halved compared with the same period last year, reaching €7.4bn.

In the quarter ending September, the company reported a net loss of €535mn compared with a €388mn profit in the same period last year.

Wintershall has in response to its crisis announced 500 job cuts — roughly a quarter of its workforce — as it will seek to save €200mn a year.

Aside from the loss of its Russian business, Wintershall blamed lower oil and gas prices as well as impairments worth €587mn, most of which came from its 10 per cent stake in an offshore gas project in the United Arab Emirates.

In January, BASF was forced to write down its stake in Wintershall by €6.5bn.

Even before the war, the chemicals group had been trying to divest Wintershall but faced opposition from minority shareholder LetterOne, the London-based investment company that was founded by two now-sanctioned Russian oligarchs, including Mikhail Fridman.

Equities

Surging mortgage rates throw rally in US housebuilder stocks into reverse

ALEXANDRA WHITE — NEW YORK

A powerful rally in the stocks of US homebuilders has gone into reverse as investors worry that a rapid rise in mortgage rates is starting to threaten demand for new houses.

Shares in DR Horton, Lennar and NVR have dropped more than 16 per cent since their peak in July. Those of PulteGroup, which surged 86 per cent in 2023 to August, are down a similar amount.

Rapid rises in mortgage rates had at first propelled homebuilder stocks, because they made current homeowners holding cheaper fixed-rate loans less willing to sell. Buyers sought out newly constructed houses as an alternative.

But higher rates are finally having an effect. Mortgage rates have risen sharply in recent months, rising from 6.48 per cent at the start of the year to a 23-year high of 7.79 per cent last week, according to Freddie Mac.

Homebuilders have said the recent jump had begun to price more homebuyers out of the market.

"At this point it's come down to a macro call," said John Lovallo, an analyst at UBS. "We've taken our estimates down and our price targets down a bit, just in recognition of what's going on in the market with rates."

Single-family housing starts increased 8.6 per cent in September from a year ago but some economists said the recent increase in activity would be shortlived.

Homebuilder confidence this month dropped to its lowest level since January as higher rates drove some buyers away and raised construction costs, said the National Association of Home Builders.

'Builders won't have an incentive to break ground on new projects so long as demand remains subdued'

"We don't think this bounce in housing activity will persist," said Oren Klachkin, financial market economist at Nationwide. "Builders won't have an incentive to break ground on new projects so long as demand remains subdued and we don't see a sustained turnaround until credit becomes less restrictive and affordability improves."

New home sales in September increased 12.3 per cent from August, the Census Bureau said last week, while existing home sales plunged to the lowest level since 2010. Yet applications for 30-year fixed-rate mortgages fell to their lowest level since 1995 last week.

Zillow senior economist Jeff Tucker said the housing market had slowed dramatically over the past month and a half. "We have seen demand for new homes start to dry up."

PulteGroup announced on an earnings call last week that it expected to deliver fewer homes than expected for the fiscal year due to high interest rates.

One way for homebuilders to boost sales is by offering a "buy-down", which provides buyers with a lower mortgage rate on a property than is available in the market. PulteGroup said it has been able to offer a 5.75 per cent loan on a 30-year fixed rate. The group said 80-85 per cent of its buyers have received an incentive towards interest rates.

While mortgage rates are expected to remain elevated through 2024, Goldman Sachs said in a research note last week that it expected them to fall just below 7 per cent by the end of next year.

COMPANIES & MARKETS

The day in the markets

What you need to know

- Global stocks rise ahead of central bank meetings in the US, UK and Japan
- US government bonds weaken as Fed prepares for interest rate decision
- Oil slides after worries over wider conflict in Middle East ease

Global stock markets rose yesterday ahead of a series of central bank meetings and data releases that will guide investor sentiment on the outlook for interest rates.

Wall Street's benchmark S&P 500 rose 0.1 per cent and the tech-heavy Nasdaq Composite added 1.2 per cent by midday in New York.

The two indices last week entered "correction" territory, having dipped just over 10 per cent since their latest peaks in July.

Across the Atlantic, the region-wide Stoxx Europe 600 added 0.4 per cent, though it remains close to its lowest level this year.

London's FTSE 100 gained 0.9 per cent — while Frankfurt's Xetra Dax rose 0.1 per cent as domestic inflation fell to its lowest annual rate since June 2021.

Yesterday's moves come after a fortnight of steady declines for stocks on both sides of the Atlantic.

Companies with highly leveraged balance sheets and those exposed to a slowdown in consumer spending have been among the hardest hit — and are likely to be "disproportionately sensitive to [interest] rates remaining higher for longer", said analysts at JPMorgan.

Investors are also looking ahead to central bank meetings in the US, UK and Japan. The Fed tomorrow is expected to leave its benchmark interest rate at 5.25-5.5 per cent, a 22-year high.

Yields on benchmark 10-year Treasuries rose 5 basis points to 4.89 per cent, reflecting falling prices.

The yen meanwhile strengthened 0.3 per cent against the dollar to ¥148.83, its strongest level since October 10, ahead of the Bank of Japan's policy meeting today.

The move followed reports from the Nikkei newspaper that Japanese policymakers were considering letting the yields on 10-year government bonds push above 1 per cent.

That would mark a further relaxation of the policy of buying government bonds to hold yields below a fixed level.

But analysts said traders were also looking to tomorrow's US Treasury's quarterly refunding update. The July report contributed to the violent repricing of US government debt in early autumn, which itself dented equity valuations.

Oil fell as worries over the potential for Israel's ground offensive in the Gaza Strip to escalate into a wider conflict eased.

Global benchmark Brent crude slid 2.8 per cent to $87.95 a barrel and US marker West Texas Intermediate fell 3.7 per cent to $82.38 a barrel. **George Steer**

Yen strengthens after reports of shift in Bank of Japan policy

¥ per $ (inverted scale)

Source: LSEG

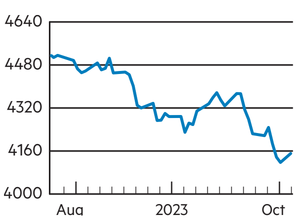
Markets update

	US	Eurozone	Japan	UK	China	Brazil
Stocks	**S&P 500**	**Eurofirst 300**	**Nikkei 225**	**FTSE100**	**Shanghai Comp**	**Bovespa**
Level	4150.96	1712.50	30696.96	7327.39	3021.55	112812.73
% change on day	0.82	0.39	-0.95	0.50	0.12	-0.43
Currency	**$ index (DXY)**	**$ per €**	**Yen per $**	**$ per £**	**Rmb per $**	**Real per $**
Level	106.431	1.062	149.015	1.216	7.318	5.040
% change on day	-0.120	0.378	-0.394	0.165	0.015	1.813
Govt. bonds	**10-year Treasury**	**10-year Bund**	**10-year JGB**	**10-year Gilt**	**10-year bond**	**10-year bond**
Yield	4.894	2.820	0.892	4.727	2.715	11.491
Basis point change on day	3.950	-0.900	2.090	1.900	0.300	40.800
World index, Commods	**FTSE All-World**	**Oil - Brent**	**Oil - WTI**	**Gold**	**Silver**	**Metals (LMEX)**
Level	417.50	86.49	82.63	1982.90	22.76	3609.60
% change on day	0.46	-3.04	-3.40	0.40	-0.94	1.32

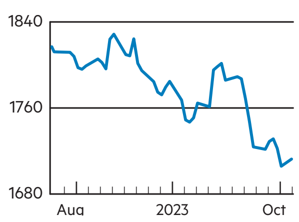
Yesterday's close apart from: Currencies = 16:00 GMT; S&P, Bovespa, All World, Oil = 17:00 GMT; Gold, Silver = London pm fix. Bond data supplied by Tullett Prebon.

Main equity markets

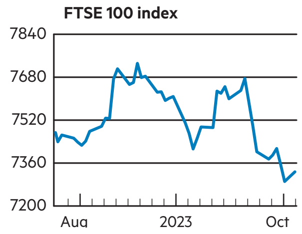
S&P 500 index



Eurofirst 300 index



FTSE 100 index



Biggest movers

%	US		Eurozone		UK	
Ups	Western Digital	5.88	B. Sabadell	3.81	Airtel Africa	4.64
	Abbvie	4.12	Erste Bank	3.46	St. James's Place	3.75
	Charter Communications	3.21	Sanofi	3.24	Pearson	2.94
	Verizon Communications	3.18	Saipem	3.17	Prudential	2.21
	Marketaxxes	3.09	Dassault Systemes	2.96	M&g	2.18
Downs	On Semiconductor	-18.22	Casino Guichard	-10.57	Ocado	-4.16
	Revvity	-16.58	Infineon Tech	-5.61	Hsbc Holdings	-2.28
	Enphase Energy	-6.76	Merck	-4.69	Natwest	-2.12
	Realty Income	-6.30	Arcelormittal	-4.25	3i	-1.30
	NXP Semiconductors	-5.96	A.p. Moller - Maersk B	-2.23	Tesco	-0.88

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

Wall Street

Sinking to the bottom of the S&P 500 index was **On Semiconductor**, the chip supplier, which forecast revenue of $1.95bn to $2.05bn for this quarter — well below the $2.2bn average that Wall Street was expecting.

Hassane El-Khoury chief executive, said On was "taking a very cautious approach as we are starting to see pockets of softness with tier 1 customers in Europe working through their inventory and increasing risk to automotive demand due to high interest rate".

On was joined by **Revvity** after Maxwell Krakowiak, its chief financial officer, said the diagnostics and life sciences group had seen a "noticeable step-down in demand from our pharma and biotech customers" during the third quarter, especially in September — adding that he expected "these headwinds to continue".

This was reflected in Revvity's revenue target of $2.72bn to $2.74bn for the full year, which missed the $2.83bn that analysts had expected.

Rallying to the top of the blue-chip benchmark was **Western Digital**, the memory manufacturer, which posted forecast-beating results alongside plans to split its hard drive and flash businesses into independent public companies.

The announcement came just days after Western abandoned merger talks with Japan's Kioxia. *Ray Douglas*

Europe

New business buoyed **Munters**, the dehumidification and cooling specialist, which has secured an order worth $137mn from an unnamed "leading data centre co-location operator in the US".

Deliveries were expected throughout 2025, said the Swedish group.

Erste, the Austrian lender, rose after a 61 per cent year-on-year jump in third-quarter net profit to €819.7mn — almost 6 per cent ahead of analysts' estimates.

Amsterdam-based **TomTom**, which makes navigation equipment, rallied on news that it would be returning more money to investors through a €50mn share buyback plan.

The scheme was aimed at reducing its share capital, repurchasing and cancelling about 7 per cent of its ordinary stock, it said. TomTom's shares are down around 19 per cent this year.

Swedish Orphan Biovitrum, the pharma group better known as Sobi, rose sharply on posting third-quarter results described as "very strong" by RBC Europe.

Revenues beat market estimates by 12 per cent and core profits 34 per cent, thanks to a robust performance from Gamifant, which treats HLH, a rare immune disease, and its first royalties on Beyfortus, a respiratory virus drug developed alongside AstraZeneca and Sanofi. *Ray Douglas*

London

Topping the FTSE 100 index was **Airtel Africa**, the Africa-focused telecoms group, which reported a 3.7 per cent rise in earnings before interest, tax, depreciation and amortisation for the half year — solidly ahead of the consensus estimate, noted Citi.

Airtel, which has been hit by the recent devaluation of the Nigerian naira, lifted its guidance — forecasting an "improved" margin for the full year against a "focus on margin resilience" stated in July.

Airtel was joined by **Pearson** near the head of the blue-chip benchmark.

The education publisher lifted guidance for adjusted operating profit by £20mn to £570mn-£575mn for the full year.

Andy Bird. outgoing chief executive, flagged strong momentum in Vue, its computer-based test system and its English-language learning products.

Near the tail-end of the FTSE 100 was **HSBC**, the Asia-focused lender, which posted a pre-tax profit of $7.7bn for the third quarter, missing the company-compiled estimates of $8.1bn.

Heading the FTSE 250 mid-cap index was **Ascentiall**, a descendent of Emap, the media group, which announced it was selling its digital commerce business and trend-spotting service WGSN for a combined enterprise value of £1.4bn — slightly ahead of Citi's sum-of-the-parts valuation. *Ray Douglas*

The EU needs to tackle its economic and fiscal slippage

Jacques de Larosière

Markets Insight

A sovereign currency represents the quintessence of the issuing country: the collective characteristics of the nation. The single currency of the EU, the euro, is far removed from this status. Rather than demonstrating unity, it is a continuing source of tension and dispute among the eurozone's constituents.

At a time when the European Central Bank needs to go further in "normalising" interest rates to counter persistent inflation, member states and the European Commission must demonstrate the will for corrective action. Unless new policies are forthcoming, a new euro crisis could erupt sooner or later.

The euro is the second global currency after the dollar. But this success cannot hide deep internal divisions. The reasons are manifold. There are as many budgetary policies as member states. Perceptions of the need to tackle inflation vary widely. Since the 1960s, the EU has become less guided by strong structural policies in areas such as industry, agriculture, energy competition. Instead, it has moved to a single market without community preferences, often overridden by powerful national trends.

Euro area growth has lagged behind that of the US. Since 1995, real US gross domestic product has increased more than 90 per cent, against the euro area's more than 50 per cent. Eliminating the risks of fluctuating exchange rates favours product specialisation. As a result, the euro has reinforced the more industrialised euro area members at the expense of those in industrial decline.

Macroeconomic divergence is further demonstrated by the so-called Target-2 imbalances that represent the national central banks' intra-euro area claims and liabilities. Spain and Italy register liabilities of roughly 28 per cent of gross domestic product, while Germany has a net claim of about 26 per cent.

What can be done? One way forward would be to solve EU banking fragmentation. This would require harmonising national rules and overcoming host-country ringfencing practices. Steps are needed to drive forward capital market union. The same is true of the need for a safe European financial asset, held back by the absence of a common tax policy.

Another basic problem has been ultra-accommodative ECB monetary policies. These have disincentivised structural reforms, particularly in France and Italy. Near-zero interest rates have made public deficits easily financeable. The ECB's quantitative easing reduced problems caused by spreads in bond yields but heightened general indebtedness and the vulnerability of the financial system.

> The euro is the second global currency after the dollar. But this success cannot hide deep divisions

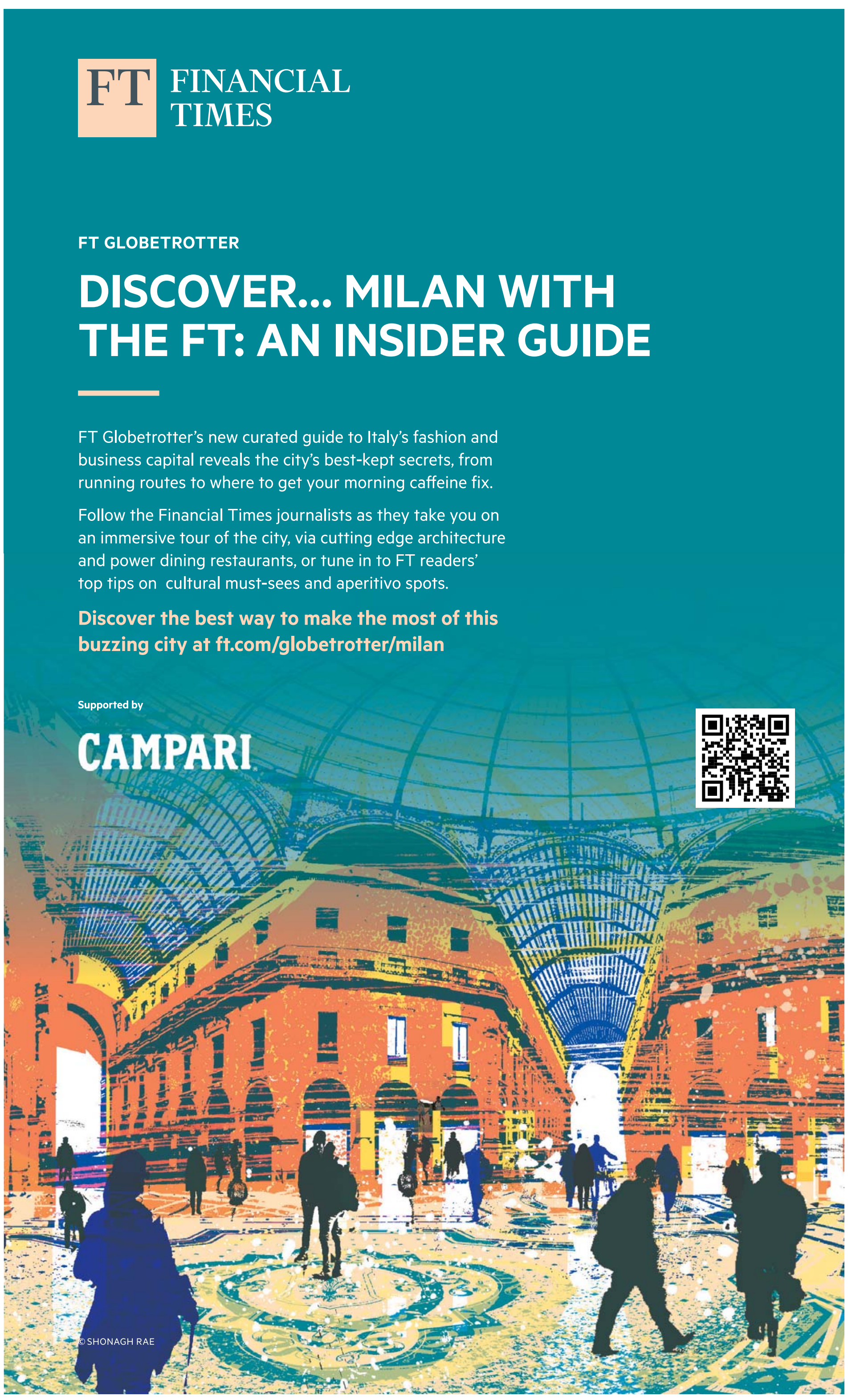
How should the ECB take into account the risks of financial fragmentation? To tackle inflation, it would be wise to start quantitative tightening to eliminate excess liquidity. Fears of rising European spreads must not dominate monetary decision-making. But sooner or later, structural spreads — reflecting accumulating fiscal and structural deficiencies — will reappear.

Member states must adjust their economic and fiscal policies accordingly. The revision of the stability and growth pact must be ambitious and immediately effective to prevent an imminent euro crisis. There must be a gradual convergence of member states' budgetary polices. The Commission's proposed case-by-case framework seems a good approach. The pace of return to public debt below 60 per cent of GDP should be specifically adapted to each country.

The macroeconomic imbalance procedure must be respected within the framework of equal treatment and multilateral surveillance, either by the Commission or by an independent budgetary authority. Current account adjustments should concern countries with both structural deficits and surpluses. It is not possible or honest to expect the countries of the south indefinitely to reduce economic growth to rein in deficits to compensate for northern surpluses. A symmetrical adjustment mechanism is needed where surpluses are treated in the same way as deficits.

Europe's system of trying to manage monetary union without a credible economic stability mechanism is unsustainable. Policymakers, and the Commission, must assume responsibilities in respecting economic discipline. This requires independence, competence, vision and courage. At present we see fiscal, inflationary and economic slippage — and the danger that the countries of the north end up paying for the ensuing problems. It is time for Europe to take its destiny into its own hands.

Jacques de Larosière is a former managing director of the IMF, former governor of the Banque de France and former president of the European Bank for Reconstruction and Development



MARKET DATA

WORLD MARKETS AT A GLANCE

FT.COM/MARKETSDATA

Change during previous day's trading (%)

S&P 500	Nasdaq Composite	Dow Jones Ind	FTSE 100	FTSE Eurofirst 300	Nikkei	Hang Seng	FTSE All World $	$ per €	$ per £	¥ per $	£ per €	Oil Brent $ Sep	Gold $
0.82%	0.98%	1.10%	0.50%	0.39%	-0.95%	0.04%	0.46%	0.378%	0.165%	-0.394%	0.344%	-1.79%	0.40%

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

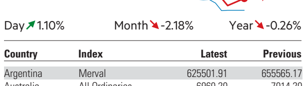
AMERICAS

Oct 01 - - — Index — All World

S&P 500 New York

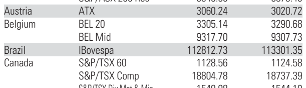
Day 0.82% Month -3.20% Year 6.40%

Nasdaq Composite New York



Day 0.98% Month -3.45% Year 14.96%

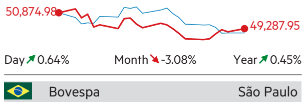
Dow Jones Industrial New York



Day 1.10% Month -2.18% Year -0.26%

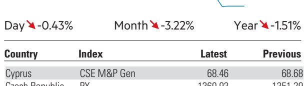
Oct 01 - Oct 30 — Index — All World

S&P/TSX COMP Toronto



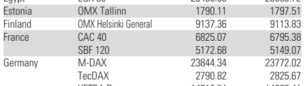
Day 0.36% Month -3.74% Year -3.39%

IPC Mexico City



Day 0.64% Month -3.08% Year 0.45%

Bovespa São Paulo

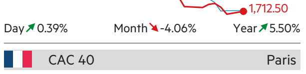


Day -0.43% Month -3.22% Year -1.51%

EUROPE

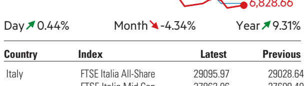
Oct 01 - Oct 30 — Index — All World

FTSE 100 London



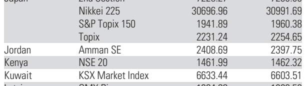
Day 0.50% Month -3.73% Year 3.92%

FTSE Eurofirst 300 Europe



Day 0.39% Month -4.06% Year 5.50%

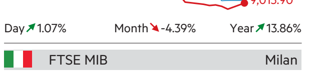
CAC 40 Paris



Day 0.44% Month -4.34% Year 9.31%

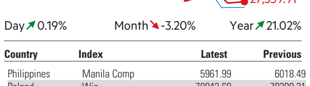
Oct 01 - Oct 30 — Index — All World

Xetra Dax Frankfurt



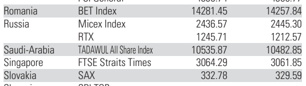
Day 0.20% Month -0.57% Year NaN%

Ibex 35 Madrid



Day 1.07% Month -4.39% Year 13.86%

FTSE MIB Milan

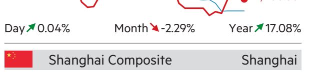


Day 0.19% Month -3.20% Year 21.02%

ASIA

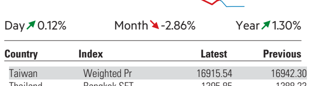
Oct 01 - Oct 30 — Index — All World

Nikkei 225 Tokyo



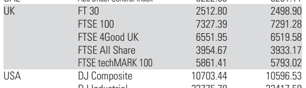
Day -0.95% Month -3.69% Year 13.20%

Hang Seng Hong Kong



Day 0.04% Month -2.29% Year 17.08%

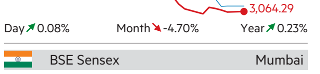
Shanghai Composite Shanghai



Day 0.12% Month -2.86% Year 1.30%

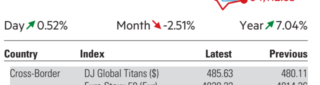
Oct 01 - Oct 30 — Index — All World

Kospi Seoul



Day 0.34% Month -6.27% Year 1.86%

FTSE Straits Times Singapore



Day 0.08% Month -4.70% Year 0.23%

BSE Sensex Mumbai

Day 0.52% Month -2.51% Year 7.04%

Country	Index	Latest	Previous
Argentina	Merval	625501.91	655565.17
Australia	All Ordinaries	6960.20	7014.20
	S&P/ASX 200	6772.90	6826.90
	S&P/ASX 200 Res	5845.50	5878.40
Austria	ATX	3060.24	3020.72
Belgium	BEL 20	3305.14	3290.68
	BEL Mid	9317.70	9307.73
Brazil	IBovespa	112812.73	113301.35
Canada	S&P/TSX 60	1128.56	1124.58
	S&P/TSX Comp	18804.78	18737.39
	S&P/TSX Div Met & Min	1549.98	1544.10
Chile	S&P/CLX IGPA Gen	27718.81	28271.14
China	FTSE A200	9374.76	9338.76
	FTSE B35	9000.71	8988.96
	Shanghai A	3167.93	3164.02
	Shanghai B	230.36	228.21
	Shanghai Comp	3021.55	3017.78
	Shenzhen A	1971.53	1944.37
	Shenzhen B	1062.66	1059.17
Colombia	COLCAP	1261.61	1260.21
Croatia	CROBEX	2013.05	2011.29
Cyprus	CSE M&P Gen	68.46	68.68
Czech Republic	PX	1360.93	1351.29
Denmark	OMXC Copenahgen 20	2123.42	2088.04
Egypt	EGX 30	23435.65	23086.72
Estonia	OMX Tallinn	1790.11	1797.51
Finland	OMX Helsinki General	9137.36	9113.83
France	CAC 40	6825.07	6795.38
	SBF 120	5172.68	5149.07
Germany	M-DAX	23844.34	23772.02
	TecDAX	2790.82	2825.67
	XETRA Dax	14716.54	14687.41
Greece	Athens Gen	1186.38	1178.79
	FTSE/ASE 20	2914.75	2899.42
Hong Kong	Hang Seng	17406.36	17398.73
	HS China Enterprise	5960.33	5979.01
	HSCC Red Chip	3405.82	3424.08
Hungary	Bux	56434.91	56314.97
India	BSE Sensex	64112.65	63782.80
	Nifty 500	16826.10	16765.45
Indonesia	Jakarta Comp	6735.89	6758.79
Ireland	ISEQ Overall	7823.76	7809.80
Israel	Tel Aviv 125	1628.01	1608.42
Italy	FTSE Italia All-Share	29095.97	29028.64
	FTSE Italia Mid Cap	37862.06	37609.40
	FTSE MIB	27339.91	27287.45
Japan	2nd Section	7228.27	7239.06
	Nikkei 225	30696.96	30991.69
	S&P Topix 150	1941.89	1960.38
	Topix	2231.24	2254.65
Jordan	Amman SE	2408.69	2397.75
Kenya	NSE 20	1461.99	1462.32
Kuwait	KSX Market Index	6633.44	6603.51
Latvia	OMX Riga	1394.28	1399.59
Lithuania	OMX Vilnius	933.72	933.79
Luxembourg	LuxX	1304.68	1301.79
Malaysia	FTSE Bursa KLCI	1439.20	1441.90
Mexico	IPC	49287.95	48973.85
Morocco	MASI	11924.90	11987.77
Netherlands	AEX	714.05	714.25
	AEX All Share	961.79	962.70
New Zealand	NZX 50	10741.57	10766.82
Nigeria	SE All Share	67136.58	67084.95
Norway	Oslo All Share	1017.37	1006.88
Pakistan	KSE 100	51482.93	50943.84
Philippines	Manila Comp	5961.99	6018.49
Poland	Wig	70943.69	70290.31
Portugal	PSI 20	6218.17	6213.08
	PSI General	4335.74	4355.77
Romania	BET Index	14281.45	14257.84
Russia	Micex Index	2436.57	2445.30
	RTX	1245.71	1212.57
Saudi-Arabia	TADAWUL All Share Index	10535.87	10482.85
Singapore	FTSE Straits Times	3064.29	3061.85
Slovakia	SAX	332.78	329.59
Slovenia	SBI TOP	-	-
South Africa	FTSE/JSE All Share	69871.16	69451.97
	FTSE/JSE Res 20	56107.16	55828.71
	FTSE/JSE Top 40	64243.68	63785.89
South Korea	Kospi	2310.55	2302.81
	Kospi 200	308.95	308.53
Spain	IBEX 35	9013.90	8918.30
Sri Lanka	CSE All Share	10687.99	10689.50
Sweden	OMX Stockholm 30	2057.14	2049.65
	OMX Stockholm AS	756.76	753.35
Switzerland	SMI Index	10382.19	10323.71
Taiwan	Weighted Pr	16915.54	16942.30
Thailand	Bangkok SET	1395.85	1388.23
Turkey	BIST 100	7712.85	7712.85
UAE	Abu Dhabi General Index	9222.93	9251.11
UK	FT 30	2512.80	2498.90
	FTSE 100	7327.39	7291.28
	FTSE 4Good UK	6551.95	6519.58
	FTSE All Share	3954.67	3933.17
	FTSE techMARK 100	5861.41	5793.02
USA	DJ Composite	10703.44	10596.53
	DJ Industrial	32775.78	32417.59
	DJ Transport	13735.76	13556.07
	DJ Utilities	811.37	812.89
	Nasdaq 100	14310.55	14180.42
	Nasdaq Cmp	12766.90	12643.01
	NYSE Comp	14766.09	14675.78
	S&P 500	4150.96	4117.37
	Wilshire 5000	42053.18	41446.59
Venezuela	IBC	58245.04	57493.58
Vietnam	VNI	1042.40	1060.62
Cross-Border	DJ Global Titans ($)	485.63	480.11
	Euro Stoxx 50 (Eur)	4028.32	4014.36
	Euronext 100 ID	1274.02	1270.18
	FTSE 4Good Global ($)	10625.35	10533.11
	FTSE All World ($)	417.50	415.60
	FTSE E300	1712.50	1705.85
	FTSE Eurotop 100	3440.63	3425.66
	FTSE Global 100 ($)	2846.37	2824.55
	FTSE Gold Min ($)	1737.18	1704.96
	FTSE Latibex Top (Eur)	4440.00	4432.20
	FTSE Multinationals ($)	2865.91	2869.49
	FTSE World ($)	761.62	758.11
	FTSEurofirst 100 (Eur)	4632.01	4615.63
	FTSEurofirst 80 (Eur)	5458.53	5441.37
	MSCI ACWI Fr ($)	629.46	630.65
	MSCI All World ($)	2731.99	2740.96
	MSCI Europe (Eur)	1739.96	1752.59
	MSCI Pacific ($)	2608.28	2571.72
	S&P Euro (Eur)	1772.37	1764.94
	S&P Europe 350 (Eur)	1757.02	1749.46
	S&P Global 1200 ($)	3036.29	3015.50
	Stoxx 50 (Eur)	3802.97	3783.73

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

STOCK MARKET: BIGGEST MOVERS

AMERICA

ACTIVE STOCKS	stock traded m's	close price	Day's change
Tesla	139.2	199.33	-7.97
Nvidia	73.9	410.51	5.51
Meta Platforms	46.3	304.13	7.40
Amazon.com	45.3	131.93	4.19
Apple	36.3	169.91	1.69
Microsoft	34.2	336.04	6.23
Advanced Micro Devices	19.9	95.79	-0.64
Alphabet	15.5	124.62	2.45
Alphabet	14.9	125.92	2.52
On Semiconductor	12.8	68.30	-15.22

BIGGEST MOVERS	Close price	Day's change	Day's chng%
Ups			
Western Digital	41.26	2.29	5.88
Abbvie	144.65	5.72	4.12
Adobe	527.58	19.46	3.83
Charter Communications	385.01	13.01	3.50
Amazon.com	131.93	4.19	3.28
Downs			
On Semiconductor	68.30	-15.22	-18.22
Revvity	81.64	-16.23	-16.58
Realty Income	45.54	-3.46	-7.06
Enphase Energy	76.98	-5.11	-6.22
Bio-techne	56.24	-3.30	-5.54

Based on the constituents of the S&P500

LONDON

ACTIVE STOCKS	stock traded m's	close price	Day's change
Hsbc Holdings	334.0	587.30	-13.70
Shell	287.1	2687.00	-13.50
Unilever	139.5	3862.50	41.50
Bp	135.0	526.70	-3.80
British American Tobacco	127.5	2449.50	46.50
Natwest	101.4	178.15	-3.85
Astrazeneca	94.3	10218.00	94.00
Experian	87.7	2435.00	45.00
Rio Tinto	83.8	5239.00	39.00
Reckitt Benckiser	81.6	5540.00	88.00

BIGGEST MOVERS	Close price	Day's change	Day's chng%
Ups			
Ascential	265.00	49.40	22.91
Cab Payments Holdings	54.70	7.15	15.04
Digital 9 Infrastructure	44.80	4.60	11.44
Foresight Holdings	358.00	28.00	8.48
Wizz Air Holdings	1623.00	73.00	4.71
Downs			
Nextenergy Solar Fund	78.40	-4.10	-4.97
Ocado	462.70	-20.10	-4.16
Cls Holdings	85.30	-3.30	-3.72
Jlen Environmental Assets	87.50	-2.40	-2.67
Diversified Energy	67.65	-1.70	-2.45

Based on the constituents of the FTSE 350 index

EURO MARKETS

ACTIVE STOCKS	stock traded m's	close price	Day's change
Roche Gs	532.2	251.95	3.71
Unicredit	332.8	23.49	0.41
Novartis N	283.6	88.37	0.91
Inditex	264.0	33.07	0.42
Stellantis	244.1	17.04	-0.28
Nestle N	240.3	102.01	0.25
Sanofi	178.3	84.08	2.64
Eni	175.7	15.36	-0.15
Intesa Sanpaolo	175.0	2.40	0.02
Asml Holding	152.9	553.00	-7.20

BIGGEST MOVERS	Close price	Day's change	Day's chng%
Ups			
Sanofi	84.08	2.64	3.24
Dsv A/s	136.06	4.09	3.10
Dassault Systemes	38.98	1.12	2.96
Santander	3.57	0.09	2.54
Enel	5.89	0.13	2.28
Downs			
Stmicroelectronics	35.42	-2.07	-5.51
Infineon Tech.ag Na O.n.	27.57	-1.26	-4.37
Sartorius Sted Bio	161.45	-4.10	-2.48
A.p. M__ller - M__rsk A A/s	1519.34	-36.17	-2.33
A.p. M__ller - M__rsk B A/s	1553.50	-35.50	-2.23

Based on the constituents of the FTSEurofirst 300 Eurozone index

TOKYO

ACTIVE STOCKS	stock traded m's	close price	Day's change
Shin-etsu Chemical Co.,	1070.6	4491.00	189.00
Mitsubishi	1063.4	6924.00	-130.00
Nippon Telegraph And Telephone	1022.9	173.70	-1.70
Mitsubishi Ufj Fin	836.7	1230.00	-24.50
Keyence	809.2	57310.00	4260.00
Itochu	807.3	5363.00	-56.00
Mizuho Fin	796.1	2512.00	-41.00
Mitsui & Co.,	781.8	5375.00	-106.00
Toyota Motor	734.9	2574.00	-64.50
Hoya	569.6	14325.00	-170.00

BIGGEST MOVERS	Close price	Day's change	Day's chng%
Ups			
Nisshin Seifun	2112.00	251.00	13.49
Osaka Gas Co.,	2716.50	247.50	10.02
Keyence	57310.00	4260.00	8.03
Hitachi,	9395.00	511.00	5.75
Shin-etsu Chemical Co.,	4491.00	189.00	4.39
Downs			
Hino Motors,	435.20	-99.90	-18.67
Omron	5318.00	-1000.00	-15.83
Sumitomo Dainippon Pharma Co Ltd	427.80	-54.30	-11.26
Seiko Epson	2049.50	-175.00	-7.87
Komatsu	3416.00	-274.00	-7.43

Based on the constituents of the Nikkei 225 index

UK MARKET WINNERS AND LOSERS

FTSE 100	Oct 30 price(p)	%Chg week	%Chg ytd
Winners			
Rio Tinto	5239.00	7.1	-9.6
Smith (ds)	281.70	6.1	-12.1
Antofagasta	1369.00	5.6	-10.7
Fresnillo	554.60	5.5	-38.4
Mondi	1315.50	5.4	-6.8
Glencore	451.00	5.2	-18.2
Pearson	946.20	4.9	0.7
Taylor Wimpey	109.65	4.9	8.0
Severn Trent	2625.00	4.5	-1.2
United Utilities	1056.50	4.4	6.4
Intercontinental Hotels	5992.00	4.0	26.4
Prudential	861.80	3.8	-23.5
Losers			
Natwest	178.15	-17.3	-32.6
Standard Chartered	620.40	-13.5	-1.2
Experian	2435.00	-9.4	-14.0
Barclays	130.66	-9.3	-17.8
Ocado	462.70	-8.4	-25.1
Rentokil Initial	422.80	-8.4	-16.7
Reckitt Benckiser	5540.00	-7.0	-3.8
Intertek	3791.00	-6.1	-6.4
3i	1943.00	-4.2	45.0
B&m Eur Value Retail S.a.	522.00	-4.2	26.9
Hsbc Holdings	587.30	-4.1	13.4
Weir	1675.50	-3.6	0.1

FTSE 250	Oct 30 price(p)	%Chg week	%Chg ytd
Winners			
Ascential	265.00	21.9	30.9
Digital 9 Infrastructure	44.80	12.1	-48.1
Plus500 Ltd	1425.00	9.0	-21.0
Trainline	260.00	7.1	-6.1
Fidelity China Special Situations	207.00	5.1	-14.2
Redde Northgate	333.00	5.0	-19.3
Drax	430.30	5.0	-39.0
Coats	70.10	4.9	6.5
4imprint	4940.00	4.9	16.1
Firstgroup	155.00	4.8	53.1
Pennon	712.00	4.6	-19.7
Elementis	112.40	4.3	-6.3
Losers			
Cab Payments Holdings	54.70	-74.7	-
Softcat	1252.00	-10.9	5.9
Ip	43.55	-10.8	-22.4
Cls Holdings	85.30	-10.2	-46.7
Ceres Power Holdings	191.40	-8.6	-45.5
Pets At Home	282.80	-7.3	0.4
Oxford Instruments	1712.00	-6.7	-23.9
Bakkavor	84.40	-6.2	-11.6
Aj Bell	252.60	-6.2	-30.5
Genus	2098.00	-5.7	-30.0
Diversified Energy	67.65	-5.5	-41.7
Morgan Sindall	1858.00	-5.4	21.0

FTSE SmallCap	Oct 30 price(p)	%Chg week	%Chg ytd
Winners			
Triple Point Social Housing Reit	55.40	10.8	-9.5
Xp Power	1110.00	9.9	-45.5
Synthomer	189.50	7.1	-82.4
Pod Point Holdings	23.23	6.8	-62.0
Jpmorgan China Growth & Income	228.00	6.0	-34.0
Severfield	64.00	5.6	3.2
Smiths News	48.00	5.3	2.7
Reach	76.35	4.5	-19.7
Costain	50.20	4.4	24.4
Halfords	202.60	4.2	-2.2
Paypoint	530.00	3.9	4.3
Baillie Gifford China Growth Trust	205.00	3.8	-24.6
Losers			
Superdry	36.70	-17.0	-71.0
Renewi	587.00	-14.9	-1.8
Seraphim Space Investment Trust	32.85	-11.0	-27.5
Molten Ventures	220.80	-10.0	-37.2
Hostelworld	105.50	-9.8	-8.4
Gore Street Energy Storage Fund	61.20	-9.7	-44.9
Oxford Biomedica	214.00	-8.9	-51.3
Metro Bank Holdings	41.95	-8.8	-65.0
Petrofac	49.46	-8.6	-29.6
Rank	67.50	-8.3	-17.3
Residential Secure Income	55.40	-7.7	-34.0
Trifast	68.00	-7.4	-6.3

Industry Sectors	Oct 30 price(p)	%Chg week	%Chg ytd
Winners			
Industrial Metals	6421.56	5.6	-17.9
Electricity	9629.78	3.2	-10.1
General Industrials	6011.01	3.0	-0.6
Gas Water & Multiutilities index	5919.20	2.5	4.5
Household Goods	10049.40	2.4	1.2
Mobile Telecommunications	1953.90	2.2	-8.5
Chemicals	8159.58	2.2	-30.5
Life Insurance	5691.16	1.9	-19.3
Aerospace & Defense	7403.50	1.7	44.4
Software & Computer Services	2095.98	1.5	18.6
Food Producers	6375.78	0.9	12.2
General Retailers	3631.33	0.9	8.0
Losers			
Banks	3303.24	-6.1	0.3
Support Services	8792.50	-5.5	-11.7
Food & Drug Retailers	3959.73	-3.7	-3.8
Automobiles & Parts	1396.61	-2.7	-6.0
Industrial Engineering	11789.32	-2.0	-14.6
Oil & Gas Producers	9161.38	-1.6	12.6
Real Estate & Investment Servic	1907.83	-1.2	-9.5
Electronic & Electrical Equip.	8168.35	-1.2	-5.6
Personal Goods	23853.55	-1.2	-22.3
Nonlife Insurance	3049.61	-0.7	-8.9
Health Care Equip.& Services	10050.59	-0.7	-7.5
Equity Investment Instruments	10143.63	-0.5	-10.0

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

CURRENCIES

Oct 30	Currency	DOLLAR Closing Mid	DOLLAR Day's Change	EURO Closing Mid	EURO Day's Change	POUND Closing Mid	POUND Day's Change
Argentina	Argentine Peso	350.0283	0.0533	371.7141	1.4760	425.4784	0.4523
Australia	Australian Dollar	1.5692	-0.0054	1.6665	0.0006	1.9075	-0.0049
Bahrain	Bahrainin Dinar	0.3772	-	0.4006	0.0015	0.4585	0.0004
Bolivia	Bolivian Boliviano	6.9100	-	7.3381	0.0280	8.3995	0.0077
Brazil	Brazilian Real	5.0400	0.0898	5.3523	0.1154	6.1264	0.1146
Canada	Canadian Dollar	1.3829	-0.0026	1.4685	0.0028	1.6809	-0.0017
Chile	Chilean Peso	909.1500	9.1500	965.4759	13.3669	1105.1212	12.1189
China	Chinese Yuan	7.3181	0.0011	7.7714	0.0308	8.8955	0.0094
Colombia	Colombian Peso	4065.9750	-74.4050	4317.8806	-62.2230	4942.4135	-85.8605
Costa Rica	Costa Rican Colon	533.2100	-0.3400	566.2447	1.8028	648.1457	0.1774
Czech Republic	Czech Koruna	23.1245	-0.1627	24.5571	-0.0784	28.1090	-0.1720
Denmark	Danish Krone	7.0283	-0.0271	7.4638	-0.0002	8.5433	-0.0251
Egypt	Egyptian Pound	30.9013	0.1616	32.8158	0.2963	37.5622	0.2305
Hong Kong	Hong Kong Dollar	7.8209	-0.0016	8.3054	0.0300	9.5067	0.0067
Hungary	Hungarian Forint	359.9276	-1.6851	382.2267	-0.3229	437.5115	-1.6480
India	Indian Rupee	83.2513	0.0050	88.4090	0.3429	101.1964	0.0982
Indonesia	Indonesian Rupiah	15890.0000	-50.0000	16874.4758	11.5529	19315.1616	-43.1491
Israel	Israeli Shekel	4.0406	-0.0140	4.2909	0.0016	4.9115	-0.0125
Japan	Japanese Yen	149.0150	-0.5900	158.2471	-0.0198	181.1358	-0.5515
..One Month		149.0143	-0.5914	158.2466	-0.0209	181.1350	-0.5532
..Three Month		149.0127	-0.5945	158.2454	-0.0233	181.1332	-0.5568
..One Year		149.0067	-0.6067	158.2410	-0.0322	181.1350	-0.5622
Kenya	Kenyan Shilling	150.6000	0.1000	159.9303	0.7166	183.0625	0.2882
Kuwait	Kuwaiti Dinar	0.3092	-	0.3283	0.0013	0.3758	0.0003
Malaysia	Malaysian Ringgit	4.7625	-0.0160	5.0576	0.0024	5.7891	-0.0142
Mexico	Mexican Peso	18.0270	-0.0475	19.1439	0.0229	21.9128	-0.0377
New Zealand	New Zealand Dollar	1.7138	-0.0025	1.8200	0.0043	2.0832	-0.0011
Nigeria	Nigerian Naira	795.0000	5.5000	844.2538	9.0427	966.3656	7.5597
Norway	Norwegian Krone	11.1446	-0.0096	11.8351	0.0351	13.5469	0.0007
Pakistan	Pakistani Rupee	280.3000	-0.0250	297.6658	1.1103	340.7199	0.2800
Peru	Peruvian Nuevo Sol	3.8430	-0.0234	4.0810	-0.0091	4.6713	-0.0241
Philippines	Philippine Peso	56.9600	-	60.4889	0.2310	69.2380	0.0631
Poland	Polish Zloty	4.1954	-0.0238	4.4553	-0.0082	5.0997	-0.0243
Romania	Romanian Leu	4.6742	-0.0181	4.9638	-0.0002	5.6818	-0.0168
Russia	Russian Ruble	92.9750	-1.7250	98.7352	-1.4478	113.0162	-1.9920
Saudi Arabia	Saudi Riyal	3.7517	-	3.9841	0.0152	4.5604	0.0042
Singapore	Singapore Dollar	1.3637	-0.0049	1.4482	0.0003	1.6577	-0.0044
South Africa	South African Rand	18.7900	-0.0131	19.9541	0.0623	22.8403	0.0048
South Korea	South Korean Won	1350.9500	-4.9000	1434.6474	0.2951	1642.1532	-4.4551
Sweden	Swedish Krona	11.1411	0.0152	11.8313	0.0613	13.5426	0.0308
Switzerland	Swiss Franc	0.9018	-0.0009	0.9577	0.0027	1.0962	-0.0001
Taiwan	New Taiwan Dollar	32.4455	0.0095	34.4556	0.1416	39.4393	0.0475
Thailand	Thai Baht	35.9575	-0.2625	38.1852	-0.1319	43.7083	-0.2790
Tunisia	Tunisian Dinar	3.1594	-0.0122	3.3551	-0.0001	3.8404	-0.0114
Turkey	Turkish Lira	28.2650	0.0735	30.0161	0.1924	34.3576	0.1206
United Arab Emirates	UAE Dirham	3.6730	0.0000	3.9006	0.0148	4.4647	0.0040
United Kingdom	Pound Sterling	0.8227	-0.0007	0.8736	0.0025	-	-
..One Month		0.8227	-0.0007	0.8735	0.0025	-	-
..Three Month		0.8228	-0.0007	0.8733	0.0025	-	-
..One Year		0.8229	-0.0007	0.8723	0.0025	-	-
United States	United States Dollar	-	-	1.0620	0.0041	1.2156	0.0011
..One Month		-	-	1.0618	-0.1525	1.2156	0.0011
..Three Month		-	-	1.0615	-0.1525	1.2156	0.0011
..One Year		-	-	1.0601	-0.1525	1.2158	0.0011
Vietnam	Vietnamese Dong	24568.0000	-12.0000	26090.1100	86.9064	29863.7615	12.5697
European Union	Euro	0.9417	-0.0036	-	-	1.1446	-0.0033
..One Month		0.9415	-0.0036	-	-	1.1445	-0.0033
..Three Month		0.9412	-0.0036	-	-	1.1443	-0.0033
..One Year		0.9398	-0.0036	-	-	1.1433	-0.0033

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

FTSE ACTUARIES SHARE INDICES

UK SERIES
www.ft.com/equities

Produced in conjunction with the Institute and Faculty of Actuaries

	£ Strlg Oct 30	Day's chge%	Euro Index	£ Strlg Oct 27	£ Strlg Oct 26	Year ago	Div yield%	Cover	P/E ratio	X/D adj	Total Return
FTSE 100 (100)	7327.39	0.50	6537.70	7291.28	7354.57	7047.67	3.95	2.00	12.67	256.71	7786.23
FTSE 250 (250)	17017.59	0.90	15183.58	16866.23	16783.09	17916.67	3.93	1.01	25.22	532.82	14581.28
FTSE 250 ex Inv Co (168)	17446.15	1.02	15565.95	17270.62	17155.98	18143.79	4.15	0.89	27.03	574.79	15272.36
FTSE 350 (350)	3997.82	0.55	3566.97	3976.01	4003.35	3893.43	3.95	1.87	13.57	138.10	8423.99
FTSE 350 ex Investment Trusts (265)	3956.25	0.55	3529.88	3934.64	3963.22	3830.98	3.99	1.91	13.13	138.72	4310.69
FTSE 350 Higher Yield (133)	3461.29	0.16	3088.26	3455.87	3476.83	3373.65	5.55	1.83	9.84	158.52	8327.74
FTSE 350 Lower Yield (217)	4115.41	0.99	3671.89	4075.22	4106.94	4010.67	2.17	1.97	23.37	92.70	5176.81
FTSE SmallCap (223)	5703.65	0.47	5088.96	5677.04	5668.93	5839.19	4.30	-0.25	-91.50	185.41	9900.14
FTSE SmallCap ex Inv Co (115)	4734.34	0.55	4224.11	4708.29	4683.20	4682.09	4.56	-0.19	-114.21	150.70	8540.86
FTSE All-Share (573)	3954.67	0.55	3528.47	3933.17	3959.51	3855.75	3.95	1.82	13.91	136.42	8414.37
FTSE All-Share ex Inv Co (380)	3883.38	0.55	3464.86	3862.16	3889.65	3761.34	4.00	1.88	13.30	136.01	4295.90
FTSE All-Share ex Multinationals (513)	986.58	0.58	730.24	980.84	982.65	1008.45	4.50	1.40	15.86	38.05	2179.58
FTSE Fledgling (73)	9849.29	0.10	8787.81	9839.71	9861.24	11154.90	3.14	-0.34	-94.10	269.95	21897.27
FTSE Fledgling ex Inv Co (31)	14386.29	0.80	12835.86	14272.41	14294.69	14321.07	2.58	-1.46	-26.45	382.39	31045.97
FTSE All-Small (296)	3961.56	0.45	3534.61	3943.81	3938.90	4077.70	4.24	-0.26	-91.62	127.73	8816.92
FTSE All-Small ex Inv Co (146)	3562.96	0.56	3178.97	3543.02	3525.09	3524.25	4.48	-0.22	-101.20	112.69	8138.70
FTSE AIM All-Share (683)	678.57	0.61	605.44	674.46	669.84	805.37	2.19	1.10	41.42	12.21	810.59
FTSE All-Share Technology (17)	2190.12	1.84	1831.66	2150.65	2143.94	1870.84	1.76	1.57	36.25	32.85	3224.25
FTSE All-Share Telecommunications (6)	1237.99	1.35	1035.36	1221.55	1209.89	1596.98	8.52	1.49	7.88	59.61	1988.39
FTSE All-Share Health Care (12)	13778.61	1.06	11523.39	13633.97	13963.58	13436.01	2.57	1.38	28.14	319.71	13040.32
FTSE All-Share Financials (257)	4331.02	-0.07	3622.14	4334.19	4377.10	4141.27	4.69	2.34	9.10	191.85	5020.81
FTSE All-Share Real Estate (51)	700.20	-0.05	612.60	700.53	693.91	813.53	5.19	-2.94	-6.55	29.85	767.42
FTSE All-Share Consumer Discretionary (81)	4841.58	0.93	4049.13	4796.96	4793.48	4303.83	2.43	2.00	20.61	108.17	5247.79
FTSE All-Share Consumer Staples (22)	17336.72	1.40	14499.12	17097.96	17443.59	18873.53	4.57	1.58	13.85	640.28	16512.45
FTSE All-Share Industrials (83)	6454.31	0.84	5397.89	6400.82	6387.66	5993.95	2.40	2.27	18.33	145.56	7638.67
FTSE All-Share Basic Materials (21)	7544.11	0.86	6309.33	7479.84	7409.70	7872.54	6.19	2.33	6.92	458.77	10906.60
FTSE All-Share Energy (15)	9461.44	-0.55	7912.84	9514.07	9502.87	8631.72	3.80	1.63	16.12	275.77	11877.08
FTSE All-Share Utilities (8)	8572.79	0.16	7169.64	8559.09	8608.93	7832.68	5.06	2.00	9.90	339.77	13594.16
FTSE All-Share Software and Computer Services (16)	2374.11	1.88	1985.53	2330.41	2322.79	2019.36	1.74	1.62	35.62	35.00	3696.84
FTSE All-Share Technology Hardware and Equipment (1)	3986.77	-1.84	3334.23	4061.52	4106.37	4702.49	4.03	-0.47	-52.31	142.95	5345.58
FTSE All-Share Telecommunications Equipment (1)	218.40	2.73	182.65	212.59	209.90	597.74	6.41	1.51	10.33	13.99	323.97
FTSE All-Share Telecommunications Service Providers (5)	1950.95	1.32	1631.62	1925.59	1907.34	2458.03	8.56	1.49	7.84	93.30	2857.71
FTSE All-Share Health Care Providers (1)	10655.16	0.24	8911.17	10629.97	10579.59	10739.44	0.24	4.26	99.38	43.16	9928.04
FTSE All-Share Medical Equipment and Services (2)	4653.61	1.13	3891.93	4601.57	4634.84	5132.15	3.11	0.62	51.50	144.86	4619.02
FTSE All-Share Pharmaceuticals and Biotechnology (9)	19827.04	1.06	16581.84	19619.15	20110.52	19202.58	2.55	1.43	27.51	456.10	16895.88
FTSE All-Share Banks (12)	3257.56	-1.06	2724.38	3292.32	3369.64	2824.73	5.91	3.67	4.61	191.73	3040.23
FTSE All-Share Finance and Credit Services (8)	10968.64	0.38	9173.34	10927.24	11035.24	10252.14	1.94	1.91	27.12	220.35	15041.68
FTSE All-Share Investment Banking and Brokerage Services (32)	8135.28	0.26	6803.74	8114.18	8113.74	7755.89	5.52	1.87	9.71	373.99	11990.55
FTSE All-Share Closed End Investments (193)	10411.26	0.51	8707.19	10358.80	10359.64	11221.91	3.23	0.62	49.84	271.22	6689.07
FTSE All-Share Life Insurance (6)	5793.48	1.46	4845.23	5709.93	5676.85	5847.25	5.64	0.40	43.89	327.63	7450.24
FTSE All-Share Nonlife Insurance (6)	3454.37	0.14	2888.98	3449.47	3472.43	3408.44	3.02	1.12	29.67	86.97	7539.34
FTSE All-Share Real Estate Investment and Services (10)	1819.67	-0.11	1521.83	1821.75	1817.03	1956.00	2.80	0.81	44.12	40.95	5554.16
FTSE All-Share Real Estate Investment Trusts (41)	1731.24	-0.03	1447.88	1731.84	1713.24	2039.73	5.64	-3.28	-5.40	80.35	2744.11
FTSE All-Share Automobiles and Parts (3)	1403.77	2.48	1174.01	1369.74	1347.61	1220.30	1.32	-3.35	-22.67	18.60	1475.84
FTSE All-Share Consumer Services (1)	3412.19	0.49	2853.70	3395.71	3420.43	3044.17	1.79	1.17	47.53	61.00	4408.71
FTSE All-Share Household Goods and Home Construction (11)	8367.83	0.68	6998.22	8311.58	8242.40	8020.44	7.02	1.91	7.48	513.37	7962.36
FTSE All-Share Leisure Goods (2)	26664.50	-0.41	22300.18	26773.25	26705.69	17577.59	4.47	1.01	22.18	1143.78	31081.90
FTSE All-Share Personal Goods (4)	20449.24	0.42	17102.20	20363.77	20369.36	25048.93	3.18	2.23	14.12	496.10	16400.96
FTSE All-Share Media (10)	10616.45	1.44	8878.80	10465.89	10518.26	9183.37	2.48	1.93	20.87	262.17	7661.62
FTSE All-Share Retailers (21)	2095.90	0.48	1752.85	2085.82	2081.77	1621.69	2.72	3.06	12.02	45.58	2795.07
FTSE All-Share Travel and Leisure (29)	6415.17	0.95	5365.16	6354.78	6301.04	5940.84	0.87	2.07	55.71	50.90	6683.19
FTSE All-Share Beverages (5)	24078.36	2.01	20137.33	23604.57	24227.12	27120.66	2.65	2.03	18.61	620.51	19774.46
FTSE All-Share Food Producers (8)	6552.30	1.69	5479.85	6443.49	6484.48	5312.69	2.41	2.21	18.77	88.02	6466.65
FTSE All-Share Tobacco (2)	27374.62	1.94	22894.07	26853.09	27395.43	36956.99	9.01	1.63	6.83	1826.19	27687.74
FTSE All-Share Construction and Materials (15)	8170.54	1.02	6833.22	8087.65	7975.57	6844.03	4.15	2.54	9.50	255.74	10276.71
FTSE All-Share Aerospace and Defense (8)	7752.24	1.38	6483.39	7646.68	7696.92	5020.38	1.63	3.84	16.01	126.01	9625.76
FTSE All-Share Electronic and Electrical Equipment (11)	9556.94	0.78	7992.70	9483.05	9507.51	10075.83	1.90	2.42	21.68	155.61	9597.87
FTSE All-Share General Industrials (7)	4837.16	0.61	4045.43	4807.67	4745.41	4713.58	3.73	1.54	17.42	156.37	6602.69
FTSE All-Share Industrial Engineering (6)	12920.53	-0.39	10805.76	12971.51	13053.30	15087.14	2.54	2.22	17.71	321.07	17711.04
FTSE All-Share Industrial Support Services (29)	8497.88	1.06	7106.98	8408.52	8369.91	9567.46	2.53	1.40	28.18	197.40	9983.71
FTSE All-Share Industrial Transportation (7)	5136.62	-0.25	4295.88	5149.43	5117.94	4923.86	1.90	3.81	13.80	90.85	5468.83
FTSE All-Share Industrial Materials (1)	13952.60	0.54	443.30	13877.59	14427.69	14502.71	2.47	3.29	12.30	345.06	17963.09
FTSE All-Share Industrial Metals and Mining (8)	6915.63	0.87	5783.71	6856.30	6792.60	7016.13	6.47	2.46	6.29	443.99	11313.37
FTSE All-Share Precious Metals and Mining (5)	8720.28	1.62	7292.98	8581.16	8474.50	8861.27	3.58	-1.34	-20.82	294.42	6339.98
FTSE All-Share Chemicals (7)	8941.77	0.44	7478.22	8902.66	8817.26	12764.26	3.93	1.41	18.06	269.95	9187.16
FTSE All-Share Oil. Gas and Coal (13)	9192.78	-0.55	7688.15	9243.78	9233.14	8379.66	3.80	1.64	16.07	267.74	11967.84
FTSE Sector Indices											
Non Financials (316)	**4859.25**	**0.73**	**4335.56**	**4824.12**	**4851.92**	**4761.41**	**3.74**	**1.63**	**16.44**	**154.20**	**9077.54**

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	7324.87	7344.73	7351.37	7349.13	7353.49	7348.84	7352.85	7322.98	7328.79	7360.82	7312.18
FTSE 250	16936.14	17001.54	17035.27	17036.11	17029.47	17095.53	17132.48	17056.54	17045.21	17155.97	16934.93
FTSE SmallCap	5677.73	5692.62	5692.52	5700.52	5702.41	5704.26	5711.23	5708.24	5707.57	5711.38	5677.73
FTSE All-Share	3950.67	3961.96	3966.02	3965.14	3966.96	3966.86	3969.91	3953.89	3956.20	3972.74	3948.66

Time of FTSE 100 Day's high:08:29:00 Day's Low15:23:30 FTSE 100 2010/11 High: 8014.31(20/02/2023) Low: 7256.94(07/07/2023)
Time of FTSE All-Share Day's high:13:51:00 Day's Low15:24:00 FTSE 100 2010/11 High: 4377.36(16/02/2023) Low: 3933.17(27/10/2023)

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FT 30 INDEX

	Oct 30	Oct 27	Oct 26	Oct 25	Oct 24	Yr Ago	High	Low
FT 30	2512.80	2498.90	2520.40	2521.60	2536.60	0.00	2895.30	2454.10
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
2498.9	2522.6	2522.5	2521.1	2521.4	2522.8	2525.6	2512.5	2516	2529.7	2498.9

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

FT WILSHIRE 5000 INDEX SERIES

	Oct 27		Oct 27
FT Wilshire 5000	41300.70	FT Wilshire Mid Cap	5075.92
FT Wilshire 2500	5304.96	FT Wilshire Small Cap	4587.24
FT Wilshire Mega Cap	5470.19	FT Wilshire Micro Cap	3976.26
FT Wilshire Large Cap	5405.93		

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FTSE SECTORS: LEADERS & LAGGARDS

Year to date percentage changes

Aerospace & Defense	44.11	Banks	0.36	Personal Goods	-9.14
Software & Comp Serv	17.21	Beverages	31.66	Mobile Telecomms	-9.68
Leisure Goods	15.60	FTSE 100 Index	-1.67	FTSE 250 Index	-9.74
Media	14.34	Household Goods & Ho	-2.11	Electricity	-9.75
Oil & Gas Producers	12.87	NON FINANCIALS Index	-2.31	Equity Invest Instr	-9.98
Oil & Gas	12.64	FTSE All{HY-}Share Index	-2.96	Electronic & Elec Eq	-10.41
Construct & Material	11.83	Fixed Line Telecomms	-4.35	Real Est Invest & Se	-10.48
Food Producers	11.58	Industrial Transport	-5.19	Consumer Goods	-11.67
Food & Drug Retailer	11.58	Pharmace & Biotech	-5.44	Beverages	-13.86
Consumer Services	10.05	Financials	-5.94	Real Est Invest & Tr	-15.03
General Retailers	9.87	Health Care	-6.00	Industrial Metals &	-15.56
Technology	6.79	Oil Equipment & Serv	-6.09	Health Care Eq & Srv	-16.28
Travel & Leisure	6.24	Automobiles & Parts	-6.18	Mining	-18.29
Industrials	4.68	Industrial Eng	-7.44	Life Insurance	-19.23
Gas Water & Multi	4.49	Nonlife Insurance	-8.32	Basic Materials	-19.34
Financial Services	2.09	Telecommunications	-8.48	Tobacco	-23.20
Utilities	0.63	FTSE SmallCap Index	-8.60	Chemicals	-30.87
		Support Services	-8.84	Tech Hardware & Eq	-49.19

FTSE GLOBAL EQUITY INDEX SERIES

Oct 30 Regions & countries	No of stocks	US $ indices	Day %	Mth %	YTD %	Total retn	YTD %	Gr Div Yield
FTSE Global All Cap	10095	701.82	-0.2	-4.0	3.2	1148.25	5.1	2.3
FTSE Global All Cap	10095	701.82	-0.2	-4.0	3.2	1148.25	5.1	2.3
FTSE Global Large Cap	2002	642.39	-0.1	-3.4	5.6	1083.56	7.7	2.2
FTSE Global Mid Cap	2292	851.57	-0.4	-5.2	-3.6	1310.78	-1.8	2.5
FTSE Global Small Cap	5801	869.94	-0.4	-6.2	-3.5	1278.40	-1.8	2.3
FTSE All-World	4294	415.60	-0.1	-3.7	3.9	720.21	5.9	2.3
FTSE World	2623	758.11	-0.3	-3.8	4.7	1762.67	6.7	2.3
FTSE Global All Cap ex UNITED KINGDOM In	9816	741.90	-0.2	-4.0	3.4	1189.81	5.3	2.2
FTSE Global All Cap ex USA	8328	481.51	0.4	-3.9	-1.5	882.19	1.3	3.3
FTSE Global All Cap ex JAPAN	8663	730.51	-0.3	-3.9	3.1	1205.40	5.0	2.3
FTSE Global All Cap ex Eurozone	9455	742.76	-0.2	-4.1	3.3	1187.72	5.2	2.2
FTSE Developed	2118	696.58	-0.3	-3.8	4.8	1146.35	6.8	2.2
FTSE Developed All Cap	5739	719.34	-0.3	-4.1	3.9	1166.14	5.8	2.2
FTSE Developed Large Cap	777	664.96	-0.2	-3.5	6.9	1113.79	8.9	2.1
FTSE Developed Europe Large Cap	197	384.61	-0.7	-2.9	1.6	786.11	4.7	3.4
FTSE Developed Europe Mid Cap	343	548.80	0.3	-4.3	-3.1	972.37	-0.3	3.5
FTSE Dev Europe Small Cap	736	722.83	0.4	-5.6	-9.6	1230.49	-7.0	3.6
FTSE North America Large Cap	221	901.99	-0.4	-3.5	9.8	1375.74	11.3	1.6
FTSE North America Mid Cap	417	1048.62	-1.0	-5.4	-4.0	1480.90	-2.7	2.1
FTSE North America Small Cap	1300	1026.39	-1.1	-6.9	-3.3	1387.36	-2.1	1.9
FTSE North America	638	577.75	-0.5	-3.8	7.0	901.12	8.5	1.7
FTSE Developed ex North America	1480	260.13	0.2	-3.9	0.0	513.30	2.9	3.2
FTSE Japan Large Cap	164	394.46	1.8	-5.3	6.3	594.22	8.8	2.3
FTSE Japan Mid Cap	348	534.00	2.1	-5.0	0.9	765.22	3.4	2.5
FTSE Global wi JAPAN Small Cap	920	599.42	2.5	-4.7	0.8	893.55	3.5	2.7
FTSE Japan	512	161.18	1.8	-5.3	5.3	271.95	7.7	2.3
FTSE Asia Pacific Large Cap ex Japan	1219	631.85	1.2	-2.8	-5.9	1184.92	-3.5	3.1
FTSE Asia Pacific Mid Cap ex Japan	902	935.13	0.9	-4.7	-2.8	1688.98	-0.6	3.0
FTSE Asia Pacific Small Cap ex Japan	2560	531.00	0.9	-3.9	-0.6	929.68	1.6	2.7
FTSE Asia Pacific Ex Japan	2121	505.40	1.1	-3.0	-5.6	1007.16	-3.2	3.1
FTSE Emerging All Cap	4356	681.82	1.0	-2.9	-3.2	1225.08	-0.4	3.3
FTSE Emerging Large Cap	1225	621.75	1.1	-2.7	-4.4	1123.95	-1.6	3.3
FTSE Emerging Mid Cap	951	1019.24	0.6	-4.2	-0.3	1841.65	2.5	3.5
FTSE Emerging Small Cap	2180	774.31	0.8	-3.1	2.8	1328.14	5.5	3.0
FTSE Emerging Europe	150	137.00	0.3	-4.3	6.6	298.46	10.7	3.2
FTSE Latin America All Cap	251	732.20	0.1	-2.0	4.9	1534.72	10.1	7.6
FTSE Middle East and Africa All Cap	326	635.76	0.0	-7.2	-12.2	1206.15	-9.2	4.0
FTSE Global wi UNITED KINGDOM All Cap In	279	309.00	-0.6	-4.3	-1.7	654.37	1.6	4.0
FTSE Global wi USA All Cap	1767	986.38	-0.5	-4.1	6.5	1449.39	7.8	1.6
FTSE Europe All Cap	1467	428.71	-0.4	-3.4	-0.1	841.07	3.0	3.4
FTSE Eurozone All Cap	640	420.58	-0.3	-3.0	1.5	818.34	4.6	3.4
FTSE EDHEC-Risk Efficient All-World	4294	446.95	-0.5	-4.7	-3.5	721.35	-1.4	2.8
FTSE EDHEC-Risk Efficient Developed Europe	540	307.24	0.0	-4.1	-2.0	557.32	0.9	3.6
Oil & Gas	138	402.21	-1.1	-5.6	-1.6	856.76	1.9	4.3
Oil & Gas Producers	89	412.61	-1.1	-5.6	1.3	904.18	5.0	4.3

Oct 30 Sectors	No of stocks	US $ indices	Day %	Mth %	YTD %	Total retn	YTD %	Gr Div Yield
Oil Equipment & Services	27	270.04	-0.9	-3.7	-2.8	519.99	0.5	4.8
Basic Materials	422	556.80	1.0	-2.7	-6.8	1061.89	-3.8	3.8
Chemicals	208	736.46	0.7	-4.2	-5.5	1339.05	-3.2	3.1
Forestry & Paper	18	243.02	1.2	-1.5	-3.5	510.17	-0.2	4.6
Industrial Metals & Mining	114	485.67	1.2	-5.0	-1.7	963.55	1.4	4.0
Mining	82	861.01	1.2	1.2	-11.9	1759.73	-7.8	4.9
Industrials	841	478.55	0.0	-5.7	-1.9	778.72	-0.1	2.2
Construction & Materials	162	585.28	0.4	-6.3	5.1	1005.39	7.0	2.1
Aerospace & Defense	37	898.96	-0.6	1.9	-0.7	1423.04	0.6	1.6
General Industrials	82	243.75	0.0	-6.0	2.2	440.73	4.3	2.6
Electronic & Electrical Equipment	170	556.59	0.7	-7.9	-7.2	812.30	-5.8	1.8
Industrial Engineering	169	973.76	-0.2	-6.7	-0.9	1580.25	0.9	2.1
Industrial Transportation	131	842.38	0.0	-6.6	-6.6	1413.09	-4.0	3.6
Support Services	90	492.01	-0.3	-6.7	-2.7	743.61	-1.3	1.7
Consumer Goods	581	535.08	-0.5	-4.7	-0.5	921.28	1.6	2.6
Automobiles & Parts	144	539.80	0.2	-9.4	23.8	893.70	26.6	2.1
Beverages	73	698.74	-0.6	-3.2	-9.8	1213.04	-8.2	2.7
Food Producers	133	644.17	-0.9	-4.5	-10.6	1137.27	-8.6	2.9
Household Goods & Home Construction	63	533.31	-1.0	-2.7	-0.7	921.93	1.7	2.6
Leisure Goods	57	245.33	0.6	-1.9	6.8	351.91	8.2	1.4
Personal Goods	99	854.79	-0.9	-1.2	-7.5	1338.09	-6.2	2.0
Tobacco	12	860.73	-1.3	-4.1	-13.7	2601.38	-9.4	7.4
Health Care	353	672.43	-1.6	-5.0	-7.7	1090.28	-6.2	2.0
Health Care Equipment & Services	133	1238.43	-0.6	-5.1	-10.2	1534.51	-9.4	1.2
Pharmaceuticals & Biotechnology	220	464.99	-2.2	-5.0	-6.1	814.46	-4.1	2.4
Consumer Services	438	547.76	1.1	-3.0	6.7	791.11	7.8	1.2
Food & Drug Retailers	66	284.91	-0.4	-2.2	-9.4	464.19	-7.3	2.7
General Retailers	144	980.33	2.2	-2.2	10.1	1351.74	11.0	1.0
Media	80	317.70	-0.9	-3.1	9.6	462.49	11.0	1.3
Travel & Leisure	148	458.46	0.3	-5.1	3.6	677.02	4.6	1.3
Telecommunication	82	119.82	-0.4	-2.0	-6.9	294.67	-3.1	4.8
Fixed Line Telecommuniations	29	91.70	-0.4	-2.4	-8.9	261.73	-4.4	5.9
Mobile Telecommunications	53	143.08	-0.4	-1.8	-5.9	301.52	-2.5	4.2
Utilities	209	287.92	-0.9	-2.0	-10.6	695.63	-7.9	3.9
Electricity	151	321.15	-1.0	-2.5	-12.1	762.70	-9.6	3.8
Gas Water & Multiutilities	58	294.33	-0.8	-0.9	-6.8	739.25	-3.7	4.3
Financials	852	247.56	-0.8	-4.6	-4.6	491.49	-1.7	3.5
Banks	273	184.17	-0.7	-5.0	-7.1	412.69	-3.1	4.9
Nonlife Insurance	70	383.55	-1.1	-1.1	4.8	659.39	7.8	2.9
Life Insurance	50	205.65	-0.1	-2.4	-9.7	411.64	-6.4	4.1
Financial Services	218	425.97	-1.0	-5.7	0.4	657.20	1.8	1.8
Technology	378	583.68	0.7	-1.5	32.0	768.37	33.0	0.9
Software & Computer Services	180	893.73	0.5	-1.1	31.9	1087.06	32.5	0.6
Technology Hardware & Equipment	198	509.76	0.9	-1.9	32.1	724.55	33.5	1.2
Alternative Energy	22	93.76	-4.3	-14.4	-48.8	135.06	-48.6	0.6
Real Estate Investment & Services	140	217.96	0.9	-5.9	-13.2	435.48	-11.1	3.0
Real Estate Investment Trusts	101	377.22	-1.0	-4.0	-13.4	917.41	-10.5	4.6
FTSE Global Large Cap	2002	642.39	-0.1	-3.4	5.6	1083.56	7.7	2.2

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

FTSE 100 SUMMARY

FTSE 100	Closing Price	Day's Change	FTSE 100	Closing Price	Day's Change
3I Group PLC	1943	-25.50	Intertek Group PLC	3791	36.00
Admiral Group PLC	2440	6.00	Jd Sports Fashion PLC	127.80	1.70
Airtel Africa PLC	114.90	5.10	Kingfisher PLC	204.30	-0.30
Anglo American PLC	2098	9.50	Land Securities Group PLC	562.40	-1.40
Antofagasta PLC	1369	-5.00	Legal & General Group PLC	209.50	2.00
Ashtead Group PLC	4687	-25.00	Lloyds Banking Group PLC	40.04	0.28
Associated British Foods PLC	1986.5	36.50	London Stock Exchange Group PLC	8244	36.00
Astrazeneca PLC	10218	94.00	M&G PLC	197.00	4.20
Auto Trader Group PLC	613.80	12.20	Marks And Spencer Group PLC	214.50	-
Aviva PLC	396.60	2.00	Melrose Industries PLC	466.70	3.10
B&M European Value Retail S.A.	522.00	-	Mondi PLC	1315.5	7.00
Bae Systems PLC	1103	19.00	National Grid PLC	976.40	-4.80
Barclays PLC	130.66	1.46	Natwest Group PLC	178.15	-3.85
Barratt Developments PLC	408.60	1.20	Next PLC	6838	16.00
Beazley PLC	517.50	0.50	Ocado Group PLC	462.70	-20.10
Berkeley Group Holdings (The) PLC	3999	20.00	Pearson PLC	946.20	27.00
BP PLC	526.70	-3.80	Pershing Square Holdings LTD	2884	14.00
British American Tobacco PLC	2449.5	46.50	Phoenix Group Holdings PLC	448.90	3.10
Bt Group PLC	112.55	1.90	Prudential PLC	861.80	18.60
Bunzl PLC	2892	-2.00	Reckitt Benckiser Group PLC	5540	88.00
Burberry Group PLC	1695.5	1.50	Relx PLC	2856	39.00
Centrica PLC	156.00	0.90	Rentokil Initial PLC	422.80	1.80
Coca-Cola Hbc AG	2142	40.00	Rightmove PLC	480.50	1.30
Compass Group PLC	2070	10.00	Rio Tinto PLC	5239	39.00
Convatec Group PLC	203.00	1.60	Rolls-Royce Holdings PLC	202.00	1.60
Croda International PLC	4267	-11.00	Rs Group PLC	675.20	-2.20
Dcc PLC	4513	85.00	Sage Group PLC	975.00	7.00
Dechra Pharmaceuticals PLC	3800	20.00	Sainsbury (J) PLC	256.50	1.00
Diageo PLC	3087	62.00	Schroders PLC	365.40	3.40
Diploma PLC	2824	8.00	Scottish Mortgage Investment Trust PLC	640.80	-2.00
Endeavour Mining PLC	1682	23.00	Segro PLC	693.40	2.60
Entain PLC	913.80	-1.00	Severn Trent PLC	2625	20.00
Experian PLC	2435	45.00	Shell PLC	2687	-13.50
F&C Investment Trust PLC	841.00	2.00	Smith & Nephew PLC	907.60	11.40
Flutter Entertainment PLC	12900	120.00	Smith (Ds) PLC	281.70	5.50
Frasers Group PLC	801.50	6.50	Smiths Group PLC	1600	30.00
Fresnillo PLC	554.60	5.00	Smurfit Kappa Group PLC	2640	-12.00
Glaxosmithkline PLC	1452.4	19.20	Spirax-Sarco Engineering PLC	8104	-36.00
Glencore PLC	451.00	5.75	Sse PLC	1620	13.50
Haleon PLC	326.70	5.65	St. James's Place PLC	641.60	23.20
Halma PLC	1818.5	-4.50	Standard Chartered PLC	620.40	9.80
Hargreaves Lansdown PLC	704.60	-0.40	Taylor Wimpey PLC	109.65	0.70
Hikma Pharmaceuticals PLC	1915	2.50	Tesco PLC	270.00	-2.40
Howden Joinery Group PLC	639.20	3.20	Unilever PLC	3862.5	41.50
HSBC Holdings PLC	587.30	-13.70	Unite Group PLC	851.00	-2.00
Imi PLC	1463	15.00	United Utilities Group PLC	1056.5	3.00
Imperial Brands PLC	1763	34.00	Vodafone Group PLC	76.73	0.63
Informa PLC	711.20	9.40	Weir Group PLC	1675.5	-5.00
Intercontinental Hotels Group PLC	5992	64.00	Whitbread PLC	3305	17.00
International Consolidated Airlines Group S.A.	143.35	1.30	Wpp PLC	698.20	3.00

UK STOCK MARKET TRADING DATA

	Oct 30	Oct 27	Oct 26	Oct 25	Oct 24	Yr Ago
Order Book Turnover (m)	70.44	87.99	87.99	44.93	100.60	187.29
Order Book Bargains	504680.00	560387.00	560387.00	589414.00	552965.00	577129.00
Order Book Shares Traded (m)	1688.00	1462.00	1462.00	1688.00	1422.00	1425.00
Total Equity Turnover (£m)	5307.86	7477.15	7477.15	4646.49	8480.61	9788.51
Total Mkt Bargains	1427672.00	1265935.00	1265935.00	1187316.00	1226654.00	1119232.00
Total Shares Traded (m)	5048.00	5187.00	5187.00	4671.00	4523.00	4459.00

† 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.
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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	
Airtel Africa	Int	**2623.000**	2565.000	**12.000**	516.000	**0.015L**	0.079	**0.00000**	2.18000	-	**3.300**	5.200
Bioventix	Pre	**12.816**	11.719	**10.134**	9.278	**160.630**	147.320	**0.00000**	74.00000	-	**62.000**	126.000
Cordel Group	Pre	**3.046**	2.273	**0.466L**	1.205L	**0.300L**	0.700L	**0.00000**	0.00000	-	**0.000**	0.000
HeiQ	Int	**20.500**	27.558	**6.381L**	1.654L	**0.046L**	0.013L	**0.00000**	0.00000	-	**0.000**	0.000
HSBC Holdings	3rd	**45683.000**	40983.000	**29371.000**	12009.000	**1.150**	0.500	**0.00000**	0.00000	-	**42.300**	28.200
Limitless Earth	Int	**0.000**	0.000	**0.110L**	0.062L	**0.170L**	0.100L	**0.00000**	0.00000	-	**0.000**	0.000
Lok'n Store Group	Pre	**27.147**	26.902	**6.701**	15.874	**15.900**	41.240	**0.00000**	12.25000	-	**5.750**	17.250
Mining Minerals & Metals	Int	**0.000**	0.000	**0.072L**	0.069L	**0.220L**	0.210L	**0.00000**	0.00000	-	**0.000**	0.000
Schroder BSC Social Impact Trust	Pre			**0.620**	1.443	**0.730**	1.770	**0.00000**	1.30000	-	**0.000**	1.300

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

UK RECENT EQUITY ISSUES

Issue date	Issue price(p)	Sector	Stock code	Stock	Close price(p)	+/-	High	Low	Mkt Cap (£m)

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

MARKET DATA

FT500: THE WORLD'S LARGEST COMPANIES

Stock	Price	Day Chg	52 Week High	52 Week Low	Yld	P/E	MCap m
Australia (A$)							
ANZ Bank	24.55	-0.30	26.08	22.39	6.12	10.34	47016.27
BHP Group	45.11	0.05	50.05	36.93	8.87	11.80	145708.02
CmwBkAu	96.22	-1.58	111.38	93.05	4.36	16.35	102737.17
CSL	230.65	-3.44	314.21	228.65	1.49	33.94	71001.83
NatAusBk	27.88	-0.52	32.83	25.10	5.60	11.90	55590.66
Telstra	3.80	-0.01	4.46	3.76	4.21	22.78	27979.62
Wesfarmers	50.16	-0.17	54.28	44.61	3.74	23.08	36247.52
Westpac Bank	20.46	-0.21	24.50	20.03	6.31	11.35	45751.91
Woolworths	34.91	-0.52	40.35	31.67	2.83	26.42	27175.9
Belgium (€)							
AnBshInBv	50.85	0.45	62.01	49.17	-	-	-
KBC Grp	51.98	0.30	72.46	49.55	-	-	-
Brazil (R$)							
Ambev	12.39	0.10	16.88	12.28	6.15	13.76	38728.12
Bradesco	12.37	-0.12	17.10	11.15	7.40	9.24	13082.54
Cielo	3.47	0.02	6.02	3.24	8.64	5.42	1870.5
ItauHldFin	23.06	-0.17	25.85	19.53	6.48	7.19	22686.16
Petrobras	38.01	-0.47	41.86	23.61	36.98	3.40	56128.53
Vale	68.54	0.97	96.30	61.00	7.81	5.85	61726.92
Canada (C$)							
Bausch Hlth	9.23	0.12	13.81	7.56	-	-13.69	2409.47
BCE	51.11	0.28	65.66	49.57	7.38	20.30	33717.57
BkMontrl♦	103.88	0.94	137.64	102.67	5.47	10.32	54155.48
BkNvaS	55.96	0.55	74.41	55.20	7.36	8.82	48777.13
Brookfield	58.88	11.29	63.88	41.28	0.94	446.60	69948.82
CanadPcR	97.21	0.71	112.96	94.94	0.78	21.15	65501.95
CanImp	48.68	0.53	65.24	47.44	6.93	10.03	32546.91
CanNatRs	87.94	-0.06	92.40	67.13	3.86	12.89	69172.1
CanNatRy	147.22	2.17	175.39	143.13	2.07	18.89	69324.69
Enbridge	43.78	0.21	56.37	42.75	7.98	23.31	67294.08
GtWesLif	37.90	0.63	41.28	29.30	5.33	15.79	25559.01
ImpOil	79.61	-0.13	85.11	60.19	2.16	8.50	32622.75
Manulife	24.16	0.37	27.50	22.00	5.75	3.61	31749.01
Nutrien	77.01	0.05	117.38	70.69	3.47	8.07	27540.17
RylBkC♦	110.07	1.60	140.18	107.92	4.75	10.71	111623.17
SHOP	64.85	0.50	93.83	41.16	-	-31.04	56511.68
Suncor En	44.69	-0.37	50.37	37.09	4.54	9.66	41998.76
ThmReut	166.07	2.56	187.70	142.04	1.54	28.65	54692.55
TntoDom♦	76.95	0.79	94.05	75.89	4.86	10.03	100276.29
TrnCan	46.88	-0.07	66.19	43.70	7.80	52.13	35171.87
China (HK$)							
AgricBkCh	2.87	-0.05	3.28	2.22	-	3.93	11280.23
Bk China	2.73	-0.03	3.45	2.51	8.79	3.63	29189.19
BkofComm	4.65	-0.17	5.65	3.84	8.35	3.89	20816.65
BOE Tech	0.58	-0.02	0.87	0.53	-	9.34	14.75
Ch Coms Cons	3.56	-0.06	5.52	3.09	6.62	3.12	2011.25
Ch Evrbrght	2.23	-0.05	2.78	2.04	8.88	3.19	3615.09
Ch Rail Cons	4.59	-0.03	7.46	3.75	5.56	2.51	1218.56
Ch Rail Gp	3.77	-0.04	6.30	3.48	5.40	2.93	2028.13
ChConstBk	4.48	-0.08	5.70	4.01	8.97	3.35	137715.85
China Vanke	7.59	0.06	17.78	7.31	13.34	4.24	2141.38
ChinaCitic	3.46	-0.12	4.74	2.92	9.91	3.00	6583.87
ChinaLife	10.70	0.04	15.84	8.53	4.75	10.09	10180.49
ChinaMBank	30.30	-1.20	53.00	25.40	5.94	5.33	17786.21
ChinaMob	61.95	-0.90	70.20	46.85	6.54	9.79	162262.88
ChinaPcIns	19.00	0.16	26.50	12.10	5.55	7.76	6742.29
ChMinsheng	2.50	-0.06	3.52	2.33	8.99	3.57	2659.67
ChMrchSecs	14.05	-0.05	15.91	12.50	3.70	16.03	14249.58
Chna Utd Coms	4.46	-0.07	6.45	3.35	2.35	18.52	18872.02
ChShenEgy	24.05	-0.35	28.70	20.70	11.52	7.53	10386.06
ChShpbldng	4.05	-0.01	5.32	3.46	0.07	-64.67	12221.84
ChStConEng	5.17	-0.05	7.35	4.68	4.71	4.29	29191.62
ChUncHK	4.91	0.02	6.58	3.33	5.86	8.08	19209.5
CNNC Intl	7.36	0.12	7.58	5.87	1.96	15.50	18991.49
CSR	3.31	-0.13	5.26	2.37	6.32	7.66	1849.92
Daqin	7.15	-0.05	8.21	6.36	-	11.97	14818.79
GuosenSec	9.67	-0.07	10.90	8.56	2.69	18.59	12075.97
HaitongSecs	4.52	-	6.01	3.77	4.86	10.21	1970.53
Hngzh HikVDT	36.56	0.66	48.84	28.80	1.84	28.54	45504.55
Hunng Pwr	3.68	0.01	5.28	2.62	-	-89.40	2211.67
IM Baotou Stl	1.64	-	2.14	1.52	-	26.22	7058.5
In&CmBkCh	3.74	-0.11	4.73	3.35	8.39	3.71	41505.78
IndstrlBk	15.57	-0.21	18.27	15.09	7.35	4.29	44199.79
Kweichow	1681	4.29	1935	1359	1.48	31.82	288556.22
Midea	0.29	-	0.44	0.27	-	-3.14	11.16
New Ch Life Ins	17.10	-0.80	25.00	12.04	6.56	4.89	2261.02
PetroChina	5.16	-0.18	6.05	3.01	8.71	5.97	13920.42
PingAnIns	40.40	-0.20	64.15	31.30	6.47	8.51	38471.58
PngAnBnk	10.45	-	15.74	10.30	4.73	4.58	27710.73
Pwr Cons Corp	5.26	-0.02	8.15	5.01	1.82	8.24	9395.42
SaicMtr	14.80	-0.37	15.65	13.09	4.44	10.85	23628.63
ShenwanHong	0.08	0.00	0.15	0.07	-	5.61	88.29
ShgPdgBk	6.80	-0.19	8.22	6.64	5.81	5.79	27274.34
Sinopec Corp	4.04	-0.10	5.47	3.06	9.39	8.16	12783.96
Sinopec Oil	1.94	-0.01	2.39	1.84	-	67.10	3597.24
Denmark (kr)							
DanskeBk	164.60	2.75	170.80	117.45	-	334.31	20191.88
MollerMrsk	11595	-265.00	17265	11100	16.97	1.75	12311.52
NovoB	677.70	17.50	742.20	399.40	0.90	46.24	331227.99
Finland (€)							
Nokia	3.08	-0.02	4.88	2.91	2.87	4.29	18416.26
SampoA	37.36	0.21	45.46	34.55	4.73	26.75	19900.66
France (€)							
Airbus Grpe	126.20	1.24	138.76	107.04	-	-	-
AirLiquide	159.78	-0.46	168.48	126.72	-	-	-
AXA	27.84	0.39	30.34	24.60	-	-	-
BNP Parib	53.72	-0.95	67.02	47.02	-	-	-
ChristianDior	647.50	11.00	872.00	606.00	-	-	-
Cred Agr	11.23	0.06	12.03	9.08	-	-	-
Danone	55.70	0.53	61.88	48.04	-	-	-
EDF	12.00	-	12.05	7.27	2.41	-2.31	53889.44
Engie SA	14.99	0.06	15.56	12.55	-	-	-
EssilorLuxottica	168.28	0.26	188.40	155.15	-	-	-
Hermes Intl	1752.4	3.60	2050.5	1301	-	-	-
LOreal	392.05	1.50	442.60	300.70	-	-	-
LVMH	671.00	9.60	904.60	623.60	-	-	-
Orange	11.06	0.05	11.87	9.10	-	-	-
PernodRic	166.20	1.20	218.00	156.35	-	-	-
Renault	32.43	-0.02	43.96	28.94	-	-	-
Safran	148.10	1.44	153.90	108.74	-	-	-
Sanofi	84.14	2.70	105.18	80.60	-	-	-
Sant Gbn	51.30	-0.14	62.14	39.73	-	-	-
Schneider	142.84	-0.22	167.98	124.86	-	-	-
SocGen	20.81	0.08	28.39	19.33	-	-	-
Total	62.99	-0.01	64.55	50.55	-	-	-
UnibailR	49.68	0.06	73.09	39.68	-	-7.39	7615.7
Vinci	103.08	1.08	112.40	91.88	-	-	-
Vivendi	8.37	0.03	10.22	7.99	-	-	-
Germany (€)							
Allianz	221.05	2.45	234.55	184.70	5.07	10.25	94675.95
BASF	41.68	0.22	53.77	40.25	8.01	-20.80	39505.05
Bayer	40.68	0.17	65.66	40.14	5.80	28.17	42441.02
BMW	87.71	-0.78	113.46	75.06	9.52	5.14	56072.25
Continental	60.46	0.20	79.24	50.72	2.44	18.43	12841.54
Deut Bank	10.41	0.00	12.36	7.95	2.83	4.62	22550.44
Deut Tlkm	20.48	0.09	23.13	18.50	3.36	18.78	108423.16
DeutsPost	44.73	0.54	45.03	29.68	4.14	12.32	60466.66
E.ON	11.09	-0.02	12.29	8.42	4.52	51.32	31107
Fresenius Med	31.40	0.21	49.62	27.38	3.50	15.75	9783.98
Fresenius SE	24.28	-0.17	31.22	22.06	3.72	13.89	14400.56
HenkelKGaA	59.34	0.36	70.10	58.15	3.03	18.65	16371.4
Linde	356.10	4.10	369.05	286.40	1.01	57.56	183367.14
Mercedes-Benz	55.58	-0.63	76.10	55.27	9.19	3.93	63145.48
MuenchRkv	379.60	4.10	384.00	268.20	3.00	18.81	55012.75
SAP	125.60	0.58	131.70	96.12	1.60	85.24	163859.71
Siemens	123.70	1.28	167.00	108.86	3.37	11.36	105091.01
Volkswgn	107.10	0.70	193.90	105.95	7.98	4.55	33562.13
Hong Kong (HK$)							
AIA	68.70	-	93.65	57.25	2.13	103.00	100831.17
BOC Hold	20.60	-0.30	28.25	20.45	6.29	7.26	27848.39
Ch OSLnd&Inv	15.28	0.02	23.20	14.58	4.94	8.11	21383.46
ChngKng	39.50	0.25	51.70	38.35	5.51	7.83	17923.89
Citic Ltd♦	6.82	-0.01	10.86	6.53	9.11	3.16	25367.29
Citic Secs	15.14	-0.14	19.18	11.90	3.36	10.43	5072.05
CK Hutchison	39.85	0.20	54.55	38.35	7.01	5.55	19515.3
CNOOC	12.86	-0.46	14.28	9.28	10.50	4.46	73298.02
HangSeng	89.75	-1.10	135.50	87.60	4.78	13.05	21939.66
HK Exc&Clr	280.00	2.00	382.40	208.20	2.43	32.21	45390.48
MTR	29.75	0.20	43.00	28.00	4.20	20.78	23649.66
SandsCh	21.20	-0.05	31.45	12.50	-	-35.44	21938.64
SHK Props	81.40	0.70	115.90	77.10	5.80	10.34	30160.13
Tencent	295.40	2.60	411.00	189.07	0.76	14.10	359865.28
India (Rs)							
Bhartiartl	926.25	11.65	960.25	735.80	0.31	65.74	66863.03
HDFC Bk	1485.1	15.95	1757.5	1460.25	1.04	16.82	135250.27
Hind Unilevr	2478.9	-3.15	2769.65	2393	1.53	58.32	69961.73
HsngDevFin	2724.3	-23.05	2927.4	2160	1.16	18.17	61324.4
ICICI Bk	924.90	12.15	1008.7	796.00	0.52	18.21	77822.44
Infosys	1377.05	-3.30	1672.6	1185.3	2.38	24.03	68651.05
ITC	430.45	-3.30	499.70	325.35	2.87	27.73	64483.51
L&T	2926.35	24.45	3114.95	1970.2	0.73	37.35	48311.24
OilNatGas	188.80	4.05	192.25	132.80	7.19	6.51	28529.93
RelianceIn	2312.5	46.70	2856	2180	0.34	24.89	187944.65
SBI NewA	565.20	4.05	629.55	499.35	1.94	7.78	60589.99
SunPhrmInds	1115.2	3.90	1169.7	922.45	0.91	32.75	32140.52
Tata Cons	3378.55	27.60	3679	3070.25	1.64	29.13	148493.71
Israel (ILS)							
TevaPha	33.39	0.03	41.25	26.37	-	-4.29	9230.71
Italy (€)							
Enel	5.89	0.13	6.38	4.45	6.51	14.98	63548.46
ENI	15.36	-0.15	15.83	11.69	5.63	5.88	55081.36
Generali	18.55	0.14	20.06	15.02	6.14	7.07	30708.4
IntSPaolo	2.40	0.02	2.64	1.91	6.70	7.35	46626.26
Unicred	23.49	0.41	23.82	12.10	4.13	5.57	44518.97
Japan (¥)							
AstellasPh	1893.5	-35.00	2360.5	1823.5	3.12	32.60	22994.97
Bridgestne	5580	-130.00	6134	4548	3.36	10.50	26725.07
Canon	3494	29.00	3912	2790.5	3.67	13.84	31273.15
CntJpRwy	3346	-46.00	3926	2984	0.80	12.70	23127.74
Denso	2264	-68.00	2613.75	1597.25	2.01	4.97	47885.31
EastJpRwy	7699	-131.00	8949	6706	1.28	23.51	19526.23
Fanuc	3653	-28.00	24645	3603	2.89	22.27	24589.67
FastRetail	32900	-460.00	37550	25386.67	0.76	35.25	70257.82
Fuji Hvy Ind	2552	-93.50	3115	1980	2.94	8.05	13172.74
Hitachi	9395	511.00	10170	6295	1.52	13.24	58455.47
HondaMtr	1527.5	-67.50	1821	1000.33	7.74	3.00	55704.96
JapanTob	3455	-30.00	3489	2442	5.91	13.36	46371.18
KDDI	4421	-52.00	4767	3873	3.01	14.70	68317.21
Keyence	57310	4260	71890	49950	0.52	38.27	93535.77
MitsbCp	6924	-130.00	7732	4006	2.56	10.52	66793.33
MitsubEst	988.62	-12.38	1062.17	948.63	-	-	-
MitsubishiEle	1698	-58.00	2105	1273	2.32	15.26	24467
MitsuiFud	815.69	-0.48	1147.48	774.38	-	-	-
MitUFJFin	1230	-24.50	1344	692.30	2.56	9.77	104726.9
Mizuho Fin	2512	-41.00	2724.5	1593.5	3.34	10.07	42805.05
Murata Mfg	2520	5.00	2912	2146	1.96	7.07	34286.19
Nippon TT	173.70	-1.70	183.40	147.48	2.72	12.44	105549.98
Nissan Mt	566.50	-26.70	712.50	408.10	1.74	8.03	16045.6
Nomura	571.00	-6.60	661.70	467.60	2.93	15.82	12122.23
Nppn Stl	3248	-5.00	3816	2019	5.46	5.33	20713.64
Panasonic	1437	-29.00	1808	1050	2.06	8.15	23667.23
Seven & I	5346	-112.00	6619	5162	2.02	17.49	31801.62
ShnEtsuCh	4491	189.00	21055	3797	2.19	13.62	61002.84
Softbank	6116	-24.00	7297	4766	0.71	6.50	60332.79
Sony	12220	100.00	14100	9882	0.61	17.19	101235.18
SumitomoF	7122	-188.00	7849	4131	3.32	12.21	63925.66
Takeda Ph	3988	-82.00	4873	3790	4.45	21.13	42348.12
TokioMarine	3282	-69.00	3688	2511	3.00	17.74	44104.32
Toyota	2574	-64.50	2911.5	1764	2.30	11.73	281815.79
Mexico (Mex$)							
AmerMvl	16.40	0.11	20.25	15.66	2.62	11.28	41116.45
FEMSA UBD	199.32	6.33	201.29	134.63	1.67	30.93	23895.6
WalMrtMex	65.85	-0.74	79.15	59.28	1.53	22.87	63783.88
Netherlands (€)							
ASML Hld	552.00	-8.20	698.10	448.55	-	-	-
Heineken	84.38	0.94	106.30	81.32	-	-	-
ING	12.01	0.13	13.57	9.59	-	-	-
Unilever	44.24	0.39	50.93	43.84	-	-	-
Norway (Kr)							
DNB	200.90	0.40	224.40	177.45	9.82	11.32	27808.18
Equinor	373.55	-0.25	399.95	278.70	2.56	4.57	100659.5
Telenor	115.50	0.25	134.95	87.60	8.01	28.39	14503.65
Qatar (QR)							
QatarNtBk	14.68	0.20	20.97	14.31	3.91	8.89	37250.24
Saudi Arabia (SR)							
AlRajhiBnk	65.10	0.20	7317	0.00	1.84	16.48	69408.52
Natnlcombnk	32.05	-0.45	1552.5	0.00	4.25	10.55	51256.74
SaudiBasic	76.10	-0.70	2115	0.00	5.34	60.28	60852.42
SaudiTelec	37.10	0.25	8480	0.00	4.12	15.71	49444.25
Singapore (S$)							
DBS	32.95	-0.18	36.40	30.30	4.56	9.09	62314.88
JardnMt US$	39.82	0.08	54.79	38.66	5.16	24.50	11497.11
OCBC	12.70	-0.06	13.39	11.88	5.16	8.85	41867.14
SingTel	2.38	0.03	2.82	2.30	3.98	17.61	28815.08
UOB	27.08	0.05	31.40	26.82	4.80	7.54	33219.18
South Africa (R)							
Firstrand	61.19	1.25	74.77	58.60	6.24	8.80	18267.41
MTN Grp	94.39	-6.73	149.42	93.99	3.32	8.93	9465.48
Naspers N	2927.31	38.47	17839200	2826.08	0.23	8.39	29035.84
South Korea (KRW)							
HyundMobis	211500	-8500.00	250000	197500	1.85	6.64	14760.94
KoreaElePwr	16920	280.00	22750	16030	-	-0.54	8040.29
SK Hynix	119100	-	130800	73100	0.99	-10.19	64180.82
SmsungEl	67300	-	73600	54500	2.10	13.10	297395.46
Spain (€)							
BBVA	7.50	0.06	7.88	5.02	5.63	6.53	47538.32
BcoSantdr	3.57	0.09	3.87	2.50	3.24	6.30	61348.43
CaixaBnk	3.86	0.06	4.14	3.10	5.87	8.67	30768.27
Iberdrola	10.41	0.04	12.25	9.88	7.27	14.71	70168.29
Inditex	33.07	0.42	36.48	22.59	2.27	21.64	109453.17
Repsol	14.17	0.22	15.87	12.46	4.85	6.27	19215.33
Telefonica	3.61	0.04	4.15	3.22	8.16	14.14	22051.4
Sweden (SKr)							
AtlasCpcoB	123.75	-1.30	140.95	103.96	1.67	23.50	17337.54
Ericsson	48.87	-0.53	70.67	48.53	5.25	13.65	13519.48
H & M	146.54	1.40	189.58	108.88	4.45	67.89	18878.56
Investor	202.45	1.00	223.60	177.04	2.09	4.56	33107.4
Nordea Bk	117.32	0.12	134.94	103.86	7.92	7.83	37461.58
SEB	123.50	0.75	139.40	105.20	5.39	7.85	23454.26
SvnskaHn	93.84	0.02	112.90	83.92	5.78	7.53	16380.66
Swedbank	178.45	0.40	219.90	161.10	5.39	6.90	18131.72
Telia Co	23.66	-0.12	29.79	20.98	6.46	-6.18	8350.54
Volvo	219.20	0.35	235.60	176.42	3.15	11.61	31253.04
Switzerland (SFr)							
ABB	29.93	-0.03	35.74	27.16	2.65	18.86	62458.66
CredSuisse	0.82	0.01	5.86	0.66	11.88	-0.31	3611.19
Nestle	97.70	0.24	116.84	97.09	2.91	28.00	289248.76
Novartis	84.63	0.87	90.16	69.89	3.57	27.26	213719.51
Richemont	104.75	0.35	161.10	96.50	2.16	15.99	60630.37
Roche	241.30	3.55	335.85	233.20	3.79	18.27	187978.46
Swiss Re	98.18	0.80	99.82	73.48	5.62	19.53	34564.38
Swisscom	538.20	3.40	619.40	481.10	3.94	17.36	30914.02
UBS	21.26	0.05	23.80	14.38	2.47	2.15	73603.98
Zurich Fin	428.20	3.80	458.30	393.00	5.38	15.49	69489.98
Taiwan (NT$)							
Chunghwa Telecom	115.50	-	128.00	107.00	4.05	24.21	27615.11
Formosa PetChem	79.00	-0.30	90.00	78.00	1.39	-58.31	23194.28
HonHaiPrc	94.50	-3.70	116.50	94.00	5.59	10.68	40377.07
MediaTek	857.00	56.00	864.00	576.00	8.83	16.66	42252.86
TaiwanSem	532.00	-1.00	594.00	378.50	2.06	14.71	425201.17
Thailand (THB)							
PTT Explor	33.25	-0.25	36.50	29.50	5.83	12.99	26412.2
United Arab Emirates (Dhs)							
Emirtestele	24.30	0.70	38.98	11.60	2.93	24.15	57535.64
United Kingdom (p)							
Anglo American	2098	9.50	3648.5	16.78	7.47	15.60	34111.35
AscBrFd	1986.5	36.50	2167	1327	2.20	20.84	18555.13
AstraZen	10218	94.00	12828.45	9940.32	2.20	32.89	192506.6
Aviva	396.60	2.00	467.30	366.00	7.82	-20.03	13201.88
Barclays	130.66	1.46	198.86	128.12	5.55	3.78	23940.96
BP	526.70	-3.80	570.57	4.75	3.76	6.73	109101.01
BrAmTob	2449.5	46.50	3473.5	2403	6.80	6.33	66588.22
BT	112.55	1.90	161.40	22.98	6.84	5.96	13603.54
Compass	2070	10.00	2250	1769	1.52	28.63	43079.54
Diageo	3087	62.00	3881.5	2996.75	2.52	18.78	84234.78
GlaxoSmh	1452.4	19.20	1609	16.64	3.98	11.46	72296.5
Glencore	451.00	5.75	583.25	410.95	6.17	7.54	67434.76
HSBC	587.30	-13.70	665.60	439.65	5.54	6.22	139018.23
Imperial Brands	1763	34.00	2185	1553.5	8.01	10.02	19167.7
Jardine Mathes.	62.50	-	53.91	42.92	3.36	38.45	18045.43
LlydsBkg	40.04	0.28	54.33	39.42	5.99	5.07	30924.81
LSE Group	8244	36.00	8893.86	7052	1.30	68.36	52374.65
Natl Grid	976.40	-4.80	1229.21	918.00	5.28	13.23	43773.21
Natwest Group	178.15	-3.85	310.00	168.00	7.73	3.99	19146.73
Prudential	861.80	18.60	1357.5	782.40	1.71	8.69	28841.73
ReckittB	5540	88.00	6570	5445.16	3.31	17.90	48325.08
RELX	2856	39.00	2951	2204	1.91	31.32	65577.58
RioTinto	5239	39.00	6354	4473	7.33	12.64	79674.52
RollsRoyce	202.00	1.60	233.00	74.77	-	10.24	20666.53
Shell PLC	2687	-13.50	2801	2149.45	3.14	8.31	215773.89
StandCh	620.40	9.80	799.40	515.60	2.28	8.11	20234.29
Tesco	270.00	-2.40	307.23	211.20	4.28	26.79	23297.36
Unilever	3862.5	41.50	4868.64	3798.5	3.35	13.81	117396.47
Vodafone	76.73	0.63	108.00	69.73	10.31	2.05	25254.56
WPP	698.20	3.00	1082	656.00	5.64	14.31	9122.15
United States of America ($)							
21stC Fox A	29.48	0.04	37.26	28.07	1.43	13.30	7477.33
3M	88.71	1.19	133.91	85.35	6.45	-32.90	48996.04
AbbottLb♦	92.49	-0.36	115.83	89.67	2.03	33.02	160503.26
Abbvie♦	144.65	5.72	168.11	130.96	3.82	31.13	255314
Accenture	291.55	1.51	330.44	242.80	1.46	26.49	193818.54
Activision Bli.	94.42	-0.05	94.57	70.94	-	36.23	74289.5
Adobe	527.58	19.46	574.40	278.23	-	51.28	240204.9
Advanced Micro	95.79	-0.64	132.83	58.03	-	-2504.88	154765.16
AEP	74.69	-0.24	100.32	69.38	4.19	20.34	38478.5
Aflac	77.22	0.73	82.03	60.20	2.03	10.83	45870.53
AirProd	278.74	2.59	328.56	244.82	2.31	29.81	61921.75
Allstate	124.30	1.00	142.15	100.57	2.68	-12.57	32512.31
Alphabet	124.62	2.45	141.22	83.34	-	27.56	737501.16
Altria	39.98	0.68	51.57	39.07	8.99	11.00	70710.49
Amazon	131.93	4.19	145.86	81.43	-	109.51	1361219.86
AmerAir	11.16	0.24	19.08	10.88	-	3.01	7290.24
AmerExpr	142.83	1.52	182.15	137.80	1.50	15.18	104086.73
AmerIntGrp	60.26	0.73	64.88	45.66	2.09	9.61	42899.07
AmerTower	170.42	-1.57	228.97	154.58	3.46	86.95	79443.86
Amgen	263.41	1.84	296.67	211.71	2.95	18.56	140898.32
Amphenol Corp	79.62	0.31	90.28	72.00	1.00	27.13	47489.66
Analog Devices	156.49	-4.09	200.10	137.79	1.96	22.54	77978.66
Aon Cp	308.10	1.22	347.37	273.03	0.71	25.06	62503.26
Apple	169.91	1.69	198.23	124.17	0.52	29.82	2656412.36
Applied Materi.	131.32	0.02	155.26	84.70	0.79	18.34	110247.59
Aptiv	86.26	0.25	124.88	85.24	-	27.34	24395.01
ArcherDan	70.86	0.82	98.28	69.31	2.29	9.88	37795.4
AT&T	15.18	0.36	22.84	13.43	6.99	-13.57	108521.82
Autodesk	196.90	1.75	233.69	179.61	-	51.72	42090.06
AutomData	215.90	1.06	274.92	201.46	2.12	27.50	88944.76
AutoZone	2459.79	13.62	2750	2277.88	-	19.84	43497.49
Avago Tech	835.97	-2.39	925.91	441.36	2.02	27.23	345034.5
BakerHu	34.90	0.09	37.58	26.12	1.90	90.01	35117.56
Bank of NY	41.99	0.36	52.26	39.65	3.37	12.77	32697.18
BankAm	25.38	0.21	38.60	24.96	3.32	7.63	201678.92
Baxter	31.81	-0.35	56.92	31.01	3.49	-5.95	16108.23
BectonDick	249.04	-2.56	287.32	217.70	1.38	47.10	72248.64
BerkshHat	509875.1	6500.05	566569.97	426136	-	8.97	293341.34
Biogen	237.37	2.85	319.76	233.76	-	13.54	34376.72
BlackRock	602.83	4.75	785.65	596.18	3.13	18.41	90004.11
Boeing	182.53	2.84	243.10	139.52	-	-25.45	110426.41
Booking Holdings	2778.96	32.80	3251.71	1771.32	-	25.49	99187.07
Bristol-Myers♦	50.61	-0.41	81.44	49.49	4.25	14.08	102979.09
Broadcom	835.97	-2.39	925.91	441.36	2.02	27.23	345034.5
Cadence Design	233.88	3.01	255.85	138.76	-	75.03	63629.86
CapOne	99.96	2.22	120.94	83.93	2.30	7.96	38128.89
CardinalHlth	90.79	-0.60	95.45	68.53	2.09	94.96	22366.48
Carnival	11.31	0.18	19.55	7.53	-	-4.18	12660.93
Caterpillar	241.01	2.45	293.88	204.04	1.90	15.70	122939.2
Centene Corp	67.25	-0.23	87.84	60.83	-	14.41	35925.02
CharlesSch	50.33	0.21	86.63	45.00	1.79	15.30	89086.3
Charter Comms	385.01	13.01	458.30	302.21	-	13.53	57624.81
Chevron Corp	144.66	0.31	189.68	143.96	3.87	9.59	270106.36
Chipotle Mexic.	1916.56	28.97	2175.01	1344.05	-	50.09	52873.32
Chubb	211.89	3.34	231.37	183.40	1.51	15.78	87028.58
Cigna	302.48	-0.76	340.11	240.50	1.49	14.49	89528.07
Cintas Corp	501.91	5.50	525.37	405.63	0.90	39.40	51121.6
Cisco	51.44	-0.13	58.19	43.39	2.83	17.73	208561.61
Citigroup	38.58	0.34	52.74	38.17	5.06	6.39	75095.95
CME Grp	211.53	2.50	221.76	166.55	3.93	27.05	76087.34
Coca-Cola	55.80	0.56	64.99	51.55	3.08	24.21	241229.2
Cognizant	63.67	0.37	72.71	51.33	1.68	15.56	32155.99
ColgtPlm♦	73.23	1.44	82.09	67.62	2.47	42.79	60534.49
Comcast	40.11	0.47	47.46	30.04	2.67	26.38	161067.13
ConocPhil	116.71	-1.09	138.49	91.53	3.19	11.70	139759.14
Constellation	233.29	3.67	273.65	208.12	1.38	-162.92	42846.67
Corning	26.58	-0.01	37.10	25.26	3.96	37.57	22672.34
Corteva	48.04	0.22	68.43	47.21	1.19	32.00	34097.06
Corteva	48.04	0.22	68.43	47.21	1.19	32.00	34097.06
Costco	550.88	7.85	577.30	447.90	0.66	41.61	243894.71
CrownCstl	88.93	-0.94	151.89	84.72	6.63	23.67	38567.03
CSX	29.47	0.23	34.38	27.60	1.36	15.57	58236.58
CVS♦	67.14	0.85	104.83	64.62	3.29	32.06	86234.55
Danaher	183.23	-4.65	249.58	182.09	0.54	22.49	135393.61
Deere♦	365.46	4.31	450.00	345.55	1.25	11.46	105252.69
Delta	31.14	0.49	49.81	30.60	-	6.99	20035.07
Devon Energy	46.04	-0.73	78.77	42.59	9.37	6.58	29496.87
Digital Realty	122.24	-0.11	133.39	86.33	3.82	100.67	37003.18
DiscFinServ	80.86	0.37	122.50	79.04	2.96	5.84	20220.31
Disney	79.89	0.56	118.18	78.73	-	67.93	146181.03
Dollar General	118.97	-0.35	261.59	101.09	1.81	12.90	26111.12
DominRes	39.81	-0.27	70.80	39.18	6.41	15.42	33311.93
DukeEner	87.24	-0.29	106.43	83.06	4.41	19.54	67236.53
DuPont	72.31	0.16	78.74	56.77	1.82	37.26	33194.7
Eaton	197.59	2.28	240.44	146.68	1.62	30.52	78836.42
eBay	38.46	0.47	50.75	37.93	2.34	16.97	20466.77
Ecolab	158.73	1.29	191.41	131.04	1.26	40.39	45243.43
Edwards Lifesc.	61.40	-0.32	94.87	60.57	-	28.41	37323.02
Elevance	442.34	0.88	549.52	412.00	1.19	17.22	103931.82
Eli Lilly	565.30	5.07	629.97	302.14	0.71	82.35	536631.81
Emerson	87.48	-0.55	100.62	76.94	2.27	16.44	50207.12
EOG Res	124.43	-1.56	150.88	98.52	2.42	8.77	72450.72
Equinix	710.27	-0.12	821.63	546.77	1.75	85.78	66456.36
EquityResTP	54.03	-0.20	69.45	53.67	4.56	26.57	21217.58
Exelon	38.40	-0.03	44.37	35.71	3.47	18.77	38216.42
ExxonMb	105.40	-0.15	120.70	98.02	3.27	8.82	421936.52
Fedex	234.03	5.19	270.95	151.34	1.93	14.89	58839.17
Fidelity NIS	47.86	0.70	85.18	46.91	3.96	-1.28	28352.44
Fiserv	114.23	2.00	122.39	87.03	-	29.56	71750.87
FordMtr	9.84	-0.13	15.42	9.68	5.83	9.99	38665.06
Franklin	22.52	0.07	32.88	21.58	5.05	14.72	11234.49
GenDyn	238.82	0.57	256.86	202.35	2.07	20.51	65173.23
GenElectric	109.11	2.76	117.96	59.75	0.21	12.35	118753.8
GenMills	64.32	-0.98	90.89	60.33	3.30	16.35	37387.88
GenMotors	27.29	0.07	43.63	26.78	1.26	3.99	37373.14
GileadSci	77.60	0.98	89.74	72.87	3.65	18.66	96684.48
GoldmSchs	297.48	7.57	389.58	289.36	3.21	13.24	98070.55
Halliburton	39.20	-0.40	43.85	27.84	1.37	15.13	35086.03
HCA Hold	222.98	-2.31	304.86	207.24	0.99	11.52	59683.01
Hew-Pack	26.09	0.25	33.90	25.22	3.80	10.10	25784.03
Hilton Worldwi.	150.97	1.80	157.14	123.74	0.38	33.10	38714.79
HiltonWwde	150.97	1.80	157.14	123.74	0.38	33.10	38714.79
HomeDep	278.64	2.18	347.25	274.26	2.71	18.41	278655.89
Honywell	178.37	1.37	220.96	174.88	2.18	23.09	117587.24
HumanaInc	511.45	1.26	571.30	423.29	0.63	19.92	63372.11
IBM	143.59	1.07	153.21	120.55	4.40	63.91	130811.39
IDEXX Laborato.	394.52	3.15	564.74	352.79	-	43.76	32745.16
IllinoisTool	223.88	0.62	264.19	206.04	2.24	23.18	67360.83
Illumina	105.62	-3.61	248.87	103.92	-	-4.15	16718.85
Intcntl Exch	105.51	0.79	118.79	92.26	1.45	36.66	59117.4
Intel	35.45	-0.10	40.07	24.73	3.29	-161.18	148443.66
Intuit	489.33	9.81	558.64	352.63	0.60	61.51	137159.2
John&John	146.54	0.94	181.04	144.95	2.99	31.09	380853
JohnsonCn	48.59	0.38	70.43	47.90	2.81	17.05	33057.7
JPMrgnCh♦	136.74	1.05	159.38	123.11	2.80	9.20	397378.1
Kimb-Clark	117.96	1.10	147.87	116.32	3.79	25.44	39863.52
KinderM	15.98	-0.11	19.36	15.89	6.67	15.05	35508.81
KLA Corp	456.41	-1.52	520.19	307.30	1.09	19.77	62218.88
Kraft Heinz	31.50	0.06	42.80	30.68	4.86	12.87	38691.28
Kroger	44.72	0.29	50.41	42.62	2.20	21.13	32164.21
LasVegasSd	47.90	0.86	65.58	34.73	-	715.69	36619.11
LibertyGbl	15.41	0.30	21.89	15.03	-	-2.21	2639.52
Lilly (E)	565.30	5.07	629.97	302.14	0.71	82.35	536631.81
Linde	378.44	7.91	393.67	289.94	1.24	34.60	183501.96
Lockheed	445.70	2.31	508.10	393.77	2.53	17.09	110577.6
Lowes♦	185.96	2.34	237.21	178.30	2.16	19.05	107320.35
Lyondell	89.93	-0.51	102.05	75.70	5.12	14.54	29155.05
Marathon Ptl	145.23	-0.77	159.50	104.32	1.86	5.57	58068.63
Marsh&M♦	188.04	3.14	199.20	151.86	1.20	29.89	92717.34
MasterCard♦	370.24	6.16	418.60	308.60	0.55	36.29	344485.48
McDonald's	261.59	5.83	299.35	236.77	2.17	25.22	190633.59
McKesson	447.49	-0.55	465.90	331.75	0.46	17.45	60366.79
Medtronic	69.56	0.13	92.02	68.84	3.71	27.17	92551.93
Merck	103.11	0.29	119.65	96.36	2.67	88.39	261643.81
Meta	304.13	7.40	330.54	88.09	-	37.07	675037.99
Metlife	58.99	0.70	77.36	48.95	3.27	143.48	44361.8
Microsoft	336.04	6.23	366.78	213.43	0.76	36.31	2497567.16
Mnstr Bvrg	50.42	0.52	60.47	45.06	-	38.92	52815.87
MondelezInt	65.58	0.57	78.59	60.42	2.25	22.79	89216.21
Monsanto	10.07	0.02	11.13	9.56	-	51.84	251.75
MorganStly	69.98	0.43	100.99	69.42	4.24	12.86	115954.36
Netflix	409.65	11.78	485.00	252.09	-	45.58	179295.48
NextEraE	56.12	-0.12	88.61	47.15	3.04	14.49	113570.83
Nike	100.71	2.73	130.22	88.66	1.29	31.79	123270.34
NorfolkS	187.15	2.62	261.71	183.09	2.65	17.62	42320.28
Northrop	472.16	-0.91	556.27	414.56	1.43	16.38	71198.24
NXP	169.33	-9.80	225.57	142.76	2.10	16.76	43653.64
Occid Pet	61.55	-0.68	76.11	55.51	0.96	10.87	54452.17
Oracle	102.02	1.03	127.54	74.05	1.35	31.56	279457.45
Pepsico	161.25	1.63	196.88	155.83	2.80	29.54	221696.81
Perrigo	27.01	0.03	40.81	26.82	3.77	-67.26	3657.07
Pfizer	30.22	0.11	54.93	30.02	5.13	8.40	170592.67
Phillips66	110.68	-0.25	125.19	89.74	3.49	4.99	49284.47
PhilMorris	89.10	1.63	105.62	87.23	5.45	18.03	138319.37
PNCFin	111.83	0.59	170.28	109.40	5.13	8.02	44536.81
PPG Inds	120.98	0.26	152.89	107.42	1.96	22.72	28527.08
ProctGmbl	147.91	0.75	158.38	130.96	2.38	26.22	348607.04
Prudntl	89.86	1.25	110.96	75.37	5.21	17.34	32619.18
PublStor	235.50	-3.07	316.48	233.87	4.06	10.66	41407.84
Qualcomm	106.94	0.48	139.94	101.47	2.73	14.64	117634
Raytheon	78.52	-0.64	108.84	68.56	2.73	21.78	112904.01
Regen Pharm	778.33	3.15	853.97	668.00	-	21.52	84494.51
S&P Global	344.55	2.07	428.65	305.05	0.97	50.76	109635.81
Salesforce	199.57	3.00	238.22	126.34	-	132.03	194181.61
Schlmbrg	55.44	-0.39	62.78	42.73	1.47	21.24	78914.44
Sempra Energy	69.28	-0.44	84.13	63.75	3.22	18.37	21799.2
Shrwin-Will	234.22	-1.81	283.80	205.43	0.98	27.19	59952.38
SimonProp	104.85	0.31	129.95	100.17	6.57	16.67	34305.98
SouthCpr	72.29	0.76	87.59	46.19	4.30	21.00	55887.98
Starbucks	93.61	1.59	115.48	82.97	2.12	29.85	107215.17
StateSt	63.33	0.40	94.74	62.78	3.80	8.96	20179.49
Stryker	262.22	0.31	306.93	205.43	1.07	38.74	99585.46
Sychrony Fin	28.17	0.08	40.89	26.59	3.12	5.36	11656.87
T-MobileUS	140.58	0.58	154.38	124.92	-	29.29	162571.48
Target	108.22	0.99	180.46	102.93	3.77	15.71	49954.94
TE Connect	115.95	0.44	146.60	110.88	1.87	18.77	36401.18
Tesla Mtrs	199.33	-7.97	299.29	101.81	-	59.40	633654.4
TexasInstr♦	140.61	-2.51	188.12	139.88	3.31	17.65	127702.58
TheTrvelers	163.92	3.24	194.45	157.33	2.21	18.18	37439.24
ThrmoFshr	426.58	-4.83	609.85	415.60	0.29	30.50	164638.45
TJX Cos	87.63	0.44	93.78	69.93	1.31	27.20	100255.78
Truist Financial Corp	27.78	0.16	53.34	25.56	7.16	6.71	37002.29
Twitter	53.70	0.35	60.16	31.30	-	-402.23	41093.72
UnionPac	204.97	3.25	240.48	183.69	2.43	19.58	124949.2
UPS	136.08	1.25	197.80	133.68	4.41	12.34	98423.37
USBancorp	30.92	0.28	49.93	27.27	5.94	9.01	47399.29
UtdHlthcre	526.00	1.34	558.10	445.68	1.24	24.63	487236.5
ValeroEngy	122.79	-0.77	160.16	104.18	3.11	4.42	41804.22
Verizon♦	34.53	1.09	44.73	30.14	7.23	7.22	145146.61
VertexPharm	356.86	1.58	375.93	282.21	-	28.84	92102.43
VF Cp	17.17	0.27	34.90	15.11	8.97	59.86	6676.87
Visa Inc	231.70	2.43	250.58	193.33	0.71	30.75	372292.69
Walgreen	20.92	-0.22	42.29	20.48	9.00	-5.55	18073.09
WalMartSto	161.78	0.61	165.85	136.09	1.32	32.93	435441.2
Walt Disney	79.89	0.56	118.18	78.73	-	67.93	146181.03
Waste Manage.	162.95	1.57	173.71	148.31	1.58	30.65	65632.26
WellsFargo	38.99	0.23	48.84	35.25	2.94	10.30	71079.87
Williams Cos	33.88	-0.18	36.22	27.80	4.93	15.89	41206.28
Workday	206.72	0.71	252.72	128.72	-	-455.86	54160.64
Yum!Brnds	120.19	0.75	143.25	114.10	1.87	25.40	33678.59
Zoetis	156.29	0.26	194.99	124.15	0.86	34.41	71942.93
Zoom	59.71	0.42	89.67	58.87	-	134.47	15183.8
Venezuela (VEF)							
Bco de Vnzla	8.00	-	8.30	1.10	87.07	-	831.66
Bco Provncl	15.63	-0.37	79400	6.80	-	7.27	178.20

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

FT 500: TOP 20

	Close price	Prev price	Day change	Day change %	Week change	Week change %	Month change %
Hngzh HikVDT	36.56	35.90	0.66	1.84	3.21	11.8	8.17
CapOne	99.96	97.74	2.22	2.27	7.36	10.6	3.00
Verizon	34.53	33.44	1.09	3.24	2.05	10.0	6.53
Deut Bank	10.45	10.41	0.05	0.46	0.88	9.7	8.65
Vale	68.54	67.57	0.97	1.44	5.01	9.6	1.46
WalMrtMex	65.85	66.59	-0.74	-1.11	6.29	9.2	0.12
NextEraE	56.12	56.24	-0.12	-0.21	4.72	8.9	-2.07
FEMSA UBD	199.32	192.99	6.33	3.28	9.84	8.8	5.01
Hitachi	9395.00	8884.00	511.00	5.75	134.00	7.4	1.23
Raytheon	78.52	79.16	-0.64	-0.81	6.03	7.4	9.09
Hunng Pwr	3.68	3.67	0.01	0.27	0.24	7.3	-3.16
RioTinto	5239.00	5200.00	39.00	0.75	309.50	7.1	1.31
AmerTower	170.42	171.99	-1.57	-0.91	12.70	7.0	3.63
Chipotle Mexic.	1916.56	1887.59	28.97	1.53	67.93	5.3	4.63
IBM	143.59	142.52	1.07	0.75	6.14	5.3	2.34
Glencore	451.00	445.25	5.75	1.29	16.50	5.2	-3.89
Keyence	57310.00	53050.00	4260.00	8.03	-1580.00	4.9	3.33
Intel	35.45	35.54	-0.10	-0.27	1.69	4.7	-0.30
AirLiquide	159.90	160.24	-0.34	-0.21	7.32	4.6	0.06
ShnEtsuCh	4491.00	4302.00	189.00	4.39	5.00	4.5	3.91

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 %
Natwest Group	178.15	182.00	-3.85	-2.12	-33.30	-17.3	-24.14
Sanofi	84.08	81.44	2.64	3.24	-16.87	-14.5	-17.09
FordMtr	9.84	9.96	-0.13	-1.26	-1.52	-14.3	-20.85
StandCh	620.40	610.60	9.80	1.60	-106.80	-13.5	-18.91
Illumina	105.62	109.22	-3.61	-3.30	-10.25	-11.6	-23.08
Edwards Lifesc.	61.40	61.71	-0.32	-0.51	-7.34	-11.1	-11.38
Charter Comms	385.01	372.00	13.01	3.50	-58.27	-10.5	-12.46
AutomData	215.90	214.84	1.06	0.49	-26.32	-10.5	-10.26
Mercedes-Benz	55.61	56.21	-0.60	-1.07	-5.80	-10.3	-9.89
Danaher	183.23	187.88	-4.65	-2.47	-16.17	-10.2	-16.68
Swedbank	178.45	178.05	0.40	0.22	-20.25	-10.0	-11.35
Chevron Corp	144.66	144.35	0.31	0.21	-16.33	-10.0	-14.21
MTN Grp	94.39	101.12	-6.73	-6.66	-3.65	-9.9	-16.36
Bristol-Myers	50.61	51.02	-0.41	-0.80	-4.98	-9.6	-12.82
New Ch Life Ins	17.10	17.90	-0.80	-4.47	-1.00	-9.5	-9.32
Barclays	130.66	129.20	1.46	1.13	-14.84	-9.3	-17.97
ChUncHK	4.91	4.89	0.02	0.41	-0.49	-8.7	-13.38
Alphabet	124.62	122.17	2.45	2.01	-14.33	-8.7	-4.75
HonHaiPrc	94.50	98.20	-3.70	-3.77	-5.30	-8.7	-9.13
Takeda Ph	3988.00	4070.00	-82.00	-2.01	-282.00	-8.4	-13.98

Based on the FT Global 500 companies in local currency

BONDS: HIGH YIELD & EMERGING MARKET

Oct 30	Red date	Coupon	Ratings S*	Ratings M*	Ratings F*	Bid price	Bid yield	Day's chge yield	Mth's chge yield	Spread vs US
High Yield US$										
HCA Inc.	04/24	8.36	BB-	Ba2	BB	113.75	4.24	0.00	0.12	-
High Yield Euro										
Aldesa Financial Services S.A.	04/21	7.25	-	-	B	71.10	28.23	0.00	0.64	25.98
Emerging US$										
Peru	03/19	7.13	BBB+	A3	BBB+	104.40	2.60	-	-	0.34
Colombia	01/26	4.50	-	Baa2	BBB-	109.50	2.33	0.16	0.52	1.28
Brazil	04/26	6.00	-	Ba2	BB-	115.15	2.78	-0.01	0.65	1.73
Poland	04/26	3.25	-	A2	A-	111.22	0.98	0.03	0.16	-0.07
Mexico	05/26	11.50	-	Baa1	BBB-	149.00	1.61	0.00	-0.12	0.56
Turkey	03/27	6.00	-	Ba2	BB+	101.26	5.82	0.00	0.17	3.07
Turkey	03/27	6.00	-	B2	BB-	102.88	5.43	0.14	0.83	4.38
Peru	08/27	4.13	BBB+	A3	BBB+	103.50	3.66	0.01	-0.02	0.80
Russia	06/28	12.75	-	Baa3	BBB	168.12	2.48	0.07	0.05	-
Brazil	02/47	5.63	-	Ba2	BB-	101.48	5.52	0.08	0.80	-
Emerging Euro										
Brazil	04/21	2.88	BB-	Ba2	BB-	103.09	0.05	0.01	-0.09	-1.19
Mexico	04/23	2.75	BBB+	A3	BBB+	107.76	0.76	0.00	-0.07	-1.56
Mexico	04/23	2.75	-	Baa1	BBB-	106.48	-0.26	-	-	-0.36
Bulgaria	03/28	3.00	BBB-	Baa2	BBB	117.04	1.00	0.02	-0.15	-1.42

Interactive Data Pricing and Reference Data LLC, an ICE Data Services company. US $ denominated bonds NY close; all other London close. *S - Standard & Poor's, M - Moody's, F - Fitch.

BONDS: GLOBAL INVESTMENT GRADE

Oct 30	Red date	Coupon	Ratings S*	Ratings M*	Ratings F*	Bid price	Bid yield	Day's chge yield	Mth's chge yield	Spread vs US
US$										
FleetBoston Financial Corp.	01/28	6.88	BBB+	Baa1	A-	129.00	2.54	-0.01	-0.05	-
The Goldman Sachs Group, Inc.	02/28	5.00	BBB+	A3	A	117.21	2.47	0.00	0.32	-
NationsBank Corp.	03/28	6.80	BBB+	Baa1	A-	127.69	2.72	-0.01	0.06	-
GTE LLC	04/28	6.94	BBB+	Baa2	A-	128.27	2.80	0.00	-0.11	-
United Utilities PLC	08/28	6.88	BBB	Baa1	A-	130.43	2.62	-0.07	-0.22	-
Barclays Bank plc	01/29	4.50	A	A1	A+	96.46	5.02	0.00	0.02	-
Euro										
Electricite de France (EDF)	04/30	4.63	A-	A3	A-	137.45	0.82	-0.01	0.10	-
The Goldman Sachs Group, Inc.	02/31	3.00	BBB+	A3	A	124.42	0.68	0.00	-0.11	-
The Goldman Sachs Group, Inc.	02/31	3.00	BBB+	A3	A	121.70	0.93	0.00	0.02	-
Finland	04/31	0.75	AA+	Aa1	AA+	111.08	-0.27	0.00	-0.05	-0.87
Yen										
Mexico	06/26	1.09	-	Baa1	BBB-	98.73	1.34	-0.02	-0.14	0.27
£ Sterling										
innogy Fin B.V.	06/30	6.25	BBB	Baa2	A-	128.68	3.20	0.00	-0.01	0.40
innogy Fin B.V.	06/30	6.25	BBB	Baa2	A-	137.45	2.19	-0.03	0.02	-

Interactive Data Pricing and Reference Data LLC, an ICE Data Services company. US $ denominated bonds NY close; all other London close. *S - Standard & Poor's, M - Moody's, F - Fitch.

INTEREST RATES: OFFICIAL

Oct 30	Rate	Current	Since	Last
US	Fed Funds	5.25-5.50	26-07-2023	5.00-5.25
US	Prime	8.50	26-01-2023	8.25
US	Discount	5.50	01-08-2023	5.25
Euro	Repo	4.0	14-09-2023	3.438
UK	Repo	5.25	03-08-2023	5.00
Japan	O'night Call	0.00-0.10	01-02-2016	0.00
Switzerland	Libor Target	-1.25-0.25	15-01-2015	-0.75--0.25

INTEREST RATES: MARKET

Oct 30 (Libor: Oct 27)	Over night	Change Day	Change Week	Change Month	One month	Three month	Six month	One year
US$ Libor	5.06157	0.010	4.136	-0.003	5.43860	5.64482	5.86889	6.04143
Euro Libor	-0.64957	-0.064	-0.224	0.001	-0.61943	-0.58057	-0.55600	-0.48571
£ Libor	0.18063	-0.005	-0.043	0.001	4.20130	5.37480	4.74470	0.81363
Swiss Fr Libor				-0.002	-0.77540	-0.75300	-0.70280	-0.55320
Yen Libor				0.000	-0.06005	-0.02617	0.07165	0.04867
Euro Euribor				-0.015	3.86800	3.94800	4.10200	4.10400
Sterling CDs				0.000	0.50000	0.63000	0.78500	
US$ CDs				-0.010	5.39000	5.55000	5.70000	
Euro CDs				0.000	3.94000	3.90000	3.98000	

Oct 30	Short term		7 Days notice		One month		Three month		Six month		One year	
Euro	3.63	3.93	3.69	3.99	3.79	4.09	3.75	4.05	3.83	4.13	3.74	4.04
Sterling					0.45	0.55	0.58	0.68	0.71	0.86	0.90	1.05
US Dollar	5.13	5.33	5.16	5.36	5.29	5.49	5.45	5.65	5.60	5.80	5.67	5.87
Japanese Yen	-0.30	-0.10	-0.30	-0.10	-0.25	0.05	-0.15	0.05	-0.05	0.15	0.00	0.20

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	198.74	0.24	-1.24	-2.44	-1.01	5.86
Corporates(£)	326.14	0.34	-0.47	0.93	-0.84	3.29
Corporates(€)	212.60	0.13	0.11	2.56	0.20	3.19
Eurozone Sov(€)	207.52	0.15	0.06	0.00	0.14	-3.35
Gilts(£)	255.69	0.56	-0.65	-5.15	-1.31	-6.83
Overall(£)	268.74	0.48	-0.55	-3.50	-1.12	-4.33
Overall(€)	205.47	0.14	0.09	0.63	0.16	-1.59
FTSE						
Sterling Corporate (£)	-	-	-	-	-	-
Euro Corporate (€)	104.47	-0.05	-	-	0.54	-1.73
Euro Emerging Mkts (€)	718.99	0.55	-	-	-5.44	20.89
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	463.80	-3.36	-0.65	37.67	475.45	409.66
Europe 5Y	88.24	-0.71	1.03	9.03	90.18	75.15
Japan 5Y	79.19	0.88	-0.88	6.86	80.75	70.54
Senior Financials 5Y	101.25	-0.71	1.18	11.03	103.71	87.01
Markit CDX						
Emerging Markets 5Y	239.09	-0.18	-5.19	12.64	245.20	213.47
Nth Amer High Yld 5Y	527.65	4.16	2.04	47.27	527.65	473.30
Nth Amer Inv Grade 5Y	81.85	0.95	0.58	7.98	81.85	70.16

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

VOLATILITY INDICES

	Oct 30	Day Chng	Prev	52 wk high	52 wk low
VIX	20.18	-1.09	21.27	30.81	12.68
VXD	19.34	2.22	17.12	29.87	3.10
VXN	23.99	-0.45	24.44	33.99	5.85
VDAX	20.01	0.13	19.88	93.30	-

† CBOE. VIX: S&P 500 index Options Volatility, VXD: DJIA Index Options Volatility, VXN: NASDAQ Index Options Volatility.
‡ Deutsche Borse. VDAX: DAX Index Options Volatility.

BONDS: BENCHMARK GOVERNMENT

	Red Date	Coupon	Bid Price	Bid Yield	Day chg yield	Wk chg yield	Month chg yld	Year chg yld
Australia	-	-	-	-	-	-	-	-
	05/32	1.25	75.50	4.77	-0.06	0.07	0.33	0.94
	02/50	1.00	85.06	2.45	-0.06	0.02	0.20	0.63
Austria	02/29	0.50	87.02	3.20	-0.03	-0.09	-0.05	0.72
	02/47	1.50	64.61	3.82	0.01	0.01	0.13	0.97
Belgium	06/27	0.80	92.37	3.05	-0.04	-0.10	-0.10	0.93
	06/47	1.60	63.36	4.03	0.00	0.02	0.14	1.03
Canada	03/25	1.25	95.45	4.81	-0.04	-0.19	-0.16	1.04
	06/30	1.25	84.10	4.02	-0.05	-0.15	-0.09	0.83
	12/48	2.75	83.28	3.79	-0.05	-0.14	-0.08	0.42
Denmark	11/29	0.50	86.82	2.91	-0.03	-0.07	-0.04	0.58
	11/39	4.50	115.42	3.25	0.00	-0.02	0.06	0.67
Finland	09/24	0.00	96.83	3.75	-0.05	-0.07	0.05	1.89
	09/29	0.50	85.74	3.20	-0.02	-0.08	-0.03	0.71
France	05/28	0.75	90.20	3.08	-0.03	-0.08	-0.06	0.90
	05/48	2.00	69.77	3.94	0.00	0.01	0.13	1.02
Germany	08/29	0.00	85.93	2.65	-0.03	-0.08	-0.06	0.78
	08/48	1.25	68.46	3.09	0.01	0.01	0.12	1.00
Greece	-	-	-	-	-	-	-	-
	01/28	3.75	100.51	3.62	-0.02	-0.14	-0.22	-0.52
Ireland	-	-	-	-	-	-	-	-
	05/26	1.00	94.93	3.11	-0.03	-0.08	-0.07	1.15
	02/45	2.00	73.91	3.81	0.00	0.02	0.11	0.89
Italy	02/25	0.35	95.77	3.84	-0.03	-0.10	-0.09	1.22
	05/30	0.40	88.73	2.26	-0.01	0.00	0.07	0.75
	03/48	3.45	76.70	5.14	-0.02	-0.03	0.11	1.02
Japan	04/25	0.05	99.92	0.11	0.00	0.01	0.01	0.06
	12/29	0.10	97.64	0.49	0.00	0.03	0.06	0.29
	12/49	0.40	71.01	1.79	0.00	0.02	0.18	0.37
Netherlands	07/27	0.75	92.40	2.94	-0.03	-0.08	-0.06	0.96
	01/47	2.75	89.71	3.40	0.01	0.02	0.13	0.96
New Zealand	05/31	1.50	75.91	5.44	-0.02	-0.07	0.13	1.13
	09/40	2.50	110.16	3.38	0.01	-0.02	0.20	0.92
Norway	08/30	1.38	84.52	4.02	-0.01	0.00	-0.01	0.48
Poland	-	-	-	-	-	-	-	-
	07/27	2.50	90.81	5.27	-0.04	-0.23	0.13	-2.89
	04/47	4.00	77.00	5.82	-0.09	-0.19	0.19	-2.71
Portugal	04/27	4.13	103.22	3.12	-0.03	-0.10	-0.08	0.82
Spain	-	-	-	-	-	-	-	-
	10/29	0.60	84.45	3.52	-0.03	-0.08	-0.04	0.85
	10/46	2.90	77.51	4.49	-0.01	-0.01	0.09	1.06
Sweden	06/30	0.13	111.25	1.38	0.02	0.06	0.12	1.56
	03/39	3.50	104.86	3.10	-0.01	-0.02	0.09	1.01
Switzerland	04/28	4.00	112.88	1.02	-0.02	-0.10	-0.04	0.17
	06/29	0.00	94.43	1.02	0.00	-0.08	-0.03	0.10
United Kingdom	-	-	-	-	-	-	-	-
	07/27	1.25	89.48	4.34	-0.08	-0.18	-0.01	0.79
	07/47	1.50	51.53	5.02	-0.05	-0.10	0.15	1.31
United States	-	-	-	-	-	-	-	-
	03/25	0.50	93.60	5.24	-0.02	-0.03	-0.04	1.00
	02/30	1.50	82.02	4.85	-0.02	-0.08	0.22	0.89
	02/50	0.25	55.94	2.56	0.03	-0.04	0.20	0.77

Interactive Data Pricing and Reference Data LLC, an ICE Data Services company.

GILTS: UK CASH MARKET

Oct 30	Price £	Red Yield	Change in Yield Day	Week	Month	Year	52 Week High	52 Week Low	Amnt £m
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
Tr 0.125pc '24	98.82	4.92	1.44	1.03	-2.38	56.19	98.82	96.10	35.55
Tr 2pc '25	95.37	4.64	0.43	-1.28	-2.73	45.45	97.82	92.80	39.93
Tr 0.125pc '26	90.93	4.41	0.68	-2.00	-2.86	32.04	92.38	87.71	35.32
Tr 1.25pc '27	89.41	4.36	0.69	-2.24	-2.46	23.51	93.30	86.03	40.99
Tr 0.5pc '29	81.75	4.44	1.14	-1.55	-1.11	26.86	87.71	78.59	28.92
Tr 1pc '32	76.12	4.50	0.67	-0.88	0.22	30.81	110.34	74.53	35.96
Tr 4.25pc '36	95.51	4.73	0.42	-1.05	0.64	27.84	110.66	94.63	31.68
Tr 4.5pc '42	93.87	5.00	0.40	-0.79	2.04	33.69	117.12	92.93	28.35
Tr 3.75pc '52	80.74	5.02	0.40	-0.59	1.62	41.81	110.80	79.70	25.11
Tr 4pc '60	84.28	4.94	0.61	-0.40	2.07	47.02	122.75	83.11	25.13

Gilts benchmarks & non-rump undated stocks. Closing mid-price in pounds per £100 nominal of stock.

COMMODITIES

www.ft.com/commodities

Energy		Price*	Change	Agricultural & Cattle Futures		Price*	Change
Crude Oil†	Dec	84.01	-1.53	Corn♦	Dec	479.50	-1.25
Brent Crude Oil‡		86.49	-2.71	Wheat♦	Dec	569.50	-6.00
RBOB Gasoline†	Dec	2.28	-0.02	Soybeans♦	Nov	1299.25	2.00
Natural Gas†	Dec	3.37	-0.12	Soybeans Meal♦	Dec	437.80	-4.60
Base Metals (♠ LME 3 Months)				Cocoa (ICE Liffe)✠	Dec	3399.00	8.00
Aluminium		2254.00	28.50	Cocoa (ICE US)♥	Dec	3828.00	-24.00
Aluminium Alloy		1580.00	55.00	Coffee(Robusta)✠	Nov	2490.00	-63.00
Copper		8137.50	46.50	Coffee (Arabica)♥	Dec	159.35	-1.60
Lead		2131.50	28.50	White Sugar✠		724.50	-17.30
Nickel		18475.00	130.00	Sugar 11♥		27.02	-0.32
Tin		25000.00	85.00	Cotton♥	Dec	85.15	0.77
Zinc		2467.00	1.00	Orange Juice♥	Nov	409.95	8.00
Precious Metals (PM London Fix)				Live Cattle♣	Dec	181.90	2.58
Gold		1982.90	7.90	Feeder Cattle♣	May	134.88	-
Silver (US cents)		2275.50	-21.50	Lean Hogs♣	Dec	70.43	1.80
Platinum		903.00	-9.00				
Palladium		1139.00	16.00		Oct 27	% Chg Month	% Chg Year
Bulk Commodities							
Iron Ore		120.06	3.01	S&P GSCI Spt	581.02	-4.69	-8.71
Baltic Dry Index		1502.00	-61.00	DJ UBS Spot	104.77	-0.07	-6.25
Richards Bay ICE Futures		129.75	-0.70	TR/CC CRB TR	322.69	-0.37	8.26
				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 27	Yield Oct 27	Yield Prev	Month return	Value stock	Market	No of stocks
Can 4.25%' 26	106.07	2.203	2.266	0.91	5.25	66282.45	8
Fr 0.10%' 25	97.63	1.905	1.892	0.09	12.79	241522.23	18
Swe 1.00%' 25	128.30	1.445	1.443	0.25	35.93	228193.01	7
UK 0.125%' 26	98.59	0.720	0.783	0.58	13.45	483016.14	31
	-	-	-	-	-	-	-
UK 2.00%' 35	235.45	1.065	1.109	-1.57	9.08	483016.14	31
US 0.625%' 26	95.36	2.801	2.852	0.74	42.42	1605198.26	48
US 3.625%' 28	104.69	2.508	2.555	0.28	16.78	1605198.26	48

Representative stocks from each major market Source: Merill Lynch Global Bond Indices † Local currencies. ‡ Total market value. In line with market convention, for UK Gilts inflation factor is applied to price, for other markets it is applied to par amount.

BONDS: TEN YEAR GOVT SPREADS

	Bid Yield	Spread vs Bund	Spread vs T-Bonds		Bid Yield	Spread vs Bund	Spread vs T-Bonds
Australia	4.77	2.12	-0.08	Netherlands	2.94	0.29	-1.91
Austria	3.20	0.54	-1.65	New Zealand	5.44	2.78	0.59
Canada	4.02	1.37	-0.83	Norway	4.02	1.37	-0.83
Denmark	2.91	0.26	-1.94	Portugal	3.12	0.47	-1.73
Finland	3.20	0.55	-1.65	Spain	3.52	0.87	-1.33
Germany	2.65	0.00	-2.20	Sweden	1.38	-1.28	-3.47
Italy	2.26	-0.39	-2.59	Switzerland	1.02	-1.63	-3.83
Japan	0.49	-2.16	-4.36	United States	4.85	2.20	0.00

Interactive Data Pricing and Reference Data LLC, an ICE Data Services company.

GILTS: UK FTSE ACTUARIES INDICES

Price Indices Fixed Coupon	Oct 30	Day's chg %	Total Return	Return 1 month	Return 1 year	Yield
1 Up to 5 Years	81.22	-0.07	2373.99	0.58	1.59	4.50
2 5 - 10 Years	141.38	-0.19	3054.70	0.39	-1.92	4.45
3 10 - 15 Years	144.01	-0.24	3412.37	0.12	-5.65	4.75
4 5 - 15 Years	140.80	-0.21	3136.78	0.31	-3.05	4.57
5 Over 15 Years	180.94	-0.31	3206.98	-0.35	-16.81	4.96
7 All stocks	125.83	-0.19	2871.07	0.18	-6.19	4.81

Index Linked	Oct 30	Day's chg %	Month chg %	Year's chg %	Total Return	Return 1 month	Return 1 year
1 Up to 5 Years	331.72	-0.02	0.61	2.14	2829.33	0.61	3.30
2 Over 5 years	477.30	-0.12	-0.50	-14.05	3655.90	-0.50	-13.51
3 5-15 years	441.09	-0.13	-0.11	-0.84	3594.05	-0.11	0.06
4 Over 15 years	499.97	-0.12	-0.78	-22.23	3711.20	-0.78	-21.90
5 All stocks	466.22	-0.10	-0.25	-11.06	3645.22	-0.25	-10.43

Yield Indices	Oct 30	Oct 27	Yr ago		Oct 30	Oct 27	Yr ago
5 Yrs	4.35	4.32	3.45	20 Yrs	4.98	4.96	3.82
10 Yrs	4.60	4.57	3.69	45 Yrs	4.83	4.81	3.33
15 Yrs	4.86	4.84	3.83				

Real yield	inflation 0% Oct 30	Dur yrs	Previous	Yr ago	inflation 5% Oct 30	Dur yrs	Previous	Yr ago
Up to 5 yrs	1.09	2.44	1.08	-1.12	0.72	2.46	0.71	-1.78
Over 5 yrs	1.43	18.46	1.42	0.19	1.39	18.52	1.38	0.16
5-15 yrs	1.04	9.33	1.02	0.11	0.94	9.35	0.92	0.01
Over 15 yrs	1.53	24.54	1.52	0.21	1.51	24.56	1.51	0.20
All stocks	1.41	14.87	1.41	0.18	1.37	14.96	1.36	0.14

See FTSE website for more details www.ftse.com/products/indices/gilts

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MANAGED FUNDS SERVICE

LGT Wealth Management (CI) Limited (JER)
Sir Walter Raleigh House, 48 - 50 Esplanade, St Helier, Jersey, JE2 3QB
FCA Recognised

Fund	Bid	Offer	D+/-	Yield
Volare Offshore Strategy Fund Limited				
Bridge Fund	£ 2.0814	-	-0.0025	2.46
Global Equity Fund	£ 3.2381	-	-0.0111	1.57
Global Fixed Interest Fund	£ 0.7068	-	0.0022	6.69
Income Fund	£ 0.5991	-	-0.0006	3.38
Sterling Fixed Interest Fund	£ 0.6474	-	0.0001	4.99
UK Equity Fund	£ 1.7812	-	-0.0003	3.54

Algebris Investments (IRL)
Regulated

Fund	Bid	Offer	D+/-	Yield
Algebris Financial Credit I EUR	€ 175.68	-	-0.38	0.00
Algebris Financial Credit R EUR	€ 150.21	-	-0.33	0.00
Algebris Financial Credit Rd EUR	€ 86.29	-	-0.19	6.20
Algebris Financial Income I EUR	€ 181.94	-	0.07	0.00
Algebris Financial Income R EUR	€ 164.23	-	0.06	0.00
Algebris Financial Income Rd EUR	€ 95.62	-	0.04	4.97
Algebris Financial Equity B EUR	€ 171.78	-	0.42	0.00
Algebris Financial Equity R EUR	€ 143.19	-	0.35	0.00
Algebris IG Financial Credit I EUR	€ 97.38	-	0.06	0.00
Algebris IG Financial Credit R EUR	€ 95.45	-	0.06	0.00
Algebris Global Credit Opportunities I EUR	€ 129.71	-	0.17	0.00
Algebris Global Credit Opportunities R EUR	€ 126.15	-	0.21	0.00
Algebris Global Credit Opportunities Rd EUR	€ 106.48	-	0.17	3.54
Algebris Core Italy I EUR	€ 132.54	-	0.07	0.00
Algebris Core Italy R EUR	€ 124.98	-	0.06	0.00
Algebris Sust. World B	€ 99.20	-	0.12	-
Algebris Sust. World R	€ 97.90	-	0.11	-

The Antares European Fund Limited

Fund	Bid	Offer	D+/-	Yield
Other International				
AEF Ltd Usd	$ 536.93	-	1.42	0.00
AEF Ltd Eur	€ 488.31	-	1.02	0.00

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

Fund	Bid	Offer	D+/-	Yield
Artemis Corporate Bond I Acc	97.34	-	0.01	4.74
Artemis Positive Future Fund	56.83	-	-0.17	-
Artemis Target Return Bond I Acc	109.34	-	0.06	-

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

Fund	Bid	Offer	D+/-	Yield
Emerging Markets Equity Fund	$ 112.91	-	0.39	0.00
Emerging Markets Equity ESG Fund	$ 128.20	-	0.75	0.00
Emerging Markets Frontier Equity Fund	$ 172.24	-	-0.43	0.98
Emerging Markets Blended Debt Fund	$ 52.60	-	0.50	5.36
Emerging Markets Blended Debt ESG Fund	$ 87.21	-	-0.99	0.00
Emerging Markets Active Equity Fund	$ 112.60	-	0.25	0.00
Emerging Markets Corporate Debt Fund	$ 57.29	-	0.22	7.05
Emerging Markets Debt Fund	$ 56.48	-	0.39	5.92
Emerging Markets Local Currency Bond Fund	$ 60.48	-	0.31	5.03

Atlantas Sicav (LUX)
Regulated

Fund	Bid	Offer	D+/-	Yield
American Dynamic	$ 6331.24	-	-311.18	0.00
American One	$ 7053.91	-	-276.08	0.00
Bond Global	€ 1519.72	-	-21.45	0.00
Eurocroissance	€ 1215.32	-	-54.91	0.00
Far East	$ 910.29	-	-36.46	0.00

Blue Whale Investment Funds ICAV (IRE)
www.bluewhale.co.uk, info@bluewhale.co.uk

Fund	Bid	Offer	D+/-	Yield
FCA Recognised - Ireland UCITS				
Blue Whale Growth USD T	$ 9.43	-	-0.13	-

Brooks Macdonald International Fund Managers Limited (JER)
Third Floor, No 1 Grenville Street, St Helier, Jersey, JE2 4UF
+44 (0) 1534 700 104 (Int.) +44 (0) 800 735 8000 (UK)

Fund	Bid	Offer	D+/-	Yield
Brooks Macdonald International Investment Funds Limited				
Euro High Income	€ 1.1992	-	0.0027	2.50
High Income	£ 0.6285	-	0.0015	3.77
Sterling Bond	£ 1.2107	-	0.0030	2.06
Brooks Macdonald International Multi Strategy Fund Limited				
Balanced Strategy A	£ 0.8936	-	-0.0015	0.02
Balanced Strategy	£ 0.8931	-	-0.0016	1.03
Cautious Balanced Strategy A	£ 0.8687	-	-0.0012	1.78
Growth Strategy A	£ 0.8999	-	-0.0027	0.01
High Growth Strategy A	£ 0.8984	-	-0.0032	0.74
Cautious Balanced Strategy	£ 1.2155	-	-0.0018	0.00
Growth Strategy	£ 1.8839	-	-0.0058	0.00
High Growth Strategy	£ 2.6358	-	-0.0094	0.00
US$ Growth Strategy	$ 1.6659	-	-0.0066	0.00

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	D+/-	Yield
Global Leaders Fund USD C	$ 20.82	-	-0.14	0.00
Global Leaders Sustainable Fund USD C	$ 12.52	-	-0.09	0.00
Global Sustainable Total Return Bond GBP B	£ 9.29	-	0.02	0.91
Global Sustainable Total Return Bond USD B	$ 9.59	-	0.02	0.00
US Equity Growth Fund USD B	$ 47.51	-	-0.17	0.00
US Flexible Equity Fund USD B	$ 24.72	-	-0.12	0.00
US Mid-Cap Growth Fund USD C	$ 16.14	-	-0.02	0.00
US Small Cap Blend Fund USD B	$ 20.13	-	-0.16	0.00
US Smaller Companies Fund USD B	$ 31.32	-	-0.26	0.00
US Sustainable Growth Fund USD C	$ 24.47	-	-0.06	0.00
US Sustainable Value Fund USD C Acc	$ 10.13	-	-0.11	-

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

Fund	Bid	Offer	D+/-	Yield
CG Portfolio Fund Plc				
Absolute Return Cls M Inc	£ 131.23	131.82	0.00	1.69
Capital Gearing Portfolio GBP P	£ 35876.81	36074.63	-4.91	1.71
Capital Gearing Portfolio GBP V	£ 174.49	175.45	-0.03	1.71
Dollar Fund Cls D Inc	£ 158.84	159.32	1.32	1.28
Dollar Hedged GBP Inc	£ 88.52	88.79	0.61	1.27
Real Return Cls A Inc	£ 190.32	190.89	1.12	1.78

Chartered Asset Management Pte Ltd

Fund	Bid	Offer	D+/-	Yield
Other International Funds				
CAM-GTF VCC	$ 291796.66	291796.67	-9009.67	-
CAM GTi VCC	$ 780.49	-	-32.39	-
RAIC VCC	$ 1.64	1.64	0.03	2.06

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

Fund	Bid	Offer	D+/-	Yield
Dodge & Cox Worldwide Funds plc - Global Bond Fund				
EUR Accumulating Class	€ 16.00	-	0.07	0.00
EUR Accumulating Class (H)	€ 10.29	-	0.04	0.00
EUR Distributing Class	€ 11.18	-	0.05	2.41
EUR Distributing Class (H)	€ 7.12	-	0.02	2.50
GBP Distributing Class	£ 11.98	-	0.03	2.15
GBP Distributing Class (H)	£ 7.73	-	0.03	2.47
USD Accumulating Class	$ 12.19	-	0.04	0.00
Dodge & Cox Worldwide Funds plc-Global Stock Fund				
USD Accumulating Share Class	$ 29.62	-	-0.22	0.00
GBP Accumulating Share Class	£ 40.19	-	-0.34	0.00
GBP Distributing Share class	£ 26.74	-	-0.22	-
EUR Accumulating Share Class	€ 42.13	-	-0.28	0.00
GBP Distributing Class (H)	£ 13.49	-	-0.10	0.25
Dodge & Cox Worldwide Funds plc-U.S. Stock Fund				
USD Accumulating Share Class	$ 37.70	-	-0.22	0.00
GBP Accumulating Share Class	£ 48.38	-	-0.32	0.00
GBP Distributing Share Class	£ 28.79	-	-0.19	-
EUR Accumulating Share Class	€ 46.31	-	-0.22	0.00
GBP Distributing Class (H)	£ 14.76	-	-0.09	0.16

Dragon Capital
www.dragoncapital.com
Fund information:info@dragoncapital.com

Fund	Bid	Offer	D+/-	Yield
Other International Funds				
Vietnam Equity (UCITS) Fund A USD	$ 26.12	-	0.18	0.00

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

Fund	Bid	Offer	D+/-	Yield
EdenTree Short Dated Bond Cls B	92.91	-	0.15	2.08

Euronova Asset Management UK LLP (CYM)
Regulated

Fund	Bid	Offer	D+/-	Yield
Smaller Cos Cls One Shares	€ 49.28	-	-0.62	0.00
Smaller Cos Cls Two Shares	€ 31.32	-	-0.39	0.00
Smaller Cos Cls Three Shares	€ 15.63	-	-0.20	0.00
Smaller Cos Cls Four Shares	€ 20.60	-	-0.26	0.00

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

Fund	Bid	Offer	D+/-	Yield
OEIC Funds				
Index Sterling Corporate Bond Fund P-ACC-GBP	£ 0.82	-	0.00	3.00
Sustainable Multi Asset Balanced Fund W-ACC-GBP	£ 0.91	-	0.00	1.57
Emerging Mkts NAV	£ 7.21	-	-0.16	2.03
American Fund W-ACC-GBP	£ 57.02	-	-0.05	0.00
Cash Fund W-ACC-GBP	£ 1.07	-	0.00	1.77
Sustainable Emerg Mkts Equity Fund A-ACC Shares	£ 1.52	-	0.01	-
Sustainable Global Equity Fund W-ACC-GBP	£ 31.48	-	-0.07	0.42
Japan Fund W-ACC-GBP	£ 6.02	-	0.02	1.37
Japan Smaller Companies Fund W-ACC-GBP	£ 3.37	-	0.00	0.66
Select 50 Balanced Fund PI-ACC-GBP	£ 1.12	-	0.00	1.38
Special Situations Fund W-ACC-GBP	£ 41.11	-	0.40	3.28
Short Dated Corporate Bond Fund W-ACC-GBP	£ 10.83	-	0.00	3.71
Sustainable Water & Waste W-ACC-GBP	£ 1.06	-	0.00	0.54
Sustainable Water & Waste W-INC-GBP	£ 1.05	-	0.00	0.54
UK Select Fund W-ACC-GBP	£ 3.57	-	0.02	2.47
Global Enhanced Income W-ACC-GBP	£ 2.36	-	0.00	4.26
Index UK Gilt Fund P-ACC-GBP	£ 0.70	-	0.00	2.11
Sustainable Multi Asset Conservative Fund W-ACC-GBP	£ 0.87	-	0.00	1.71
Sustainable Multi Asset Growth Fund W-ACC-GBP	£ 0.94	-	0.00	1.42

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

Fund	Bid	Offer	D+/-	Yield
American EUR Unhedged Class	€ 159.98	-	-1.62	0.00
American Fund USD Class	$ 169.29	-	-1.13	0.00
American Fund GBP Hedged	£ 82.42	-	-0.55	0.00
American Fund GBP Unhedged	£ 139.38	-	-1.12	0.00

Foord Asset Management
Website: www.foord.com - Email: info@foord.com

Fund	Bid	Offer	D+/-	Yield
FCA Recognised - Luxembourg UCITS				
Foord International Fund | R	$ 45.88	-	0.11	0.00
Foord Global Equity Fund (Lux) | R	$ 15.30	-	0.01	0.00
Regulated				
Foord Global Equity Fund (Sing) | B	$ 18.36	-	0.01	0.00
Foord International Trust (Gsy)	$ 44.73	-	0.10	0.00

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

Fund	Bid	Offer	D+/-	Yield
LAPIS GBL F OWD 50 DIV.YLD-Na-D	£ 94.88	-	-0.39	1.25
LAPIS GBL MED DEV 25.YLD-Na-D	£ 80.10	-	-0.02	-
LAPIS GBL TOP 50 DIV.YLD-Na-D	£ 112.40	-	-2.18	2.94

Guinness Global Investors

Fund	Bid	Offer	D+/-	Yield
Guinness Global Equity Income Y GBP Dist	£ 18.65	-	-0.12	2.14
Guinness Global Innovators Y GBP Acc	£ 27.99	-	-0.41	0.00
Guinness Sustainable Global Equity Y GBP Acc	£ 10.19	-	-0.05	0.00

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

Fund	Bid	Offer	D+/-	Yield
International Insurances				
Holiday Property Bond Ser 1	£ 0.50	-	0.01	0.00
Holiday Property Bond Ser 2	£ 0.63	-	0.00	0.00

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

Fund	Bid	Offer	D+/-	Yield
Janus Henderson Instl UK Index Opportunities A Acc	£ 1.11	-	0.00	3.05

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	D+/-	Yield
M&G Charibond Charities Fixed Interest Fund (Charibond) Inc	£ 1.06	-	0.00	3.35
M&G Charibond Charities Fixed Interest Fund (Charibond) Acc	£ 38.69	-	-0.05	2.84
M&G Charity Multi Asset Fund Inc	£ 0.84	-	0.00	4.16
M&G Charity Multi Asset Fund Acc	£ 103.11	-	-0.18	3.97

MMIP Investment Management Limited (GSY)
Regulated

Fund	Bid	Offer	D+/-	Yield
Multi-Manager Investment Programmes PCC Limited				
UK Equity Fd Cl A Series 01	£ 3080.40	3080.41	-231.75	-
Diversified Absolute Rtn Fd USD Cl AF2	$ 1688.02	-	45.93	-
Diversified Absolute Return Stlg Cell AF2	£ 1579.00	-	-1.96	-
Global Equity Fund A Lead Series	£ 1747.16	1747.16	-5.31	-

Marwyn Asset Management Limited (CYM)
Regulated

Fund	Bid	Offer	D+/-	Yield
Marwyn Value Investors	£ 329.72	-	-6.14	0.00

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

Fund	Bid	Offer	D+/-	Yield
British Innovation Fund	£ 121.92	-	2.89	0.00
MAI - Buy & Lease (Australia)	A$ 103.45	-	0.50	0.00
MAI - Buy & Lease (New Zealand)	NZ$ 91.20	-	-6.06	0.00
Milltrust Global Emerging Markets Fund - Class A	$ 85.71	-	-0.37	0.00

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

Fund	Bid	Offer	D+/-	Yield
Milltrust Alaska Brazil Fund SP A	$ 92.38	-	-1.69	0.00
Milltrust Laurium Africa Fund SP A	$ 89.07	-	0.06	0.00
Milltrust Marcellus India Fund SP	$ 129.07	-	1.33	0.00
Milltrust Singular ASEAN Fund SP Founders	$ 118.76	-	0.13	0.00
Milltrust SPARX Korea Equity Fund SP A	$ 106.24	-	-0.31	0.00
Milltrust Xingtai China Fund SP A	$ 87.60	-	1.50	0.00
The Climate Impact Asia Fund SP A	$ 67.34	-	0.85	0.00
The Climate Impact Asia Fund (Class B)	$ 66.51	-	0.85	0.00

Mirabaud Asset Management (LUX)
www.mirabaud.com, marketing@mirabaud-am.com
Please find more details on our website: www.mirabaud-am.com
Regulated

Fund	Bid	Offer	D+/-	Yield
Mir. - Glb Strat. Bd I USD	$ 113.59	-	-0.03	0.00
Mir. - DiscEur D Cap GBP	£ 143.59	-	-1.09	0.00
Mir. - UKEq HA Cap I GBP	£ 122.22	-	0.10	0.00

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

Fund	Bid	Offer	D+/-	Yield
Oasis Crescent Global Equity Fund USD A (Dist)	$ 32.89	-	-0.28	0.52
Oasis Crescent Global Income Fund USD A (Dist)	$ 9.76	-	0.01	3.63
Oasis Crescent Global Low Equity Fund USD D (Dist)	$ 11.66	-	-0.04	1.21
Oasis Crescent Global Medium Equity Fund USD A (Dist)	$ 12.98	-	-0.06	0.70
Oasis Crescent Global Property Equity Fund USD A (Dist)	$ 6.95	-	-0.05	1.65
Oasis Crescent Global Short Term Income Fund USD A (Dist)	$ 0.93	-	0.00	2.72
Oasis Crescent Variable Fund GBP A (Dist)	£ 9.22	-	-0.02	0.68

Omnia Fund Ltd

Fund	Bid	Offer	D+/-	Yield
Other International Funds				
Estimated NAV	$ 929.86	-	0.72	0.00

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

Fund	Bid	Offer	D+/-	Yield
Orbis OEIC Global Cautious Standard	£ 11.92	-	0.00	0.00
Orbis OEIC Global Balanced Standard	£ 19.60	-	-0.01	0.36
Orbis OEIC Global Equity Standard	£ 22.79	-	-0.04	2.33

Platinum Capital Management Ltd

Fund	Bid	Offer	D+/-	Yield
Other International Funds				
Platinum All Star Fund - A	$ 150.35	-	-	-
Platinum Global Growth UCITS Fund	$ 7.89	-	-0.10	0.00
Platinum Essential Resources UCITS Fund SICAV USD Class E	$ 10.12	-	0.00	0.00
Platinum Global Dividend UCITS Fund	$ 42.17	-	-0.41	0.00

Polar Capital Funds Plc (IRL)
Regulated

Fund	Bid	Offer	D+/-	Yield
Artificial Intelligence I USD ACC	$ 15.71	15.71	-0.32	0.00
Asian Starts I USD Acc $	$ 13.11	-	-0.27	0.00
Biotechnology I USD	$ 34.32	34.32	0.20	0.00
China Stars I USD Acc $	$ 9.22	9.22	0.00	0.00
Emerging Market Stars I USD Acc	$ 10.48	-	-0.19	0.00
European Ex UK Inc EUR Acc	€ 14.84	14.84	-0.07	0.00
Financial Opps I USD	$ 12.92	-	-0.12	2.37
Global Convertible I USD	$ 12.81	12.81	-0.04	0.00
Global Insurance I GBP	£ 10.60	-	-0.05	0.00
Global Technology I USD	$ 72.70	-	-1.76	0.00
Healthcare Blue Chip Fund I USD Acc	$ 17.51	17.51	-0.21	0.00
Healthcare Dis I Acc USD $	$ 10.23	-	-0.15	0.00
Healthcare Opps I USD	$ 59.03	-	-0.84	0.00
Income Opportunities B2 I GBP Acc	£ 2.98	2.98	-0.01	0.00
Japan Value I JPY	¥ 175.56	175.56	3.14	-
North American I USD	$ 33.53	33.53	-0.29	0.00
Smart Energy I USD Acc $	$ 8.25	8.25	-0.04	0.00
Smart Mobility I USD Acc $	$ 7.78	7.78	-0.01	0.00
UK Val Opp I GBP Acc	£ 11.58	11.58	0.00	0.00

Private Fund Mgrs (Guernsey) Ltd (GSY)
Regulated

Fund	Bid	Offer	D+/-	Yield
Monument Growth 24/10/2023	£ 525.41	530.41	-12.19	0.00

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

Fund	Bid	Offer	D+/-	Yield
Prusik Asian Equity Income B Dist	$ 165.64	-	1.38	5.93
Prusik Asia Fund U Dist.	£ 188.80	-	0.78	0.00
Prusik Asia Sustainable Growth Fund A Acc	$ 81.06	-	-0.05	0.00

Purisima Investment Fds (CI) Ltd (JER)
Regulated

Fund	Bid	Offer	D+/-	Yield
PCG B ✠	301.10	-	-3.69	0.00
PCG C ✠	292.37	-	-3.59	0.00

Ram Active Investments SA
www.ram-ai.com

Fund	Bid	Offer	D+/-	Yield
Other International Funds				
RAM Systematic Emerg Markets Eq	$ 214.42	214.42	0.92	-
RAM Systematic European Eq	€ 491.03	491.03	-1.43	-
RAM Systematic Funds Global Sustainable Income Eq	$ 143.80	143.80	-0.48	0.00
RAM Systematic Long/Short European Eq	€ 154.86	154.86	0.30	-

Ruffer LLP (1000)F (UK)
2nd floor, 20-22 Bedford Row, London, WC1R 4EB
Order Desk and Enquiries: 0345 601 9610
Authorised Inv Funds

Fund	Bid	Offer	D+/-	Yield
Authorised Corporate Director - Waystone Management (UK) Limited				
LF Ruffer Diversified Rtrn C Acc	97.77	-	-0.01	1.78
LF Ruffer Diversified Rtrn C Inc	95.31	-	0.00	1.81
LF Ruffer Equity & General C Acc	557.35	-	-8.97	1.38
LF Ruffer Equity & General C Inc	496.77	-	-8.00	1.40
LF Ruffer Gold C Acc	243.39	-	-2.00	0.42
LF Ruffer Gold C Inc	146.69	-	-1.20	0.45
LF Ruffer Total Return C Acc	523.64	-	-2.69	2.49
LF Ruffer Total Return C Inc	318.93	-	-1.63	2.53

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

Fund	Bid	Offer	D+/-	Yield
Rubrics Emerging Markets Fixed Income UCITS Fund	$ 136.54	-	0.49	0.00
Rubrics Global Credit UCITS Fund	$ 16.74	-	0.05	0.00
Rubrics Global Fixed Income UCITS Fund	$ 166.18	-	0.83	0.00

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

Fund	Bid	Offer	D+/-	Yield
Slater Growth A Acc	548.55	548.55	4.54	0.00
Slater Income A Inc	129.69	129.69	0.15	5.22
Slater Recovery A Acc	283.40	283.40	2.24	0.00
Slater Artorius	244.86	244.86	-6.31	0.57

GLOBAL BEST IDEAS EQUITY FUND

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

Fund	Bid	Offer	D+/-	Yield
SF Global Best Ideas Eq B USD ACC	$ 229.60	-	-3.68	0.00
SF Global Best Ideas Eq D GBP INC	£ 287.22	-	-4.22	0.00

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

Fund	Bid	Offer	D+/-	Yield
Other International Funds				
Superfund Green Gold	$ 878.21	-	-0.93	0.00
Superfund Green Silver	$ 718.31	-	-1.82	0.00
Regulated				
Superfund Green US$	$ 653.30	-	-1.05	0.00

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

Fund	Bid	Offer	D+/-	Yield
Aptus Global Financials B Acc	£ 5.11	-	-0.01	3.81
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Tosca Mid Cap GBP	£ 120.64	-	-6.43	0.00
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Fund	Bid	Offer	D+/-	Yield
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Trojan Ethical Global Inc O Inc	96.06	-	-0.60	2.63
Trojan Ethical O Acc	127.77	-	0.00	0.07
Trojan Ethical O Inc	127.67	-	0.00	0.08

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Jittery, intense — and dazzling

James Francies on stage at Ronnie Scott's
Monika S Jakubowska

JAZZ

James Francies
Ronnie Scott's, London
★★★★☆

Mike Hobart

The opening carousel of watery keyboard, whiny synth, acoustic grand and crunchy synthesised bass was both foretaste and summary of an intense, jittery set. Pianist/keyboardist James Francies, at this point unaccompanied, played them all, sometimes in combination, sometimes separately. Mists of sound floated on lush piano chords, ripples of piano alternated with sprays of synth bass and harsh Moog came with sounds that plunged to the depths.

The tune, "Open Water", was new, and an impressionist root seemed clear. But Francies's core aesthetic combines hip-hop and modern jazz. This was made clear when drummer Damion Reid entered with staggered rolls and a backbeat whack. Guitarist Mike Moreno soon followed, confirming the move with an etched melody and a round, punchy sound.

As the piece unfolded, Moreno spun tight investigative lines while Francies was magisterial on acoustic grand. But the main point of interest was the shifting-sands dialogue between soloist and drums and a sense of "What will come next?", particularly as Francies multitasked on keyboards and synth bass.

The American's piano technique sends notes flying over his own full chordal support and, locked into Reid's drum urgency, focused the crowd. But the episode dropped in volume and, lacking underpinning power in the bass, fell just short of excellent. Francies's solution was a dazzling multi-instrumental display of sonic layers, unison lines played at ferocious speed and internal duets in which each hand seemed to have a mind of its own.

The rest of the set featured music from Francies's two Blue Note albums. Like label-mate Robert Glasper, Francies combines hip-hop's sparse harmonies and set-piece rhythms with modern jazz flow, and flies off at tangents at the drop of a hat. Both tonight's accompanists were also Glasper regulars and supported Francies's trains of thought with ease. Reid's skewed metronomic backbeats were a force of nature, and his round-the-kit bravado was impressively locked in. Moreno, who played on both CDs, delivered controlled fluency and melodic appeal. Head-nodding grooves were dotted round the set.

But it was Francies who imposed his stamp, shifting tension and mood. He set up the edgy hip-hop groove of "713" with a firework display of chirrupy synth, ruminative piano and swapped lines. Moreno introduced "Dark Purple" with gorgeous strums and lines and delivered a probing solo that hovered above ballad tempo.

The evening finished with Rodgers and Hammerstein's "My Favorite Things", a jazz standard famously covered by John Coltrane, and now the standout track on *Purest Form*, Francies's most recent release. Up-tempo, riff-driven and sinuously changing shape, extra notes added tension while drums fired up passion underneath. It was an uplifting end to a tightly argued set that, until then, had intrigued as much as it had engaged.

ronniescotts.co.uk

CLASSICAL

BBC Symphony Orchestra
Barbican, London

London Philharmonic Orchestra
Royal Festival Hall, London

Richard Fairman

It is a good thing Shostakovich's music has not fallen foul of the widespread shunning of Russian culture, as performers such as Anna Netrebko and Valery Gergiev have. Where would orchestras be without his giant symphonies to pull in the crowds? They cannot play Mahler every day.

Two of his biggest symphonies turned up on consecutive days over the weekend. The Symphony No 10 and the less frequently performed No 8 are both ambitious musical testimonies from the period when Shostakovich was under intense pressure from the communist regime under Stalin.

The 10th, which had its premiere only months after Stalin's death, formed the main work in a typically adventurous BBC Symphony Orchestra concert. The increasingly fraught, or triumphant, repetitions of Shostakovich's musical monogram, the notes DSCH, clearly have a coded meaning, but what? The limitations of how far the arts, and composers in particular, can speak out under a dictatorship are relevant again in the current political climate.

This symphony is a fail-safe work in performance and David Afkham led the BBC Symphony Orchestra in an adequately played account that was well dramatised, stinting neither in volume nor intensity.

No BBC concert is without several good reasons for attending. This programme opened with Messiaen's *Les Offrandes oubliées*, not often performed, an early work that has at its centre an unusually extrovert showpiece for the orchestra.

In between came the first UK performance of Outi Tarkiainen's *Milky Ways*, a concerto for cor anglais, which was a joint commission by the BBC and orchestras in Finland and San Francisco. The composer says the music describes the milky "cradle of life" of a young infant, though its slow-moving sense of space and time may rather suggest the other kind of Milky Way. Nicholas Daniel was the expert soloist, charting the infant's emergence into the world through music that is atmospheric but on the static side. ★★★☆☆
barbican.org.uk

At the Royal Festival Hall, the London Philharmonic Orchestra and principal guest conductor Karina Canellakis paired Shostakovich with Beethoven in a programme of two halves. The Beethoven opened with a nicely sprung performance of the overture to his ballet *The Creatures of Prometheus*.

That genial style continued in his Piano Concerto No 2, played with exceptional gentleness by Jonathan Biss. An instrument of Beethoven's time could barely have sustained the time-stopping hush that Biss brought to the slow movement, but a modern concert grand can, and an appreciative audience held its breath. Soloist and conductor sounded in complete accord and the result was a performance of very distinct character.

Nicholas Daniel performs 'Milky Ways' on cor anglais

Shostakovich's Symphony No 8, given its first performance in 1943, is more discursive than the tautly argued 10th, but its widescreen cinematic scope is just as vivid. The work can arguably take a more biting, raw kind of attack, but Canellakis made sure that this wartime symphony had trenchant power and a palpable sense of the overwhelming forces that crush individual freedoms. It was also well played by a London Philharmonic Orchestra on full alert. ★★★★☆
southbankcentre.co.uk

The LPO's Karina Canellakis was one of two conductors tackling Shostakovich over the weekend
EPA-EFE/Evert Elzinga

Swirling sound of violence and passion

OPERA

L'amore dei tre re
La Scala, Milan
★★★☆☆

James Imam

Maestros from La Scala's pantheon of conductors have made *L'amore dei tre re* ("The Love of the Three Kings") what it is: Italo Montemezzi's best-known opera. Tullio Serafin led the work's premiere at the Milan house in 1913, winning the local audience's favour, while the towering Victor de Sabata conducted a production two decades later. No pressure on Pinchas Steinberg, then, the Israeli conductor who was leading the first staging of the work in 70 years at the temple to Italian opera.

A violent and sensual tale of passion and adultery in a generic medieval Italy, *L'amore dei tre re* was once a staple of many theatres — not least the New York Met, where conductor Arturo Toscanini, another La Scala legend, exported the work a year after the premiere. Today, the opera is largely forgotten. That did not stop curious opera-lovers in Milan turning up in droves last weekend on a near sell-out opening night.

Montemezzi's score weds influences of Wagner and Debussy with the full-throated lyricism of Italian verismo. Making his La Scala debut, Steinberg, who has conducted the work half-a-dozen times, drew playing that was so assured and nuanced it felt as if the opera had never left the repertory. His swirling evocation of transmogrifying harmonies brought another reference to mind: the incense-laced aural plumes of the Russian composer Alexander Scriabin.

The libretto, adapted by Sem Benelli from his eponymous play, tells of a blind king, Archibaldo, who kills Fiora, the wife of his son Manfredo, after proving she is having an affair with Avito, another prince. Montemezzi does much of the legwork of delineating the compact tragedy (it ran at just over two hours at La Scala, interval included) with heralding offstage trumpets, obsessively driving ostinatos and impassioned melodies. Steinberg blended vividly differentiated textures as if drawing them into the light from a dreamlike fog.

Àlex Ollé's new staging provides little of inherent interest and, as a result, few distractions from the music. The singers, wearing black contemporary garb, with white for Fiora, move on a shadowy, mainly bare stage. Fiora and Avito fondle on a four-poster bed, while an imposing staircase that leads to a suspended platform represents the princess's tower. Hundreds of metal chains draped on to the stage represent her sense of imprisonment by her regal pursuers.

Replacing an indisposed Günther Groissböck, bass Evgeny Stavinsky portrayed a rage-consumed Archibaldo in a dark, booming voice. The moment when the king's anger bubbles over, driving him to strangle his daughter-in-law, was thrillingly dramatic, casting a deathly silence over the auditorium.

Chiara Isotton, the La Scala Academy graduate whose career is taking off, was a passionate Fiora sung with a rich yet slender voice. She strikingly contrasted burning desire for her lover with skin-crawling contempt for her husband.

Tenor Giorgio Berrugi offered volcanic magnetism as the heroic Avito, while Roman Burdenko won sympathy as the opera's secondary victim, Manfredo. But, fine singing aside, this was Steinberg's night.

To November 12, teatroallascala.org

Evgeny Stavinsky, standing, with Roman Burdenko and Chiara Isotton in 'L'amore dei tre re' — Brescia/Amisano

Investors' Chronicle

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FT BIG READ. MEDICAL SCIENCE

Why is there an unexpected decline in dementia?

Emerging research is challenging the belief that new cases of the condition will rise exponentially as people live longer — with evidence that the absolute risk is lower than it was a generation ago.

By Sarah Neville

Stuart Lambie remembers the moment about five years ago when Alzheimer's disease started to rob him of his father. As the illness tightened its grip, the "true gentleman", who saw wartime service in the Royal Navy and later ran a successful business, became verbally aggressive towards the wife he had adored.

Lambie, who had never so much as heard his dad Ian swear before, says such behaviour would have disgusted the man his father used to be. "Well it wasn't the same person, it was the disease," he adds.

Dementia, with its capacity to alter and extinguish personality, rivals or even exceeds cancer in the panoply of our most feared conditions.

Determined to avoid his father's fate, Lambie, who is 64, has taken up running, eats a Mediterranean diet and is learning to play the piano — "my anti-dementia intellectual activity".

Yet beyond the wrenching personal experiences and the bleak numbers that have made dementia a priority for health systems around the world, global data on instances of new cases of dementia offers a shaft of hope.

Despite the widely held belief that dementia will rise exponentially as populations age, experts believe that, in the developed world at least, the prospects of avoiding dementia are stronger than they were a generation ago.

A study published in 2020, which drew together multiple pieces of research to track the health of almost 50,000 over-65s, showed that incidence rates of dementia in Europe and North America had dropped 13 per cent per decade over the past 25 years — a decline that was consistent across all the studies.

For Albert Hofman, who chairs the department of epidemiology at the Harvard TH Chan School of Public Health, the research shows "the absolute risk [of developing dementia] is lower now" than it was 30 years ago.

Early signs that the same phenomenon may be emerging in Japan, one of the world's most aged populations, suggest that the downward trend is becoming more widespread.

Hofman acknowledges that the idea of a diminishing burden from dementia may seem at odds with the vast numbers still contracting the disease. An analysis based on the Global Burden of Disease database, one of the most authoritative surveys of its kind, estimated that the number of people with dementia would increase from 57.4mn cases globally in 2019 to 152.8mn cases in 2050. However, even here there were signs that when population ageing was taken into account, prevalence would remain stable rather than surging.

While emphasising that the reasons for the reduction are not yet fully understood, Hofman believes better cardiovascular health is likely to be a significant factor. "In North America and in western Europe, there has been for 50 years now an enormous emphasis on preventing cardiovascular diseases . . . that led to heart attacks and strokes," he says. At least a third of the population over 50 now takes pills to control high blood pressure, he adds, and the use of statins, a group of medicines that reduce cholesterol, has risen.

Adding weight to this hypothesis, studies suggest that the reduction in dementia incidence rates has been greater in men, on whom efforts to reduce cardiovascular risk factors were largely focused in the 1970s and 1980s, an era when women were wrongly thought to be less susceptible.

But the downward trend initially took even experienced researchers by surprise. Carol Brayne, professor of public health medicine at the University of Cambridge — and the lead investigator for one of the longest established dementia studies, the Cognitive Function and Ageing Studies — was "staggered" when she first found evidence of the falling incidence. "I really thought [the trajectory of] dementia couldn't be changed because I thought it was so closely linked to ageing," she adds.

Now that theory is being reconsidered. The findings predate the availability of any medical treatments for the condition, so Brayne's hypothesis is that reducing incidence requires "optimising neurological function" throughout the course of a person's life by improving brain and physical health.

Hofman says that preventing dementia in practice may mean postponing it long enough that people can live their lives without feeling its effects. "For individuals it means . . . you die from something else," he says.

'An inconvenient truth'

One of the most powerful insights scientists have gained in recent years is the importance of better vascular health, how effectively your body carries blood to and from the heart, in the fight against dementia.

'The dementia field has come to appreciate that vascular pathology may contribute to Alzheimer's dementia, and not only to vascular dementia'

This may play a role not only in protecting against vascular dementia, the diagnosis given to up to 30 per cent of those who contract the condition, but in helping to ward off the development of symptomatic Alzheimer's disease, which appears to result from the accumulation of two toxic proteins, tau and amyloid beta, in the brain.

Francine Grodstein, professor of internal medicine at the Rush Alzheimer's Disease Center in the US, who led a study to investigate how brain ageing differed in participants over decades, says: "The dementia field has come to appreciate that vascular pathology may contribute to Alzheimer's dementia and not only to vascular dementia."

Worse vascular health is strongly related to development of clinical Alzheimer's dementia, she says.

Grodstein's study, published earlier this year, made a notable discovery. While signs of vascular disease in the brain appeared to have decreased over time, the extent of the distinctive markers of Alzheimer's in the brain stayed the same. This led the team to hypothesise that "any decrease in clinical Alzheimer's dementia might be due in part to better cardiovascular health and in part to increased resilience to [the causes of] Alzheimer's", such as amyloid plaque, rather than to a decrease in Alzheimer's pathology itself.

Chengxuan Qiu of the Aging Research Center at the Karolinska Institutet in Sweden, who led a 2013 study of older people in Stockholm that was one of the first to show a reduction in incidence of dementia, suggests the finding offers hope that the disease may be less intractable than previously thought. "Even if we are not able to do so much about tau or amyloid, we can do something to promote the vascular health of the brain and that will also help to prevent, or to delay, the onset of symptoms," he says.

Other researchers believe the implications could be profound for the way the condition is viewed and approached. Jonathan Schott, professor of neurology at UCL's Dementia Research Centre, believes Grodstein's work is a key part of a collection of "different pieces of evidence that have been coming together for some time" to suggest that it is possible to substantially reduce the risk of developing dementia by improving health, perhaps particularly in mid-life.

As well as better vascular health, there is another factor that researchers believe has played a role in reducing incidence rates. Those whose brains remain nimble and active seem better able to tolerate the deterioration of dementia without any obvious loss of faculties, known as "cognitive reserve".

It is frequently associated with the length of time someone stays in formal education. Using brain samples, Cambridge's Brayne and her team "found that the higher the level of education, in terms of years of exposure, the less likely you were to express dementia".

The finding has split opinion among scientists: are those who are better educated simply able to cope with their symptoms for longer — or does education itself have a protective effect?

Securing definitive answers to such questions is proving difficult. As researchers seek to discover more about how durable the trend of reduced incidence is likely to be, what lies behind it and how it might be sustained, they face a perennial struggle to raise the necessary funding for the laborious work of running big population studies.

One scientist argues the field is dominated by "the juggernaut" of biomedical research aimed at discovering the silver bullet drugs that will cure, or at least ameliorate, different forms of the disease — with a massive payday in prospect for any company that succeeds.

"There is pretty well no money being invested in epidemiological studies of dementia in the population at the moment," says Brayne, compared to the billions of pounds going into drug discovery and mechanistic research.

Her own work and that of her colleagues has uncovered what she wryly dubs "an inconvenient truth" — that the cohorts drug companies are using to study new medicines are far from representative of those diagnosed with dementia as a whole.

Rather than dividing neatly into the different forms the illness can take — vascular, Alzheimer's or Lewy Body, the second most common type — postmortem brain analysis conducted by CFAS researchers showed most cases combined elements of the different versions. In contrast, participants involved in the trials for the new Alzheimer's drugs tended to have "the rarer, purer forms" of the disease, Brayne adds.

As a result, any findings about the efficacy of a new medicine may not translate to a wider population.

Another complicating factor is age. Test subjects were often a decade younger than 84, the average age at which the disease develops. Such studies could miss the extent to which older people were able to tolerate significant levels of amyloid plaque — a major signifier of Alzheimer's — without showing symptoms, she warns.

"We know that most dementia occurs in the oldest old with all that mixed pathology," adds Brayne. "If you're only detecting and targeting one protein, which we know can be tolerated in the brains of older people, you'd potentially be overmedicating massively."

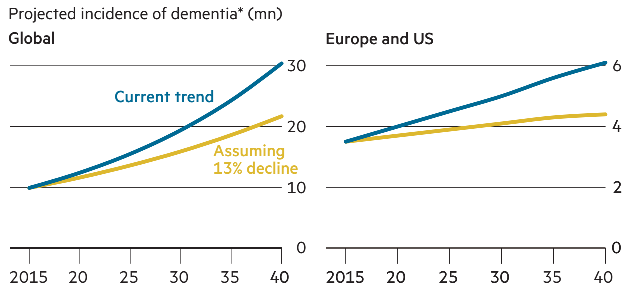
Stuart Lambie and his late father. Lambie has taken up running, a Mediterranean diet and is learning to play the piano as a way to stave off Alzheimer's disease

Andrew Fox/FT

'People say it is very difficult to prevent dementia, but I think our new data . . . shows the possibility of [doing that]'

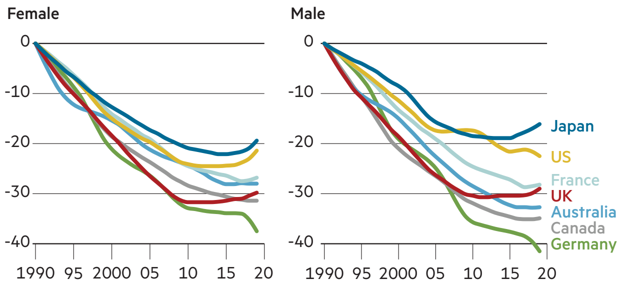
A 13% decline implies 15mn fewer people will develop dementia by 2040 in high-income countries

Projected incidence of dementia* (mn)



Incidence rates for cardiovascular disease have fallen across the G7

% change in age-standardised incidence rates of cardiovascular disease since 1990



* Projections based on the 13% decline in dementia incidence rates per decade observed in Europe and North America over the past 25 years across seven population-based cohort studies

Sources: Wolters, et al (2020); IHME

Global outlook

At the moment, the fall in dementia incidence rates is an exclusively rich-world phenomenon. However, Harvard's Hofman says big population studies, which generate the most authoritative insights, are under way in Brazil, Nigeria and South Africa, adding: "I have hope we will see the same pattern."

Changes are already evident in Japan, where a study of over-65s in the town of Hisayama, which has been running since 1985, found the proportion with dementia fell from 18 per cent in 2012 to 12 per cent a decade later. The team will not complete a full analysis of the most recent data until next year, but Professor Toshiharu Ninomiya, lead investigator, says this evidence of reduced prevalence and also a reduction in mortality from the disease suggested that incidence, too, was likely to have fallen.

Cases would continue to grow, he forecasts, but at a much slower rate. Whereas in 2010 he had estimated that there would be 8mn cases of dementia in the Japanese population by 2050, he now believes a more accurate figure is likely to be 5mn.

Ninomiya says the Hisayama study has helped to encourage focus on education and awareness and better management of lifestyle diseases that is now spreading throughout Japan. "People say it is very difficult to prevent dementia but I think our new data . . . shows the possibility of [doing that]," he adds.

Whether the downward trajectory will endure remains unclear. The advent of processed food and sedentary lifestyles since the middle of the last century, including a startling rise in obesity in the past 40 years, means some in current generations lead less healthy lives than their parents or grandparents.

Brayne's most recent CFAS study from 2010 to 2014 found the fall in dementia occurrence was significantly less in deprived areas, underlining the impossibility of divorcing the disease from "social determinants", such as decent housing and nutrition.

Dr Susan Mitchell, head of policy at Alzheimer's Research UK, the charity, says: "I can only hypothesise about this, but given what we know about other changes that have been happening, with increased prevalence of diabetes, of obesity, [which are] risk factors for dementia, we may see the incidence rates start to increase in the future."

A study published last week provides some statistical ballast for such concerns. The research, published in The Lancet Public Health, indicated that dementia incidence decreased in England and Wales by 28.8 per cent between 2002 and 2008, but increased again by 25.2 per cent between 2008 and 2016.

Eric Brunner, one of the researchers on the study, says while there is a possibility their findings are part of a natural fluctuation in cases, "we're pretty confident that the uptick seems to be real" — although it would now need to be replicated in other countries. The role of social factors, as well as the massive rise in obesity and type two diabetes", was supported by the study's finding that the biggest rise in new cases had been in those with the least education, he adds.

A combination of preventive measures and new drugs to treat the disease have the potential to change the outlook for dementia more completely than would have seemed possible back in the 1990s, researchers believe.

Hofman at Harvard welcomes the fact that thousands of scientists around the world are focused on finding ways to limit the dreaded effects of dementia, once considered a "silent epidemic".

There is still a long way to go. The veteran researcher, who has been working in the field for four decades, points to the estimate that about one in three cases could be averted through better heart and brain health, a percentage that is "not bad" but could be better.

From health systems traditionally focused on treating rather than preventing disease, a shift in funding and focus may be needed, he suggests. "In the UK, in the US, in western Europe there has not been very much except for lip service on prevention. And really, we need dedicated strategies for that."

Hofman is not a believer in silver bullets. But in a field where breakthroughs have often proved elusive, he is allowing himself some cautious optimism: "Overall, there is reason for hope."

Data research by Amy Borrett

The FT View

FINANCIAL TIMES
'Without fear and without favour'

ft.com/opinion

The catastrophe unfolding in Gaza

Israel must stop the bombing, and allow more aid into the besieged strip

Each day for the past three weeks the reports coming out of besieged Gaza have become ever more grim. Bodies piled in pick-up trucks. Children being pulled from rubble. Residential districts flattened. Thousands killed. About 1mn people forced from their homes.

Then there are the crippling shortages of food, water, and fuel needed to power desalination plants and generators. Basic services, poor even before Israel mounted its retaliatory offensive on Gaza in the wake of Hamas's October 7 attack, have collapsed. It will only get worse. Israeli tanks rumbled into the strip under the cover of a ferocious aerial bombardment on Friday night as prime minister Benjamin Netanyahu declared that a new, expansive phase of the war had begun.

Israel, a country born into conflict and with a deep sense of vulnerability, has every right to defend its citizens and respond to the Islamist militant group's assault. More than 1,400 people were killed, making it the deadliest attack on Israeli soil since the state was founded. Hamas committed atrocities. Women, children and the elderly were among the dead. More than 230 people, including civilians, were taken hostage.

But Israel's collective punishment of the 2.3mn people trapped in Gaza — almost half of them children — must stop. More than 8,000 people — including more than 3,000 children — have already been killed in Israel's three-week bombardment of the strip, according to Palestinian health officials.

US President Joe Biden said last week he had "no confidence in the number that the Palestinians are using" for the dead. But in past Israel-Hamas conflicts, when the dust settled and UN agencies did their own tallies, no huge discrepancies appeared with those put out by Gaza's health officials. Rather than quibble about numbers, Biden's focus should be on pressuring Israel to protect civilians and respect the rules of war. The scale of devastation in the strip is plain for all to see. UN officials have expressed alarm about "the clear violations of international humanitarian law" taking place in Gaza. Israel has laid siege to Gaza and has instructed half the population to move south away from the enclave's north. It accuses Hamas of using civilians as human shields.

Now Israel has ordered the evacuation of schools and hospitals in the north where tens of thousands have sought sanctuary. The Israel Defense Forces estimates there are still 300,000-400,000 people in the north — the focus of the ground offensive. All the while, Israel has allowed only a trickle of aid into Gaza — about 131 trucks compared to the 500 that entered daily before October 7.

In the background, violence is escalating in the occupied West Bank, where more than 100 Palestinians have been killed, some by security forces and others by Jewish settlers. With tensions soaring across the region and beyond, diplomats fear a broader conflict could erupt.

> It is time for a humanitarian ceasefire to ease the suffering of Palestinians and cool regional tensions. Hamas has to release all hostages

It is time for a humanitarian ceasefire. That would ease the suffering of Palestinians and cool regional tensions. Hamas must release all hostages.

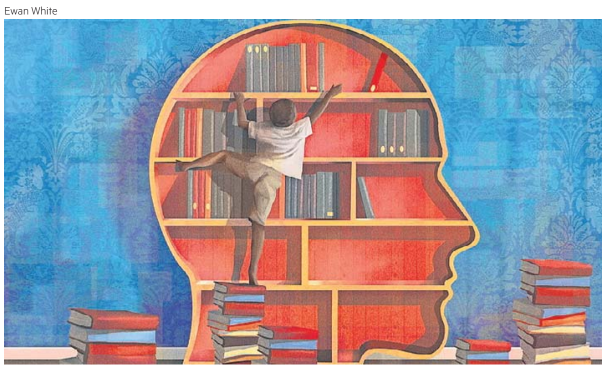
Israel's allies must press Netanyahu's government to allow more aid into Gaza and to lift its siege. They must also steer Israel towards a more plausible plan to negate the threat posed by Hamas — one that does not drive Israel and the region into the abyss.

Hamas struck a catastrophic blow against Israel on October 7. Israel must now avoid falling into the trap of enabling the militants — who count every Palestinian victim as a martyr to their cause — to capitalise on that. The greater the suffering of Palestinian civilians, the more likely it is that Israel will lose support in the west, while further enraging the Arab and Muslim worlds.

Opinion Society

Should we tell our children fairy tales about race?

Ewan White



Stephen Bush

The Romans were a lot like us in many ways. They had organised religion, working drains and dentistry. But what they didn't have was black people. Certainly, there were many Romans with dark skin, and the Roman empire had many encounters with other nations and empires ruled by people we would now class as "black". But our definition of blackness is something invented gradually over the course of the modern era.

Unlike other modern inventions, however, there is a healthy cottage industry that likes to extend the concept backwards through time. In the UK, a new children's book, *Brilliant Black British History*, defines both Quintus Lollius Urbicus, one of Britain's Roman governors, and Septimius Severus, the Roman emperor whose campaign to conquer what is now Scotland was cut short by his own death, as "Black Britons".

> What is the right mixture of deceit and openness to prepare the very young for the big wide world?

In historical terms, of course, this is pure fiction. Severus was born in Africa and is depicted with dark skin in contemporary work, but he was no more "black" in the sense we understand it today than growing up near a Roman road makes me a centurion. He was not a Briton and, having come here as a conqueror, would have found the term insulting.

But of course, *Brilliant Black British History* is not really a history book, just as the surprisingly engaging hit Christian cartoon series *Veggie Tales* is not really biblical education. These are actually morality plays for concerned parents to read to small children to prepare them for adult life. So too are the whole gamut of what you might call "Feelgood Tales for Liberal Tots": the Little People, Big Dreams series, which wants to teach kids that they can do anything and be anything. This features heavily sanitised stories about the likes of Coco Chanel (heavy on the entrepreneurship and the stylish outfits, light on the Nazism and the cocaine) and Jean-Michel Basquiat (much is made of the art and his sexual openness, less of his early death and heroin habit).

None of these books are free of controversy. Even *Veggie Tales* is frowned upon by some ultraorthodox Christians for implying that talking vegetables can enter the Kingdom of Heaven, a privilege extended only to humans. But it is not, I think, particularly helpful, to criticise *Brilliant Black British History* because it is flatly contradicted by Olivette Otele's marvellous *African Europeans: An Untold History*, or to find *Veggie Tales* wanting because it falls short of what the Bible actually says.

These are texts designed to point children towards these books when they get older. As such, they grapple with the same challenges that parents and schools have to reckon with across a whole swath of issues, from race to religion to sexual health to politics: what is the right mixture of deceit and openness to prepare small children for the big wide world?

The exact consequences of telling children about Coco Chanel and leaving out her Vichy collaboration are hard to measure, but we have better data available about what children think when it comes to race. As Marguerite Wright explains in her brilliant book *I'm Chocolate, You're Vanilla*, which draws on her experience of working with American children, preschoolers have little intuitive grasp of race. Asked what colour she was by Wright, one of her subjects replied first that she was "blue", and then "red". Another said she looked the same as another child because they went to school together.

Indeed, small children, even in an ultra race-conscious society like the US, have a more healthy attitude towards race than adults. When they begin to grasp that they are neither red nor blue, they reach for more accurate labels like "peach" or "chocolate". It is only as they get older that they reach for adult categories and begin to repeat adult stereotypes.

Children's open and liberal attitudes about race will inevitably collide painfully with the society they live in. Some will experience racism, others will perpetrate it and some will do both. But in preparing them for all this, it is not necessarily helpful to say Severus was black or British. It's also, to put it mildly, optimistic to end as *Brilliant Black British History* does by saying "one day, racism will be over".

What the book is meant to do is to arm young black children with the ability to say "no, I'm part of this country too, and have been for a long time", just as a kids' history of Coco Chanel is meant to encourage young readers to think they can be both stylish and successful at business. Fairy tales work, as anyone who has spent any time around a small child will tell you. Recounting them in preparation for adult life is fine — provided that you remember they are only fairy tales.

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EU approach to landing slots will not foster airline competition

The EU proposals to tighten rules for airline mergers (Interview, October 17) seek to "ensure slots are allocated to rivals on routes with competition concerns". A lesson I learnt after 20 years in the aviation sector is that it is the wrong framework to use when evaluating airline mergers and joint businesses.

Instead of slot releases specific to routes with competition concerns, it is better to ask for slots that can be used on any route. Otherwise, the slot release will provide little meaningful competition. We saw this effect when the EU required British Airways-American Airlines to release slots on the London-Philadelphia route when approving their joint business. BA has a hub at Heathrow and AA at Philadelphia, and the hub-flow traffic to BA-AA makes it very hard for competition; Delta tried and failed.

A better option would have been to release slots for any route, allowing perhaps Virgin to add flights to San Francisco or Boston. This would have reduced the increased grip of BA at Heathrow via the joint business.

Merger candidates KLM and SAS compete on Amsterdam-Copenhagen. Slots should be released at both airports, allowing competitors to add flights anywhere, to Madrid or Athens or New York.

I am pro-consolidation in Europe. It is a fragmented market full of lossmaking airlines that are often just sustained on public funds. The example to follow is the US, where six lossmaking airlines merged into three profitable mega-airlines that compete aggressively with each other. This has enabled them to invest in product and expand networks. The difference is that there are almost no slots in the US; anybody can compete anywhere.

We need more runway capacity to open more slots, but that's another story.

Abigail Perez
Edinburgh, UK

Why carbon offsets are no answer to the climate crisis

Burning fossil fuels causes near permanent changes to our planet's atmosphere. In "Carbon-neutral claims for latest Apple devices under close scrutiny in Europe" (Report, October 26), Kenza Bryan's article on Apple's claim that its newest generation of Apple Watch is "carbon neutral" does a great job of highlighting a fundamental weakness that lies at the heart of the global offsets market — not just one company's offsets.

Truly undoing the harms caused by burning fossil fuels requires safely storing carbon dioxide out of the atmosphere for millenia. That's because the fossil carbon we burn lingers in the atmosphere for tens of thousands of years. Like an overflowing bathtub, we're adding carbon dioxide to the atmosphere faster than it can be removed, resulting in rising global temperatures.

Carbon offsets, especially those related to planting trees, typically store carbon for a few decades.

While Apple's carbon neutral claim is almost certainly misleading to consumers, it's important to emphasise that the physical inconsistency between the lifetime of offsets and the lifetime of carbon dioxide is a much broader problem — and explains why the EU is so keen to rein in claims of "carbon neutrality" in general.

Grayson Badgley
Research Scientist, CarbonPlan
San Francisco, CA, US

This library books returns policy deserves attention

One alternative to library fines, which Soumaya Keynes mentions briefly in her column "Are library fines reaching their denouement?" (Opinion, October 20), is to temporarily block further withdrawals for borrowers who return their books late. This policy deserves greater attention.

I used to live in Andalusia in Spain, where library users are blocked from borrowing anything for one day, for each day a book is overdue. It proved far more effective than the threat of a fine.

I think it works like this: the people who return library books late are precisely the same people who want to be able to borrow them at will, then keep them lying around only to return them late again. In other words, we book lovers are a selfish bunch.

The thought of being prevented from borrowing whatever I liked, whenever I liked, saw me running to return my books, and sorely ruing the two or three days I was repeatedly deprived of my rights.

Alasdair Gillon
Edinburgh, UK

Your story about piano removals struck a chord

I read with interest Pilita Clark's article on expenses claims, including what she says may be the apocryphal story of a journalist who shipped a grand piano from Africa (Business Life, October 23).

Back in 1969, I shipped my wife's Blüthner, which came from Carlisle, Cumbria, all the way to Tripoli, Libya. Occidental, my employers, met the costs. Those were good days to be working in the oil industry.

Robert David Barnfather
London TW10, UK

Correction

● Blackstone is not an investor in the Swedish battery maker Northvolt as wrongly stated in an article on October 24.

OPINION ON FT.COM
Revisiting the CABastrophe's risk factor disclosures
Shares in the Africa-focused fintech firm have been in free fall, writes Craig Coben
www.ft.com/alphaville

OUTLOOK
AMERICA

Citizens deciding how to spend public cash is a useful experiment

by Patti Waldmeir

The diseased state of US democracy was never more in evidence than during the unseemly struggle to find a Speaker for the House of Representatives. Ordinary Americans are fed up with political paralysis, so some are trying to fix democracy from the ground up.

Several US cities — including New York, Seattle, and the small town of Evanston, Illinois, where I live, — are experimenting with "participatory budgeting", a form of direct democracy that lets citizens decide how some public money is spent. Pioneered in Brazil in 1989, it has been tried around the world, including the UK.

It's a "school for democracy", according to Vincent Russell, who helped introduce participatory budgeting to Greensboro, North Carolina almost a decade ago. "We only need to look outside our window to see the ways our current political system does not work for everyday people," he says, adding "even if it's just a little, it can shift people's perspective on the role of government and what it can achieve".

But earlier this year Greensboro gave up on the process. It failed, said Russell, partly because city leaders resisted it. It's also in decline in Brazil, where it started. And research done by the city of Burnsville, Minnesota, on projects around the US, found that, on average, only 1.3 per cent of locals participated in such polls.

That didn't deter Evanston from inviting me and my neighbours to vote last month on how to spend $3mn in American Rescue Plan funds. Turnout was a whopping 8.4 per cent.

Jimmy Hill, 74, cast his vote at the local community centre, where an unattended cardboard box invited him to "Vote Here". "I've lived in Evanston for 55 years and I'm a taxpayer but I feel like I'm not really involved in what happens," Hill told me. "This makes me feel more engaged in the political process".

I voted for seven projects, including a mobile dental bus (for those whose state medical insurance isn't accepted by local dentists), an entrepreneurship mentoring programme run by an African-American single mother, and a senior transport subsidy. They all lost. Winners included mental health first aid training, affordable refugee housing and small business grants.

Evanston, which I often joke is more leftwing than several communist countries I have lived in, faced no apparent pushback to giving anyone aged 14 and over — whether registered voters or not — the chance to spend so much federal money. Not so the Midwest city of Cleveland, where the mayor and city council presidents fervently oppose a proposal on next week's ballot that would designate two per cent of the city's general fund ($14mn at current levels) to a permanent People's Budget.

"This will be devastating," Cleveland City Council President Blaine Griffin, a Democrat, told me. Opponents say the process, run by a steering committee, will create a "shadow government with unelected, inexperienced and unaccountable people spending millions of dollars". It could lead to cuts in services and staff but Griffin says it's hard to fight: "when you put people and democracy in the same sentence, people think it's a good thing".

Molly Martin, lead organiser for People's Budget Cleveland, a campaign group, told me "one of the beauties of PB is that it's training everyday citizens to ask smart questions".

But an editorial in the local newspaper argues that the city "already has a participatory budgeting process. It's called City Council. Any citizen who wants to participate in how the city spends its money is free to run for council, attend council meetings, and of course, vote". In Evanston, the same city email that announced the result of our PB vote also invited me to public hearings to influence the main city budget.

But Gary Hytrek, who is involved in a California scheme, says "PB is less about voting than about learning to 'do' democracy. Discussing how money is spent and the needs of communities is more important than the physical act of voting". He believes we have to start with civic engagement "to break through the partisan divide at national level". Maybe it's time we went right back to brass tacks on democracy in our own neighbourhoods. I've given up thinking anything can be done to cure Congress.

The writer is a contributing columnist, based in Chicago

Opinion

We might be surprised by our reactions to generative AI

TECHNOLOGY

Elaine Moore

One of the puzzles about generative artificial intelligence is why the text it conjures is so long-winded. Why does ChatGPT produce 10 paragraphs when one would do? Another puzzle is how we will all behave when it proliferates. There is a chance that we are about to get a lot more terse.

AI is stretching the reality gap between Silicon Valley and the rest of the world. Most of us are not yet firing up chatbots to write emails or carry out research. But tech companies think it is a foregone conclusion that we soon will. If they are right, the way we communicate is about to be transformed.

The turning point could be 2024. Plans are in motion to knit generative AI into our everyday lives, particularly at work. Google is about to release its AI model Gemini while Microsoft will be selling its AI-assistant Copilot. We could find ourselves surrounded by prompts offering to summarise meetings, write emails and fill in spreadsheets.

No one knows how the public will react. Governments fret about catastrophe. Yesterday, Joe Biden issued regulations requiring AI companies to notify the government if they are developing models that pose a security risk. The UK's eye-catching AI summit at Bletchley Park this week is likely to examine everything that could go wrong, from enabling fraud to facilitating attacks. But these sorts of outcomes will not occur immediately, if at all. Nor will the dreaded job losses. What will happen first is a shift in our own behaviour.

Most discussion about generative AI focuses on the ways it can help users. Little time is spent thinking about the impact on recipients. But computer-generated words carry less weight. At a recent debate on AI in Hong Kong, one speaker revealed that what she was reading had been generated by a chatbot. The words sounded convincing, but her revelation stripped them of meaning. My attention instantly wavered.

My guess is that you will react the same way if you know that what you are reading or hearing was not made by another person. It could also change the way we interact online. Once you realise there is no one at the other end of a message, there is no need to type out complete sentences. What matters are key words. Courtesies become unnecessary too. Even when sending a message to a real person, the knowledge that they are using generative AI to parse that message and extract information means there is no need for niceties. Communication could be pared back to a brusque exchange of facts.

> Much depends on whether we will have fail-safe ways to know what has been generated by a human

If you are an optimist, you may believe that this will make us all more productive. It could make real-world interactions more precious too. Fussy formalities may not be missed. Much depends on whether we will have fail-safe ways to know what has been generated by AI and what has not. Without clear watermarks, I think trust will falter.

Not everyone agrees with me. The people I know who already use generative AI (mostly friends who work in tech in San Francisco) say that drafting the prompts necessary for creating the right content means there is still human-to-human involvement.

Some tech companies believe we will not interact with AI-generated text any differently than we already do with each other. Meta is planning to roll out more AI chatbots with their own Instagram and Facebook accounts. Mark Zuckerberg expects AI experiences to become a meaningful part of all of Meta's apps, with creators across social media able to create their own AI versions that can interact with fans, create content and, in time, interact with one another. It will be, he says, "almost a new kind of medium and art form".

"Art form" is a dubious description. Low-effort monetisation scheme for busy creators might be more accurate. But what sort of interactions with fans does Meta expect? The comments on videos produced for an early version of this idea, featuring videos of dancer Charli D'Amelio on an AI account called Coco, are variations of "I don't get it" and "this is scary".

All new technology goes through a life cycle. AI is in the research and development spending stage. If it reaches the next phase, we can expect mass deployment. If that happens, the scale of AI's impact is being compared to the industrial revolution.

Our own reactions could come as a surprise to us. There was a mini-trend this summer in which people aped the mannerisms of computer-generated non-player characters, or NPCs, in their videos. The jerky movements and blank expressions of creators like Pinkydoll and Nicole Hoff make them look like digital avatars.

Many of us will accept the help that AI offers. Some of us will reject it. Other attitudes may be more peculiar. Instead of trying to distinguish what is and is not real, we might instead opt to blur the lines.

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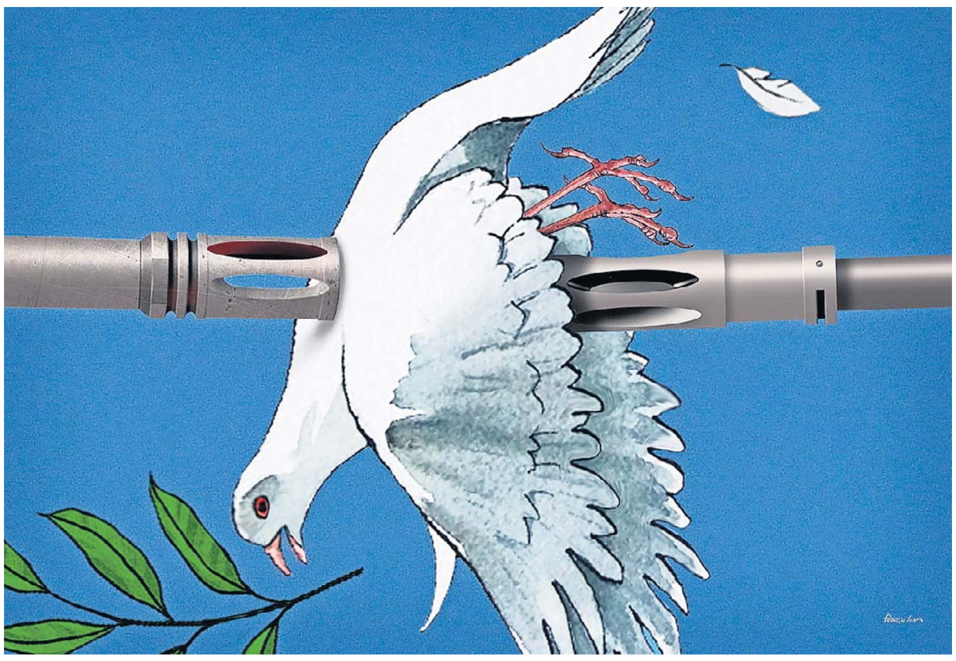
The threat of a wider war in the Middle East



GLOBAL AFFAIRS

Gideon Rachman

Historians are fascinated by the outbreak of the first world war. How could the assassination of an Austrian archduke in Sarajevo in June 1914 have led, just a few weeks later, to a conflict that dragged in every major power in Europe, and eventually the US?

The question is particularly troubling because many of the leaders involved tried hard to avoid a general European war. The German and Russian emperors exchanged numerous messages trying to defuse the month-long crisis that led to conflict. But they failed.

A similar danger of inadvertent escalation now hangs over the Middle East. The horrors of the Gaza conflict are so compelling that it is tempting just to concentrate on the fighting there. But western policymakers are increasingly focused on the wider region — and the danger of a general war in the Middle East that could pull in Iran, the US and even Saudi Arabia.

For the Biden administration, that threat of a wider war is now regarded as the central challenge in the entire crisis. As one Washington insider puts it: "All the countries involved have thresholds that, if crossed, will make them believe they have to act. But nobody really knows what the other side's threshold is."

Over the weekend, Iran issued a clear threat that its own threshold is getting closer. Ebrahim Raisi, the country's president, took to X (formerly Twitter) to state that Israel's actions in Gaza have "crossed the red lines, and this may force everyone to take action." He added: "Washington asks us to not do anything, but they keep giving widespread support to Israel."

So how could escalation play out? One indication came last week, when the US bombed Iran-backed militias in Syria. Washington said that it was responding to attacks on US forces in Iraq and Syria, carried out by Iranian proxies. If those attacks continue, and American troops are killed, the next US response will be even fiercer.

The role of Hizbollah, the Iran-backed militant group based in Lebanon, is crucial. If Hizbollah steps up its attacks on Israel, it has enough precision-guided missiles in its armoury to essentially force most of the civilian population of Israel into bomb shelters.

Benjamin Netanyahu, Israel's prime minister, has threatened Lebanon with "devastation", if Israel is attacked from its territory. But if Hizbollah is in danger of destruction, Iran could send in troops from the Islamic Revolutionary Guard Corps to fight alongside its ally. At that point, Israel might decide to strike the IRGC in Iran, as well as in Lebanon.

Other Iranian proxies around the region would also probably respond to a war involving Hizbollah, by stepping up their attacks on Israeli and American targets. Iran might also finally act on its occasional threats to close the Strait of Hormuz, through which much of the world's oil flows — perhaps by mining the strait. That would send the global economy into a tailspin and also directly threaten Saudi Arabia.

The US Navy would attempt to reopen the strait. But that might lead Iran and its proxies to hit back. The US has troops and facilities all over the region that could be targeted — including in Bahrain, the United Arab Emirates, Qatar, Syria and Iraq.

One Iran-backed force that the Americans are watching with particular concern are the Houthis in Yemen — who were targeted in a brutal war with Saudi Arabia. Houthi forces fired rockets towards Israel last week. They have also hit Saudi oil facilities in the past. A few precision missiles could destroy the desalination plants that supply water to the Saudi capital, Riyadh.

> All sides believe there are certain events that it would be very dangerous for them not to respond to

A conflict that unfolded in this way would be a disaster for every one of the participants — and they all know it. It could happen nonetheless because all sides also believe that there are certain events that it would be very dangerous for them *not* to respond to.

Israel has invaded Gaza, without a credible exit plan, because it feels it must "restore deterrence". Iran believes that it has to show that its "axis of resistance" is supporting the Palestinians. America believes that it must respond forcefully to any attacks on its troops.

Not everybody in the region is panicking. In Riyadh last week, I found some well-placed Saudis asserting confidently that this was just another crisis in a historically unstable region. The kingdom's ambitious modernisation agenda — Vision 2030 — remained on track, they insisted.

But the business-as-usual crowd in Riyadh are burying their heads in the sand. Crown Prince Mohammed bin Salman, the country's de facto ruler, is very worried about the risk of a regional war. MBS's strategy, says one confidant, is to "put pressure on the Americans to put pressure on the Israelis". The Americans, for their part, hope that MBS, Qatar and even China can persuade Iran of the dangers of escalation and the need for restraint.

This crisis has already led to an unprecedented conversation between MBS and the president of Iran. Like the Russian and German emperors before the first world war, the Iranian and Saudi leaders were willing to talk to each other — in a bid to avoid a catastrophic war. It did not work in 1914. Let us hope this time is different.

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What the ubiquitous syringe tells us about US supply chains

Willy Shih

The Covid-19 pandemic called attention to the fragility of the supply chains for many medical products, with shortages in everything from generic pharmaceuticals and essential medicines to basic supplies like blood sample collection containers and personal protective equipment.

Since then there have been numerous calls in the US to rethink supply chain designs, build national stockpiles and revamp domestic manufacturing. But three of the last five high-volume disposable syringe factories in the US have closed in the past six months because it was cheaper to source products from China.

A recent visit to a Becton, Dickinson and Co (BD) factory in Canaan, Connecticut, one of the last two large-scale syringe factories left in America, raised some important questions about the scale of that challenge.

In the US, we use about 10mn syringes a day — two out of every three medical procedures involve one. Hospitals, pharmacies and doctors' offices use them for everything from intravenous injection of drugs, to intensive care unit infusion of critical drugs, to the maintenance of catheters. Their quality and precision are critical to patient safety, yet they are amazingly inexpensive, typically selling for about 15 cents each.

In 1954, BD supplied disposable glass syringes for Jonas Salk's first polio vaccine trial and supported the subsequent vaccination campaign.

The Canaan factory, which started operations in 1961, was a big supplier for H1N1 flu shots and, of course, for Covid vaccine shots. It has about 400 employees who produce more than 2bn medical devices a year, which means over 5mn units per employee per year. Each syringe is individually packaged, sterilised and then boxed in quantities of 100 or more.

I was told that the output of the factory fills between four and seven 53-foot semi-trailers a day, depending on size mix (with 1mn units in each trailer). Eighty per cent are shipped all over the US and the rest exported. The factory is highly automated, and it runs around the clock, so there are not that many people on the floor.

> Most end users in hospitals and medical facilities don't know where the product came from

I draw two conclusions from these observations. First, that labour costs are not an issue because worker productivity is so high. And second, that capital costs are low because most of the equipment is fully depreciated, except for a relatively new electron beam sterilisation system.

So why do these domestically produced syringes cost slightly more than the ones made in China?

Material costs, mainly the polypropylene plastic for the syringe body or the polyisoprene (a synthetic rubber) stopper that is part of the plunger, represent more than half the manufacturing cost. These are made from resins derived from oil, and right now oil is cheaper for Chinese manufacturers because they can buy it from Russia.

The BD factory had its Food and Drug Administration inspection in mid-September. A quick search of the FDA website for a few Chinese manufacturers importing into the US indicated no inspections since 2018, well before the pandemic.

Among the reasons one would want to inspect the factories is to ensure consistent product quality and avoid safety issues from over- or under-infusion of drugs due to size variations (this is especially critical in paediatric and neonatal patient populations). One would also want inspections to check drug stability and potency shifts if pre-filled and unqualified materials were used in manufacture.

The other challenge with syringes is that because they and similar items are sold to medical product distributors and may pass through several layers before reaching the medical professional who ultimately uses them, most of these end users in hospitals and medical facilities don't know where the product came from. And they have too many other immediate things to worry about instead of where it was made or whether they will be able to get it in the next crisis.

But, for a matter of just pennies per syringe, the US seems to be going down a path towards losing its last large-scale domestic syringe manufacturing capacity. I recently received my Covid booster and flu shots, and I would have happily paid a nickel or a dime more for domestically produced syringes to make sure I could get them in the *next* pandemic.

The writer is a professor of management practice in business administration at Harvard Business School

Forget dieselgate — 'tyregate' is a bigger emissions scandal

Nick Molden

Eat lettuce and you are eating tyres. Your diet may still be vegetarian, but not as green as you think.

We know this from a recent study that traced how a particular chemical was drawn up through the roots and into the leaves of a lettuce plant as it grew. This chemical is overwhelmingly found in vehicle tyres.

As we drive, our tyres wear down and release invisible particles that we inhale and ultimately ingest. Strikingly, the rate of release of these particles is almost 2,000 times greater than the mass of particles from a modern exhaust pipe. It looks likely, then, that these apparently mundane yet economically vital and technically sophisticated products are a source of pollution that will make Dieselgate — the exhaust emissions cheating scandal of 2015 — look minor. The difference? No rules are being broken, yet current US and EU polices promoting battery electric vehicles through subsidies are set to make the problem worse.

Tyres work hard. They are the only points of contact between a vehicle — which often weighs more than two tonnes — and the road. Those on battery vehicles, which often weigh an extra half tonne compared with conventional vehicles, are usually even bigger and wider to compensate. Add to that the sharper acceleration potential of battery vehicles, and you have a recipe for up to 20 per cent higher tyre emissions.

Very soon, if not already, the total tyre emissions from all vehicles in the US will exceed exhaust mass emissions. By the time sales of new internal combustion engine vehicles are banned in 2035, tyre emissions will be many times higher. We shouldn't stop electrification, but we should recognise that battery vehicles are far from emission free. Car weight matters when it comes to the climate.

> Rubber particles are released at a rate almost 2,000 times greater than particles from an exhaust

When we think of products of strategic national significance, we rarely consider tyres. Without them, though, economies would hardly function. Cement kilns are powered by burning tyres as cheap fuel. Asphalt roads contain pieces of them to reduce noise. Clever tyre formulations can deliver lower rolling resistance to vehicles, giving a carbon dioxide emissions benefit to the manufacturer. Even football pitches often rely on ground up old tyres. With their use, however, come adverse environmental impacts, such as deforestation in Asia, the deaths of salmon as a result of ingesting road run-off and lives lost to cancer from football pitch fumes.

Leading players in the tyre industry are already working to mitigate these effects, in advance of looming regulation. Modifying the ingredients and formulas for tyre-making can reduce the potential toxicity of particles released, although this puts the price up. When those tyres are worn out, drivers often replace them with the cheapest option. Therefore, the electrification of cars must come hand in hand with the regulation of replacement tyres.

European authorities are racing to develop the "Euro 7" regulation, part of which seeks to reduce tyre emissions on all vehicles by limiting the rate of rubber loss through abrasion, based on a standardised test. The flaw in the European approach, however, is that it only focuses on reducing the rubber mass shed by tyres, with little consideration for how to control the quality of replacement tyres, and of the chemical composition. The price of lower wear may be greater toxicity.

Tyres are all around and inside us — yet none carry an ingredients list. If there is any doubt about their potential damage, consider the Chinese subjects of a recent peer-reviewed scientific study, who had their urine tested. An average of 709 nanograms of the very same tyre preservative found in the lettuce were passed per person daily. That may seem a tiny amount, but zero nanograms would be preferable, given what we know about the toxic effects in fish. To avoid our decarbonisation mission backfiring, we must take the tyres problem seriously.

The writer is CEO of Emissions Analytics

Lex.

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Israeli gas: pipe themes

The conflict in Israel threatens much in the region and beyond. Rising tensions and security concerns also have potential repercussions on the country's ambitions to grow its natural gas exports.

In the space of little more than a decade, Israel has become a significant gas producer and regional exporter. It produced almost 22bn cubic metres of gas last year from its giant Leviathan and Tamar fields, of which, 9 bcm were piped to Egypt and Jordan. Chevron is a major shareholder in both fields. Israel's NewMed Energy owns 45 per cent of Leviathan, while Abu Dhabi's Mubadala owns 22 per cent of Tamar.

News that the Israeli government awarded a further 12 exploration licences over the weekend, to operators including Italy's Eni and BP, underscores its growth ambitions.

The immediate consequence of the conflict has been a shut-in of the Tamar field. This has caused exports to Egypt to dwindle, which is a serious problem for Israel's much more populous neighbour.

The cut in Israeli imports comes amid falling domestic production in Egypt. It was down 10 per cent in the first eight months of the year, according to Greg Molnar at the International Energy Agency. The country experienced power cuts during the summer. Last winter, Egypt managed to export 4.5 bcm of gas. Without a resumption of Israeli imports, it will struggle to do so again.

Israel has the potential to grow its natural gas production, perhaps by 15 bcm by 2026, through the ramp-up and development of existing fields. New exploration — such as that envisaged by the recently awarded licences — could add resources.

While not huge by international standards, Israel's gas resources have regional and geopolitical importance. For instance, it is a potentially attractive source of — non-Russian — gas for Europe. New export routes, including an LNG terminal in Israeli waters, or a pipeline to Europe, have accordingly been floated, although the latter could need to overcome costly technical challenges.

Yet, for Israel's budding gas sector, time is of the essence. The US and Qatar are rushing to increase LNG supply capacity. More of this fuel is widely forecast for the middle of the decade. Should the conflict slow the pace of investment, the country risks missing its moment.

McDonald's: bun fun

American consumers are an economic paradox. Interest rates are at a 22-year high, inflation remains elevated and any pandemic-related personal savings are depleted. Yet they continue to spend freely, helping to propel the economy to a blistering pace of growth in the third quarter.

Their resilience was on display in McDonald's earnings yesterday. The world's largest fast-food chain served up a 14 per cent increase in third-quarter revenues. Operating income grew 16 per cent. Within this, US same-store sales expanded 8.1 per cent as consumers were willing to pay more for burgers, fries and shakes.

Not everyone is flush with cash. McDonald's warned of a slowdown among lower-income customers. It said foot traffic in the US suffered a "slight dip" during the quarter. The chain noted fewer visits from customers with annual incomes of $45,000 or below across the fast-food industry.

But investors need not worry. McDonald's size and scale means it can cope. Chief among them is its "barbell" pricing strategy, promoting traffic-driving deals on low-priced menu items alongside new, pricier offerings. The chain aims to capture diners from both ends of the income spectrum.

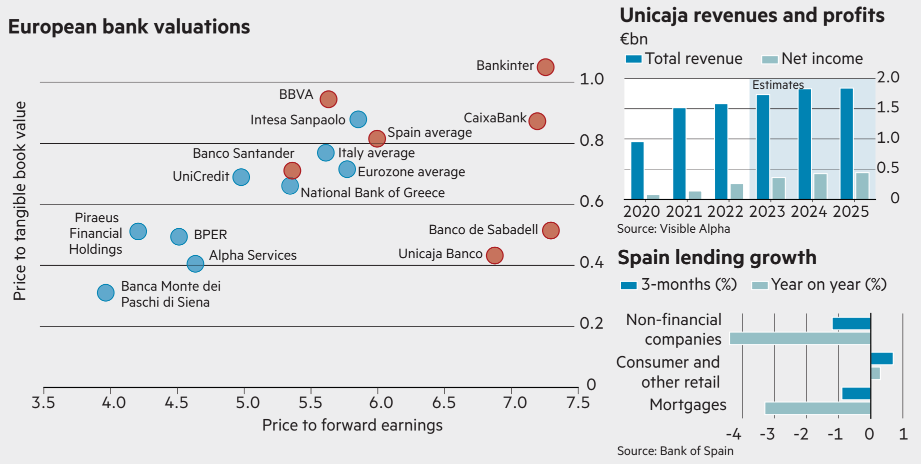
McDonald's shares are down about 12 per cent from the record highs of June. That has knocked its valuation as well. It trades on about 22 times forward earnings, compared with its three-year average of about 25 times.

Burger King owner Restaurant Brands International and KFC owner Yum Brands trade at about 20 and 22 times, respectively. Given McDonald's strong digital offerings, size and brand, the stock deserves a premium.

Nevertheless, it must maintain a delicate balancing act. Profitability could fall if it leans too much on value items, worse if it prompts other chains to lower prices as well. For now, McDonald's sits in an inflation sweet spot. Demand is robust and consumers seem relatively insensitive to price changes. A happy meal for shareholders.

Unicaja: retail therapy

More bad loans are depressing price to book valuations of some Spanish banks. Higher interest rates mean lending volumes are now shrinking but should also mean profit growth continues into 2024.



FT graphic Source: Citi

Belt tightening and deleveraging are increasingly the norm for Spanish consumers. This is rational given interest rates at 20-year highs.

But a 55 per cent decline in new mortgage lending still surprised Unicaja shareholders yesterday.

The shares dipped as much as 5 per cent in response. That was despite a 35 per cent rise in third-quarter net profits that beat market forecasts.

Spanish bank shares have outrun most European peers this year. One reason: yields on their lending books track the central bank's interest rates. Geared towards mortgages, Unicaja is benefiting — average loan yields rose 50 basis points over the quarter to 3.09 per cent.

Meanwhile, Spanish banks have only slowly passed on higher rates to their depositors. Deposit costs at Unicaja rose just 10bp into the third quarter to 0.47 per cent, one of the lowest pass-through rates in the sector.

Even without further rate rises, net interest income should grow next year, boosting profits.

Investors are ambivalent. Unicaja shares are stuck at a steep discount to book value, partly due to a low 6 per cent return on equity. Yet they trade on a relatively high price/earnings ratio for European banks.

That leaves chief executive Isidro Rubiales Gil with a dilemma. Unicaja's common equity tier one ratio was 14.2 per cent in the third quarter, well above an established 12.5 per cent target. He should have about €500mn of spare capital, almost a fifth of market capitalisation. He can pay this to shareholders, buy some growth or fix the balance sheet to improve the returns on capital.

Buying back shares at a 60 per cent discount to tangible book value makes sense but could also lift its seven times price/forward earnings ratio. This tops the range for European banks.

Balance sheet repair offers a better use. Foreclosed real estate assets valued at a net book value of €500mn linger from past downturns. Their disposal, covered by excess capital, should shrink capital.

Better returns on capital and a higher valuation should follow. That promise should support the shares.

Frasers/Missguided: label stable

Recycling is in fashion. That applies to brands as well as clothes. Many famous-but-faded names have an afterlife, long after the collapse of the original business. That explains what has become a lively trade in intellectual property.

Yesterday, Chinese-founded Shein made its first purchase of a UK brand when it bought the IP and trademarks of teen fast-fashion group Missguided.

The seller, Mike Ashley's Frasers, had originally bought the assets out of administration for £20mn last year.

The famous Topshop brand — bought by online retailer Asos for £330mn in 2021 — might also be about to change hands. Asos did not comment on reports it is set to raise funds by selling the group to US-based Authentic Brands. Along with US household names like Brooks Brothers, the licensing expert owns UK logos such as Ted Baker and Hunter Boots.

Why buy legacy brands? It might be tempting to make a quick buck by plastering a well-known name over myriad items, though that would cheapen it. Also, the turmoil in the retail sector has thrown up bargains.

Buyers may have spotted an opportunity to reposition a name that has been mismanaged. Also, buying a business out of administration offers opportunities to cut overheads while integrating any operations.

FTSE 100-listed Next illustrates a variation on this theme. Its flurry of acquisitions of brands including Cath Kidston and Made.com is a logical extension of providing its online services to third-party labels.

Frasers has plenty of form buying up legacy brands. Given that, its sale of Missguided might seem odd. Yet it could bolster the investment case for the shares which trade on a price/earnings ratio of 11 times, according to Shore Capital's Eleonora Dani.

Frasers could collaborate with Shein. A deal might allow Shein customers to use Fraser's stores for returns, and open Ashley's business up to a gaggle of new customers.

Western Digital: thanks for the memory

Elliott Management declared 18 months ago that Western Digital could be worth $100 per share or more by the end of 2023. To meet that target, the tech company has to more than double its share price in the next two months.

This is not likely. But yesterday Western Digital announced that it would follow Elliott's advice and separate its hard disc drive and flash memory segments into listed companies. The decision comes as a long-rumoured tie-up with Japan's Kioxia to create a fortified, east-west NAND memory chip colossus collapsed last week when Western Digital walked away from discussions.

Elliott's thesis is that Western's 2016 acquisition of SanDisk for $19bn proved confusing to investors. Today, Western's total enterprise value is roughly $20bn. With the Kioxia tie-up apparently dead, the question is whether some other transaction is in the works. Otherwise, Western Digital needs some other means to achieve the sum-of-the-parts valuation Elliott cobbled together.

Western Digital's struggles look stark next to those of Seagate Technology, the HDD leader. Seagate's enterprise value to trailing annual revenue ratio is approaching 3 times. Western Digital trades at under 2 times. In the past five years, Western Digital shares are down more than 15 per cent while Seagate has rallied more than half.

Elliott has pointed out that by simply applying roughly the Seagate market multiple to the Western hard disc business, the remaining implied worth of the flash business is only a few billion dollars, too low. Back in 2022, it said that it was willing to invest a $1bn in the flash segment at as much as a $20bn valuation.

In the end, Elliott and Apollo Global Management teamed up earlier this year to buy $900mn of convertible preferred stock in Western Digital. This pays a juicy 6.25 per cent dividend. It also converts into company stock at just under $48. Forget $100, this is the threshold Elliott will be focused on.

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CROSSWORD

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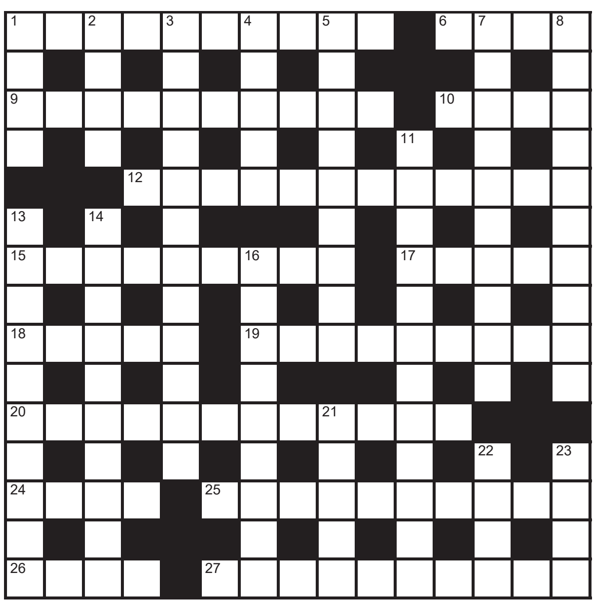

ACROSS

1 Certain cheats — zany characters with musical instruments (4,6)
6 Pole left over, a bit short (4)
9 Publications not mainly in the pink! (10)
10 Necklace is light, not hard (4)
12 Professional criterion apt to be flexible (12)
15 Hospitality old writer Henry established by river (4,5)
17 Very foolish person by Great North Road (5)
18 Rebel with hesitation in river? (5)
19 Hesitant princess starting operatic cycle (9)
20 I repeatedly get romance wrong — I cannot square the circle! (12)
24 Skilful learner taken on board by former President (4)
25 Very bad adult, one with common sense, very bad (10)
26 Yen to be in specialist fighting unit in States (4)
27 Sweet chap, me, 24, roughly (5,5)

DOWN

1 Jargon philosopher's spoken (4)
2 Lines of angry exchanges? (4)
3 Senior cop rushed, full of emotion (12)
4 Jelly with a flavour that's inadequate (5)
5 Appropriate as some expert in enterainment (9)
7 Forecast offered by professional theologian regarded as heretic (10)
8 My daughter is entertained by funny singer in studio productions (10)
11 Slam Blairite involved in two-sided negotiations (12)
13 New signora excited certain natives (10)
14 Upset tot a yeller? I'll bring a drink round (3,7)
16 Maybe propping up team that is bottom? (9)
21 Officer in charge is a pain (5)
22 Hospital hooter making a beastly noise? (4)
23 Like one area, an area very large (4)

JOTTER PAD

Solution 17,561

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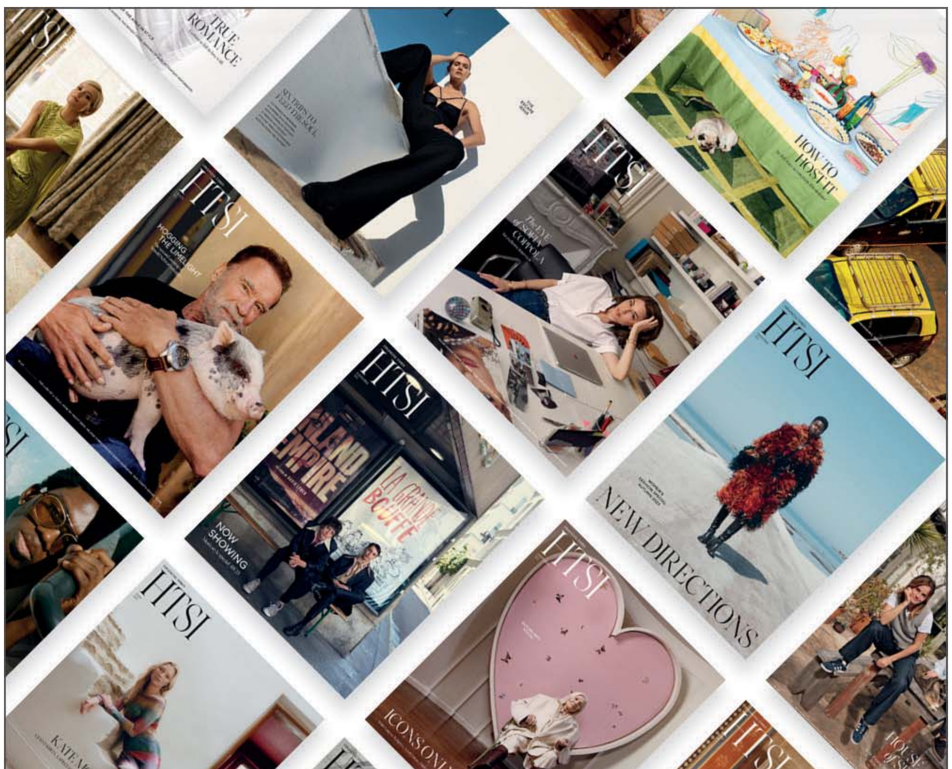

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