# FINANCIAL TIMES

WEDNESDAY 5 OCTOBER 2022 INTERNATIONAL NEWSPAPER OF THE YEAR ASIA



China feels shockwaves from property crash
SERIES BEGINS, PAGE 15

How big is the Credit Suisse capital hole?
ANALYSIS, PAGE 9


## Warning shot

## Seoul alert to missile threat

A South Korean Air Force F-15K drops two bombs against a target at Jikdo weapons range in the Yellow Sea yesterday, during a precision bombing drill in response to North Korea's firing a ballistic missile over Japan.

Japanese prime minister Fumio Kishida called the North Korean launch, the first over Japan since 2017, "barbaric".

The US described it as "dangerous and reckless". Some train services in northern Japan were suspended but government officials said no damage had been reported.

Japan estimated that the missile reached an altitude of 1,000km and travelled about 4,600km.

Yesterday's launch was North Korea's fifth in 10 days, following military drills between the US, South Korea and Japan and a recent visit to the region by US vice-president Kamala Harris.

**Tensions raised** page 4

South Korean Defence Ministry/AFP

# Musk agrees to pay $44bn for Twitter 2 weeks before courtroom showdown

- Go-ahead offered on original deal
- Suspicion of delay tactics
- No certainty on end to legal battle

JAMES FONTANELLA-KHAN, ORTENCA ALIAJ AND SUJEET INDAP — NEW YORK
HANNAH MURPHY — SAN FRANCISCO

Elon Musk has offered to buy Twitter for the initially agreed price of $44bn, in a move that could put an end to one of the most high-profile corporate legal battles in decades, according to three people familiar with the matter.

The chief executive of electric carmaker Tesla sent a letter to the social media group on Monday night offering to go ahead with the deal, less than two weeks before the two sides were set to go to trial in Delaware Chancery Court.

Twitter's legal team is examining the letter sent by the billionaire entrepreneur, according to people briefed on the matter. It is not clear if Twitter will agree to proceed with the deal without guarantees on timing and certainty of closing it, the people added.

An emergency court hearing on the matter was expected to take place as soon as yesterday, according to two people familiar with the situation.

A person close to Twitter said the social media company was concerned that Musk might be offering to proceed with the deal in an effort to delay a trial. Another person close to Twitter said the matter was not yet fully resolved.

> The social media group is thought unlikely to agree to the deal without guarantees on timing

Shares in Twitter rose about 13 per cent to $48 before being halted after Bloomberg first reported that Musk had proposed to proceed with a deal.

The Tesla chief initially agreed in April to take over Twitter for $54.20 a share.

Just months later, in July, he said he intended to pull out of the deal, citing concerns that the company had misled regulators and investors over the number of fake accounts on the platform.

Twitter sued Musk to complete the deal, arguing that his attempt to back out was motivated by the need to protect his financial interests during a downturn in tech stocks rather than any valid concern over account numbers.

A trial was set to begin on October 17.

The two parties have issued dozens of subpoenas to investors, bankers and others involved in the deal, and each has accused the other of not co-operating.

Last month, Musk amended his complaint to include allegations from former Twitter executive Peter Zatko that the company misled investors on its security practices — claims that were only made public after Musk first announced his intention to pull out.

The social media company denied the allegations.

Musk's attempt to avoid a protracted legal battle, which has already resulted in the release of his private text messages with well-known tech figures, adds another twist to a deal that has captivated the corporate world.

While most observers believed it would be near impossible for Musk to back out of the watertight agreement, they were also curious to see whether he could get away with it. They also wanted to see what that might mean for M&A contracts broadly.

Historically it has been extremely difficult for buyers who agree to a deal to walk away unless there are extraordinary breaches of the merger agreement.

A coterie of Wall Street banks that signed up to provide $13bn of financing for the deal now face a probably difficult path in trying to unload the debt, given the sell-off in the leveraged finance market. The banks may have to fund it at least partially themselves.

Twitter did not immediately respond to a request for comment.

**Lex** page 18

## Briefing

**▸ IMF alert on illiquid funds**
A surge of outflows from funds allowing frequent investor withdrawals but holding harder to sell assets could amplify market stress, the multilateral lender has warned.— PAGE 10

**▸ US job listings shrink**
Labour data have shown that employers cut more than 1mn job openings in August as the Federal Reserve's bid to cool the economy hit the jobs market.— PAGE 2

**▸ Russians pushed back**
Ukraine's military has made progress on two heavily fortified fronts to the east and south of the country, as it recaptures territory claimed by the Kremlin.— PAGE 3

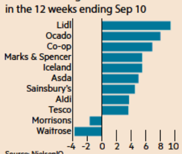
**▸ China eyes embassy plans**
Beijing has demanded the floor plans of properties rented by foreign missions in Hong Kong, sparking fears that they could be used to plant bugs.— PAGE 4

**▸ PwC to poach EY staff**
The professional services group has said it will target staff from its Big Four rival to capitalise on "uncertainty" caused by its decision to split in two.— PAGE 6

**▸ Arm job cuts raise alarm**
The British chip designer has cut 40 per cent of the workforce it recruited as part of a pledge by SoftBank to the UK government when it bought the group.— PAGE 8

## Datawatch

**Lidl goes a long way**
Annual % change in UK market share in the 12 weeks ending Sep 10




Source: NielsenIQ

**With food inflation accelerating and UK shoppers focusing on buying less and more often to help manage rising food bills, the low-cost supermarket Lidl has become the fastest growing grocery retailer in the country**

**Bridgewater enters new era as Dalio cedes control**

**Report** ▸ PAGE 6

# Saudi Arabia and Russia set to deepen production cuts at oil nations meeting

DAVID SHEPPARD — VIENNA
DEREK BROWER — SAN FRANCISCO

Saudi Arabia is seeking to raise oil prices at a crucial meeting today in Vienna in a move set to anger the US and aid Russia.

Riyadh, Moscow and other producers are set to announce deep cuts at a meeting of the Opec+ cartel, according to people familiar with the discussions.

The size of the cut is still to be agreed but Saudi Arabia and Russia are expected to try to take 1mn-2mn barrels a day off the market, or more, although the reductions could be phased in over several months. The move would probably trigger US countermeasures, including the additional release of oil from the country's Strategic Petroleum Reserve, analysts said.

"This is not the Saudi Arabia of old and the US has maybe been a little slow or unwilling to acknowledge that in energy matters," said Raad Alkadiri, an analyst at Eurasia Group.

"If they want a higher oil price they've clearly indicated they're going to pursue that, even if it results in a tit-for-tat response from the US."

Today's meeting of Opec members and other producers was hastily convened at the cartel's headquarters in Vienna, with ministers rushing to Austria for what analysts have billed as the most important gathering in years.

Russia's top energy official Alexander Novak is expected to attend and is understood to support a substantial production cut, with Russia's oil already trading at a large discount as European buyers have turned away.

A person familiar with the discussions said the cuts would be made from existing production, not quota levels that some Opec+ member countries have been unable to fulfil after years of mismanagement and under-investment.

Such a cut is likely to have a big impact on prices, which have fallen over the past few months in a fillip to the electoral chances of US president Joe Biden's Democrats in midterm elections next month. Brent crude, the international benchmark, rose above $90 a barrel yesterday — up 7 per cent since the weekend — as the likelihood of a large production cut became clearer.

The tensions between Saudi Arabia, the world's largest crude oil exporter, and the US, the world's largest consumer, comes as analysts warn of a deepening global energy war triggered by Russia's invasion of Ukraine.

**Russia oil price cap** page 2
**Day in the markets** page 11

## World Markets

**STOCK MARKETS**

| | Oct 4 | Prev | %chg |
|---|---|---|---|
| S&P 500 | 3783.16 | 3678.43 | 2.85 |
| Nasdaq Composite | 11170.59 | 10815.44 | 3.28 |
| Dow Jones Ind | 30252.68 | 29490.89 | 2.58 |
| FTSEurofirst 300 | 1596.78 | 1547.62 | 3.18 |
| Euro Stoxx 50 | 3482.58 | 3342.17 | 4.20 |
| FTSE 100 | 7086.46 | 6908.76 | 2.57 |
| FTSE All-Share | 3873.21 | 3773.80 | 2.63 |
| CAC 40 | 6039.69 | 5794.15 | 4.24 |
| Xetra Dax | 12670.48 | 12209.48 | 3.78 |

**CURRENCIES**

| Pair | Oct 4 | Prev | Pair | Oct 4 | Prev |
|---|---|---|---|---|---|
| $/€ | 0.996 | 0.982 | €/$ | 1.004 | 1.019 |
| $/£ | 1.140 | 1.128 | £/$ | 0.877 | 0.887 |
| £/€ | 0.873 | 0.870 | €/£ | 1.145 | 1.149 |
| ¥/$ | 144.455 | 144.465 | ¥/€ | 143.827 | 141.828 |
| ¥/£ | 164.723 | 162.957 | £ index | 76.798 | 76.150 |
| SFr/€ | 0.977 | 0.973 | SFr/£ | 1.119 | 1.118 |

**CRYPTO**

| | Oct 4 | Prev | %chg |
|---|---|---|---|
| Bitcoin ($) | 20040.90 | 19636.00 | 2.06 |

**GOVERNMENT BONDS**

| Yield (%) | Oct 4 | Prev | Chg |
|---|---|---|---|
| US 2 yr | 4.09 | 4.09 | 0.00 |
| US 10 yr | 3.61 | 3.61 | 0.00 |
| US 30 yr | 3.69 | 3.67 | 0.02 |
| UK 2 yr | 3.91 | 4.01 | -0.10 |
| UK 10 yr | 3.87 | 3.96 | -0.09 |
| UK 30 yr | 4.03 | 3.89 | 0.14 |
| JPN 2 yr | -0.06 | -0.06 | 0.00 |
| JPN 10 yr | 0.23 | 0.24 | -0.01 |
| JPN 30 yr | 1.32 | 1.32 | 0.00 |



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

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| | | | |
|---|---|---|---|
| Nikkei | 26992.21 | 26215.79 | 2.96 |
| Hang Seng | 17079.51 | 17222.83 | -0.83 |
| MSCI World $ | 2429.91 | 2378.65 | 2.16 |
| MSCI EM $ | 876.15 | 875.79 | 0.04 |
| MSCI ACWI $ | 563.99 | 553.37 | 1.92 |
| FT Wilshire 2500 | 4791.59 | 4670.65 | 2.59 |
| FT Wilshire 5000 | 37421.73 | 36481.48 | 2.58 |
| Ethereum | 1350.66 | 1323.29 | 2.07 |

| COMMODITIES | Oct 4 | Prev | %chg |
|---|---|---|---|
| Oil WTI $ | 86.74 | 83.63 | 3.72 |
| Oil Brent $ | 92.03 | 88.86 | 3.57 |
| Gold $ | 1668.40 | 1671.75 | -0.20 |

| | | | |
|---|---|---|---|
| GER 2 yr | 1.55 | 1.60 | -0.05 |
| GER 10 yr | 1.86 | 1.91 | -0.05 |
| GER 30 yr | 1.90 | 1.92 | -0.02 |

Prices are latest for edition
Data provided by Morningstar

A Nikkei Company





INTERNATIONAL

Energy crisis

# US outlines 'benefit' of Russian oil price cap

Largest emerging nations will make huge savings, claims Treasury report

JAMES POLITI — WASHINGTON

The US Treasury has estimated the G7's plan to cap the price of Russian oil exports could yield $160bn in annual savings for the 50 largest emerging markets, as Washington insists the scheme it has championed will keep a lid on energy costs around the world.

The analysis was developed ahead of the IMF and World Bank's annual meetings next week, where high energy costs triggered by Russia's invasion of Ukraine will take centre stage as one of the heaviest burdens on the global economy. At the same time, the Opec+ oil producers' cartel is planning new cuts in supply at its meeting this week.

The G7 approved plans for a price cap on purchases of Russian oil last month with an aim of cutting revenue for the Kremlin to wage war in Ukraine.

Starting in December, it would allow western companies to service and insure Russian oil cargoes around the world, exempting them from EU and other western embargoes, as long as sales are made below the cap.

Western allies still have to agree on the level at which the cap will be set. Wally Adeyemo, the deputy Treasury secretary, told CNBC last week it would be "well above" Russia's cost of production in an effort to punish Moscow without spurring Russian oil companies to scale back supplies.

However, there are still doubts and uncertainty in the oil market about the extent to which one of the most novel international economic policymaking experiments ever attempted will work in practice, what its effect will be on the market and how Russia will react.

The US Treasury's study — expected to be shared with external partners in the coming weeks — compares the impact on the global oil market of a functioning price cap plan for Russian oil with a scenario in which embargoes were in place without exemptions for shipments under a price cap. The Treasury declined to specify which price level would lead to $160bn in savings.

'All net oil importing EMs would benefit from lower oil prices'
US Treasury official

"While there is significant uncertainty, a Treasury analysis finds that in aggregate, the price cap exception could save the 50 largest emerging market (EM) and low-income countries (LIC) about $160bn annually in spending on oil imports," a Treasury official said.

"This means that countries have a significant incentive to benefit from the price cap, including purchasers like China and India, and that all net oil importing EMs would benefit from lower oil prices."

According to a Treasury official, the Europe and central Asia region is the most dependent on net oil and oil product imports, which account for 4.7 per cent of gross domestic product, or $55bn.

In 16 emerging markets, ranging from Mali to Turkey, El Salvador and Thailand, net oil imports account for more than 5 per cent of GDP, the Treasury said.

Washington is counting more on carrots than on sticks to convince governments and companies around the world to embrace the G7 plan, even if they do not formally sign up to the coalition adopting the price cap.

To date, a decline in Russian oil exports to Europe has been largely offset by shipments rerouted to customers such as China, India and Turkey. However, the International Energy Agency has forecast that Russian oil production will fall sharply once the EU embargo comes into full force, a risk that could drive up energy prices without a price cap, US officials say.

"[The price cap] would stabilise world energy prices and from that aspect we [in the US] benefit, but we're a net exporter of energy. The impact is far greater under any reasonable assumptions for emerging markets, which are just getting hammered right now," a Treasury official said.

See The FT View

Asia. Climate change

# Japan steps in to fill green energy funding gap

Slowdown in development aid from China offers chance for Tokyo to set region's rules

KANA INAGAKI — TOKYO

Japan is ready to exploit a sharp decline in China's overseas lending by helping Asia-Pacific countries address the $40tn cost of fighting climate change.

Asia accounts for about half of global carbon emissions and is home to the world's youngest generation of coal power plants. Rich nations have been accused of not providing enough financial support to help developing countries make a green energy transition.

Tokyo's efforts to take the lead in rule-making for green financing in Asia come amid a global debate about how quickly countries should shift to cleaner forms of energy in the wake of the war in Ukraine and the energy crisis.

Government officials in Japan and other parts of Asia have said that international standards such as the EU's green taxonomy, a classification system aimed at helping investors judge industries on environmental sustainability, are too stringent, starving poorer countries of funding.

Beijing has long dominated development aid in Asia. But China has markedly reduced overseas loans for infrastructure projects recently.

"China needs to focus more on their internal market. So when I think about the next 10 years, China today may be the largest creditor to the developing world but there are just going to be gaps," said Ian Bremmer, president of Eurasia Group and Gzero Media. "So it's clear that there is going to be space for the Japanese."

Last week, some of the world's largest financial institutions, led by Japan's Mitsubishi UFJ Bank, released guidelines for investors to finance projects and technologies to help Asian countries speed the shift away from fossil fuels.

Analysts believe Japan's push to lead "transition finance" efforts in Asia is in some ways self-serving. The country, which has increased its reliance on coal, natural gas and oil following the Fukushima Daiichi nuclear disaster in 2011, does not have a realistic plan to achieve net zero carbon emissions by 2050 and lags behind some of its regional peers in adopting solar and wind power.

Power point: a Tokyo Gas Company storage tank looms over a residential area in Yokohama, Japan
Toru Hanai/Bloomberg

With Prime Minister Fumio Kishida exploring government and private funding to reduce the country's carbon footprint, it makes sense, analysts said, for Japan to drive standard-setting in the region for transition finance and carbon-reducing technologies, such as carbon capture.

"To attract transition financing from around the world, we envision working on large-scale projects in Asia such as power generation, hydrogen and grids, as well as creating common standards within the region," Kishida told the New York Stock Exchange last month.

Last year, when Japan unveiled the concept for an Asian version of transition finance, it pledged $10bn to support the shift to renewables and other clean sources of energy. Tokyo estimates that Asia will need $40tn to achieve net zero emissions by 2050.

Some Asian leaders feel that western donor countries have been too strict and do not take into account differences in economic development and the region's geographical conditions when it comes to climate aid.

"Every country has to prepare regulations in accordance with the capability they have," Arifin Tasrif, Indonesia's minister of energy and mineral resources, said. "The international [community] should not push such kind of difficult regulations, which cannot be implemented in other countries, and they have to be flexible."

The war in Ukraine and the surging prices of coal and gas have added to the pressure on Asian countries to achieve energy security. Developing countries are being outbid by richer European nations desperate to buy liquefied natural gas to replace Russian pipeline exports, prolonging the Asia-Pacific's dependency on coal. But with prices for fossil fuels high, renewable sources of energy have become more attractive.

'We are in this unique moment in time in which carbon neutrality is not only desirable but it's necessary'

"The Ukraine war has made all fossil fuels very expensive. We are in this unique moment in time in which carbon neutrality is not only desirable but it's necessary because it is cheap," said Khurram Dastgir Khan, Pakistan's energy minister.

Pakistan, which has been devastated by floods linked to climate change, has received long-term financing under China's Belt and Road Initiative as well as emergency loans from Beijing in recent years. It said it would welcome Japanese investment if it provided competitive pricing for its projects.

"This assumption that somehow China has taken over Pakistan is not correct," Khan said. "The door for Japanese investment in the energy transition is open. But the actual way in which it can be put on the ground is yet to be devised, so it's just a concept at the moment."

Pilita Clark see Letters page

US employment

# Job openings drop by 1mn as Fed's bid to cool economy takes effect

TAYLOR NICOLE ROGERS — NEW YORK
COLBY SMITH — WASHINGTON

US employers cut more than 1mn job openings in August, in a sign that the Federal Reserve's aggressive efforts to cool the economy are starting to hit the labour market.

Yesterday's figures came before the release of official non-farm payrolls jobs data on Friday, which will be closely watched for its influence on how the US central bank will continue with its campaign to stamp out inflation that is running near its highest levels in four decades.

Job openings, a measure of labour demand, stood at 10.05mn, according to data released by the US labour department, representing more than 1.1mn fewer listings than in July.

It was one of the biggest one-month drops in openings in two decades of data analysed by the Financial Times, second only to the 1.2mn decline reported in April 2020 after coronavirus was declared a pandemic and led to lockdown restrictions that froze hiring.

Even as other parts of the US economy have slowed, the labour market has remained hot, keeping upward pressure on inflation. But other figures from yesterday's Job Openings and Labor Turnover Survey (Jolts) also indicated the employment market could be slowing.

The number of workers who voluntarily quit their jobs has been trending down in recent months, but was little changed in August at 4.2mn. So-called quits are still hovering above pre-pandemic levels, a sign that workers are confident they can find new employment opportunities. Meanwhile, the ratio of job openings to unemployed people now stands at 1.7, having steadied at two for the past six months.

"The Jolts report today shows some clear signs that the job market is cooling even if it's starting from a high temperature," said Daniel Zhao, an economist at jobs website Glassdoor.

The decline in job openings should provide some relief for the Fed, which is in the midst of its most aggressive campaign to tighten monetary policy since the early 1980s. Last month, it implemented the third consecutive 0.75 percentage point interest rate rise, which lifted the federal funds rate to a target range of 3 per cent to 3.25 per cent.

As the Fed lifts rates to a level that restrains the economy, policymakers believe the labour market is so tight that it can achieve a better stage of balance without material job losses. They are hopeful employers, who have struggled since the onset of the pandemic to find workers, will be more hesitant to reduce headcount while demand remains high.

That runs counter to the view held by many Wall Street economists, who forecast the unemployment rate to hover at or above 5 per cent as the Fed ploughs ahead with its efforts to return inflation back to its 2 per cent target. A recession under those circumstances is an inevitability, they argue.

In his first public remarks since becoming a Fed governor in May, Philip Jefferson yesterday described the labour market as "very tight", but said the supply and demand imbalance "seem[s] likely to ease some".

See Lex



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Science award

# Three physicists win Nobel Prize for quantum discoveries

CLIVE COOKSON — LONDON

Three scientists in their 70s have won the Nobel Prize in Physics for translating the outlandish predictions of quantum theory into the foundations of a practical discipline in information and communications technology.

Alain Aspect from France, John Clauser from the US and Anton Zeilinger from Austria share the SKr10m ($900,000)

Zeilinger, who works at the University of Vienna, said after hearing of his award: "The point of using entanglement is that you can transfer the information carried by an object to another place at which the object is reconstituted."

This transfer of instantaneous information is often referred to as teleportation but Zeilinger said it should not be confused with the unrealistic science

portation experiments with entangled photons have demonstrated quantum communications over a 7,600km satellite link between China and Austria.

"Perhaps the most transformational application will be that of quantum computing, which opens up our access to doing complex calculations efficiently and quickly," said Michael Moloney, chief executive of the American Institute of Physics.

Aspect, 75, works at the Université Paris-Saclay and École Polytechnique, Palaiseau, while Clauser, 79, runs his own company in California.

"This is an area of physics with ongoing, profound impact, at a fundamental level to help understand the world around us . . . and for use in highly novel technologies for sensing and communication today," said Professor Sheila

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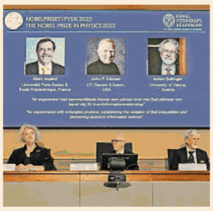
Austria share the SKr10m ($900,000) prize for "demonstrating the potential to investigate and control particles that are in 'entangled states'," the Royal Swedish Academy of Sciences said.

When two particles are "entangled" — the scientific term for quantum linking — what happens to one of the pair has an instantaneous effect on the other one, however far apart they may be.

Albert Einstein was sceptical about the idea of quantum entanglement, the 20th century physicist dismissing it as "spooky action at a distance". But the three laureates carried out experiments with entangled photons — light particles — which confirmed that the early quantum theorists were correct in their predictions that the phenomenon would turn out to be real.

confused with the unrealistic science fiction idea of teleporting large solid objects, as in the *Star Trek* series. Tele-




Honoured: the prize winners are announced in Stockholm yesterday

Institute of Physics.

"Real-world applications may in time include developing drugs and vaccines faster, improving the efficiencies of batteries, increasing the accuracy of weather forecasts and securing data with quantum encryption, among others," Moloney added.

An early application of quantum technology is in the growing field of cryptography, the practice of building digital codes to ensure secure communication. If anyone intercepts an encrypted quantum signal, the entanglement is lost and the message disappears.

"This prize is an encouragement to young people," said Zeilinger, who is 77. "It would not be possible without more than 100 young people who worked with me over the years."

'Real-world applications may in time include developing drugs and vaccines faster'

Rowan of Glasgow university, who is president of the UK Institute of Physics.

Only four of the 221 Nobel laureates in physics since 1901 have been women.

The physics award is the second of this year's six Nobel Prizes to be revealed, after Svante Pääbo won the medicine prize on Monday for decoding the DNA of ancient humans.

Prizes for chemistry, literature, peace and economics will be announced in the coming week.



INTERNATIONAL

# Western allies assess scenarios after Putin raises threat of nuclear strike

## Russian president's setbacks on Ukraine battlefield have increased risk he will use tactical weapons

JOHN PAUL RATHBONE AND BEN HALL — LONDON
MAX SEDDON — RIGA
HENRY FOY — BRUSSELS

It has been called the biggest nuclear threat to world safety since the 1962 Cuban missile crisis: as Vladimir Putin seeks to salvage his invasion of Ukraine, the Russian president has stepped up his threats to use nuclear weapons.

He said last week he would use "all available means" to keep Russia safe after unilaterally proclaiming four eastern Ukrainian provinces part of Russia. The US had "created a precedent" when it dropped two atomic bombs on Japan in 1945, he added.

At the weekend, Chechen leader and Putin loyalist Ramzan Kadyrov suggested Putin consider using "low-yield nuclear weapons" in Ukraine.

But the proposal was dismissed by the Kremlin on Monday. Putin's spokesman Dmitry Peskov said there were "no other considerations" apart from using nuclear weapons according to Russia's military doctrine, which permits their deployment if Russia is struck first or if the existence of the state is at risk.

Western officials and military experts believe the risk that Putin will deploy nuclear weapons is low. But, as Russian forces suffer military setbacks in south-eastern Ukraine, they also recognise that risk is rising.

The Cuban missile crisis was about "strategic" nuclear weapons, which are powerful enough to obliterate entire cities thousands of miles away. The issue in Ukraine instead centres on smaller, so-called tactical, nuclear weapons.

These smaller nuclear warheads are intended for battlefield use and designed to destroy targets in a specific area. Even so, many of the warheads are more powerful than the atomic bomb dropped on Hiroshima by the US, which had an explosive yield equivalent to about 20 kilotons of TNT.

"So-called tactical nuclear missiles for battlefield use have a yield of generally between one and 50kt [of TNT] . . . devastating over areas of typically two square miles," General Sir Richard Barrons, former head of UK Joint Forces Command, told the BBC on Monday.

The US and USSR once kept huge stockpiles but after the cold war ended the US gave up all but 230 of them, believing "increasingly efficient conventional weapons could do the job" better, according to a 1989 analysis in the Bulletin of the Atomic Scientists.

Russia kept about 2,000 tactical nuclear warheads. They can be placed on systems used to deliver conventional explosives, such as Kalibr cruise missiles or Iskander ballistic missiles, and can be launched from land or sea.

Experts see three ways in which Russia might use tactical nuclear weapons. The first is demonstrative: a nuclear shot that does not kill anyone. It could be a detonation underground, over the Black Sea, perhaps somewhere high in the skies above Ukraine or on an uninhabited site, such as Snake Island.

The blast's electromagnetic pulse would fry unprotected electronic equipment and the radioactive fallout, while large initially, would reduce to about 1 per cent of the initial radioactive blast in 48 hours. Most of the radioactive dust sucked into a rising cloud by the explosion would settle back on Earth nearby within 24 hours of the strike and could be an extreme biological hazard. Other particles could be dispersed by prevailing winds and settle in much lower concentrations over large parts of the globe.

Even a demonstrative attack would start the "escalation ladder" and raise the prospect of a Russian attack on a big city. It would probably spark a global backlash for no military gain, making Russians "more of a pariah in the world than they ever have been", as US president Joe Biden said on September 16.

The demonstration effect may also be unclear, as it would show that Russia was ready to break the taboo on nuclear weapons but that it remained cautious on using their full explosive power.

That, according to Sir Lawrence Freedman, professor emeritus of war studies at King's College London, is one reason the US discarded the demonstration option in 1945 before dropping a nuclear bomb on Hiroshima.

The second possibility is a strike on a Ukrainian military objective or key piece of infrastructure, for example, a missile strike on Zaporizhzhia nuclear power plant. How useful this would be is also open to question. Ukraine's military forces are highly dispersed and US Army studies concluded that a 1kt warhead has to detonate within 90 metres of a tank to inflict serious damage.

Some experts say it would make little sense for Russia to strike battleground targets in provinces it now considers its own. Russia's army would also be exposed to the radioactive fallout.

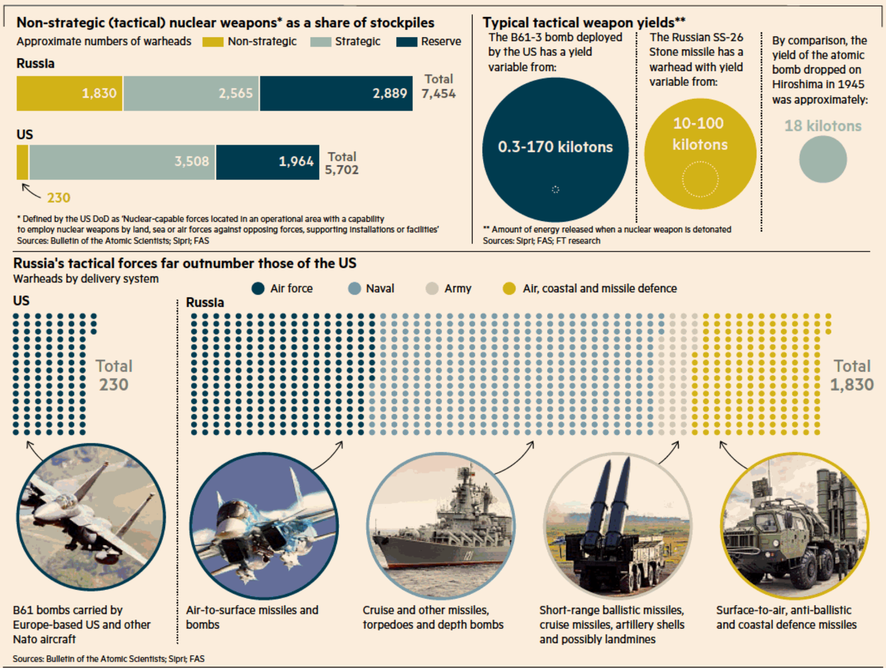
The third and most escalatory move would be a strike on a Nato member, including the US, as suggested by Dmitri Trenin, former head of the Carnegie Moscow Center, a Russian think-tank. In a state television interview last week, Trenin said Russia needed to show it was serious about a US nuclear strike for its deterrent to be effective. He added that the west was also wrong to assume that Putin would use nuclear weapons only against Ukraine.

How the west would respond to an attack on Nato is hard to predict. Article V invoking a collective defence response from Nato members would be triggered. Moscow would risk a devastating nuclear retaliatory strike by the US.

Jake Sullivan, Biden's national security adviser, said last month that any Russian nuclear use would have "catastrophic consequences" without specifying what those might be. He also made clear the US had "spelt out" in private conversations with Moscow how the west would react. On Sunday, Nato secretary-general Jens Stoltenberg warned of "severe consequences for Russia".

That might involve a conventional military attack on Russia's Black Sea fleet, as retired CIA director and army general David Petraeus suggested on Sunday. But western officials have remained vague in their threats of retaliation, as deterrence rests on ambiguity.

How the west would respond to an attack on Nato is hard to predict. Article V invoking a collective defence response from Nato members would be triggered




In focus: Russian president Vladimir Putin watches a military exercise near Orenburg, Russia, in 2019
Alexei Nikolsky/AP

Counteroffensive

# Ukrainian forces push back Russians on two fronts

FT REPORTERS

Ukraine's military is steadily pushing back Russian forces across two heavily fortified fronts, as it recaptures territory claimed by Vladimir Putin.

In a map published as part of its daily briefing yesterday, Russia's defence ministry showed its forces had retreated about 30km in the southern Kherson region from Zolota Balka to Dudchany in a day and ceded almost all of what little territory it still held in the eastern Kharkiv region.

Ukraine reinforcements including armoured vehicles were seen yesterday moving into the eastern Donbas region towards Lyman, a railway hub won back three days ago, according to local reports. They were heading towards Lysychansk, which has been held by Russia for more than three months and is the focus of the Ukrainian counteroffensive efforts in the east.

About 600km to the south, Ukrainian soldiers forced Russian troops into what a US official referred to as a "defensive crouch". The heavy fighting has continued in towns such as Dudchany, en route to the city of Kherson, which fell into Russian hands days into the full-scale invasion of Ukraine in February.

The simultaneous advances have shown Kyiv's ability to repurpose captured Russian weapons and recently arrived western arms against an enemy still waiting for newly mobilised troops.

Ukrainian officials have been wary of discussing operational details but western allies briefed on the advance said thinly stretched Russian formations had been targeted with an overwhelming force travelling rapidly at night.

"In the vicinity of Kherson, we continue to see deliberate and calibrated operations by the Ukrainians as they continue their offensive," a senior US military official said.

In the east, the Ukrainian military was "picking off the comparatively easier targets to seize some initiative", another western diplomat said, avoiding sending more troops to become bogged down in cities such as Bakhmut, where they have faced off against Russia forces for months without much effect.

Russia is attempting to bolster its forces with a "partial" mobilisation of the army's reserves. Sergei Shoigu, Russia's defence minister, said 200,000 men had already been called up.

But the measure has proved unpopular at home, prompting hundreds of thousands to leave the country.

The movement on both fronts has been gruelling, compared with a counteroffensive in the north-east last month when Ukraine forces pushed Russian troops back to the border within days.

"In the north-east, the Ukrainians moved through Russian defences like Swiss cheese, as opposed to the south, where it will be more difficult," a second US military official said.

*Reporting by Mehul Srivastava and Roman Olearchyk in Kyiv, Felicia Schwartz in Washington and Max Seddon in Riga*

Armed forces. **Regional tensions**

# Moscow's mobilisation targets ethnic minorities

Move to deploy many more troops disproportionately affects people from 'republics'

have been disproportionately targeted by Russian president Putin's mobilisation drive to bolster his invasion of Ukraine, say community leaders.

The draft has hit far more of the popu-

the deportations of Kalmyks, Ingush, Chechens and Crimean Tatars to central Asia by Stalin — are among Russia's poorest and are often outnumbered in their own republics by ethnic Russians.

history on the peninsula to centuries before the Russian empire conquered it.

CrimeaSOS, a Ukrainian non-governmental organisation, said in parts of the territory as many as 90 per cent of men

Economic aid

# Kyiv demands more stable financial support from EU

HENRY FOY — BRUSSELS
BEN HALL — KYIV
SAM FLEMING — LUXEMBOURG

"There are a lot of questions on how the EU will handle financing for Ukraine and few of them are resolved," said an

POLINA IVANOVA — BERLIN
MAX SEDDON — RIGA
BEN HALL — KYIV

Andrei, a 35-year-old IT worker from the far eastern "republic" of Buryatia, started packing his bags almost as soon as Vladimir Putin announced mass mobilisation across the Russian Federation last month.

He had already seen how people from his community, a predominantly Buddhist ethnic minority, had been dispatched en masse by Moscow to the front line of its war in Ukraine.

By the time he began the long drive to Mongolia the day after the call-up was announced, his brother had already had a knock on the door from conscription officers. A young man that Andrei picked up en route said 17 men from his village had already been taken — a significant number for a place with just a few hundred residents.

"Most of Russia's population don't care about the Buryats dying because 'they're not like us, they're some aboriginals'. It's easier for them to accept, we're minor losses," said Andrei.

Ethnic minorities such as Buryats

lation than was promised, prompting officials and state TV to seek scapegoats and forcing Putin to admit to "mistakes" in calling up too many people.

As thousands of men are sent to the front, Russia is conducting "basically a genocide of Buryats, Ukrainians and other peoples", said Alexandra Garmazhapova, head of the Free Buryatia Foundation, an antiwar advocacy group. "To conquer another territory and make it part of the empire, you use national minorities . . . because they are expendable," she added. "So what if 200 Buryats die?"

The pattern is rooted in the Kremlin's attempts earlier in the seven-month conflict to maintain a sense of normality in Russia's big cities by targeting rural areas, with fewer resources to resist conscription, protest or flee.

That focus has led to high casualties from areas with large ethnic minority populations, often known as "national republics". Conquered by the Russian empire and formed into statelets by Joseph Stalin, the republics theoretically enjoy special privilege. However, the indigenous people who have faced decades of discrimination — including

"The true history was suppressed, as was language, as were all aspects of identity," said Garmazhapova. "Before, people were deprived of an identifying language and everything else. Now, Putin is simply bringing this process to its conclusion by destroying them physically."

> 'Most of Russia's population don't care about the Buryats dying . . . we're minor losses'

Of the 6,756 Russian troops officially reported killed in Ukraine as of September 23, Dagestan accounted for 306 and Buryatia 276, as opposed to just 24 for Moscow, according to a tally by independent news site Mediazona. The US and Ukraine have said the true casualty figure is likely to be several times higher.

Russia needed at least 300,000 troops to bolster its front line, but the mobilisation drive has gone far beyond that.

In Crimea, which was annexed from Ukraine by Moscow in 2014, activists said the mobilisation had targeted ethnic Crimean Tatars, who trace their

receiving conscription notices were ethnic Crimean Tatars, even though they make up only 13-15 per cent of the whole population and rarely more than 60 per cent, even in traditional Tatar villages.

One Crimean Tatar living in the peninsula, who asked to remain anonymous, said the mobilisation was devastating because "we're losing the most productive part of the population, the people who could create families and children are all gone and that's really going to hurt our demography".

In some areas, the mobilisation drive has given rise to rare public displays of dissent. Protesters in Dagestan chanted "It's not our war!" as they clashed with police last week, while women led demonstrations in Yakutia and Tuva.

Back in Mongolia, more than 3,500 Buryats have crossed the border since mobilisation was announced. They had been welcomed there as brothers, said Andrei. He has also reconnected with distant relatives in Mongolia, including those whose families fled Russia in the 1920s, escaping the revolution and the early days of the Soviet state. "Now I joke with them: 'You fled in the twenties and now so did we!'"

Ukraine has demanded the EU provide a stable and predictable flow of financial support to keep its government functioning, warning that Kyiv was being "squeezed by uncertainty" over cash flows.

The plea comes as the European Commission struggles to agree a strategy to provide more clarity over its economic assistance to Ukraine in the coming year despite urgent calls from Kyiv and Washington to clarify its approach.

"We of course want a more structured and more predictable process [from the EU]," said Olha Stefanishyna, Ukraine's deputy prime minister for European integration. "We are waiting for the commission."

Kyiv is counting on $38bn in budgetary assistance from its international partners in 2023, or about $3.5bn a month.

Stefanishyna praised a decision by the US to provide monthly budget support to Kyiv, and called on the EU to take a similar step. But so far, there is little clarity on how a more predictable funding plan will work, say the bloc's diplomats and officials.

EU diplomat. "How much is needed? Should the financing be all loans or a combination of loans and grants? Where will the money come from when national budgets are constrained?"

EU assistance for Ukraine since Russia launched its full-scale invasion in February has been subject to repeated delays as member states haggle over the terms of the loans. The EU extended an emergency loan of €1.2bn in the spring, before announcing plans to advance another €9bn.

But the bloc has transferred only €1bn of the new funding round. It has agreed to pay €5bn in three tranches between now and the end of the year, with no timetable set for the remaining €3bn. Washington has already provided $8.5bn in economic assistance to Kyiv.

Kyiv has been exasperated by the EU's slow pace of disbursement, forcing it to ask its central bank to print money for the budget at the risk of igniting hyperinflation.

Finance minister Sergii Marchenko said Ukraine's short-term budget needs were covered for 2022 as long as the EU paid the €9bn in full. But plans for next year were "vague", he added.



INTERNATIONAL

Espionage concerns

# China demands HK diplomats' floor plans

## Beijing brings city rules in line with the mainland but staff fear surveillance

PRIMROSE RIORDAN — HONG KONG

China has demanded the floor plans of all properties rented by foreign missions in Hong Kong, in a move diplomats believe reflects Beijing's paranoia about overseas interference in the Asian financial hub's turbulent politics.

The order has brought the city in line with how China treats embassies and consulates on the mainland and sparked fears in the diplomatic community that Beijing could use the information to plant listening devices, according to three people familiar with the matter.

China has claimed that foreign powers, particularly the US, were behind the 2019 pro-democracy protests in Hong Kong, one of the greatest challenges to Chinese rule since the Tiananmen Square demonstrations in 1989.

In the wake of the 2019 unrest, Chinese authorities implemented a sweeping national security law, prosecuted political opponents and vastly curtailed civil liberties. They now appear to be placing greater restrictions on diplomats in the financial hub.

"Before the changes of 2019 and 2020, China's foreign ministry usually took a minimalist approach and mostly avoided the sort of [tight control of diplomats] seen in the mainland, because their goal was to have foreign missions that could operate easily in Hong Kong to help China do business with the world," said Kurt Tong, formerly the US consul-general in Hong Kong and now a managing partner at the Asia Group, an advisory firm. "Now, the mindset seems to be that some foreign missions are not welcome."

The foreign ministry has asked diplomats for an array of details about the official premises of foreign missions, as well as the homes of staff, in the past few months, according to the people familiar with the matter.

Officials want floor plans, details of rental or sale terms, as well as lease or sale agreements. According to the people familiar with the matter, the ministry has asked for new premises to be vetted before staff move in. "Beijing clearly wants diplomats to feel uneasy," another former diplomat said.

The Vienna Convention on Diplomatic Relations, the international agreement that governs diplomacy, is vague on whether a foreign government can make such requests. Article 24 of the agreement, however, states that the "documents of the mission shall be inviolable at any time".

Diplomats said they were considering how to respond to the requests, and added that handing over floor plans was a concern because it exposed properties to espionage. The Chinese foreign ministry in Hong Kong did not immediately respond to a request for comment.

The request came after China demanded that the US obtain permission before it sold a set of residences in Hong Kong island's upscale Shouson Hill to a local developer for HK$2.6bn last year, complicating the transaction.

Under the Basic Law, the city's mini-constitution, Hong Kong's foreign affairs are managed by the mainland, but China has previously taken a more hands-off approach. Diplomats said that over the past few years, Beijing has slowly increased its supervision of foreign missions.

Health. Pharmacies

# US considers non-prescription birth control pill

## Regulator to look at sales of contraceptive over counter amid curbs on abortion rights

JAMIE SMYTH AND CAITLIN GILBERT
NEW YORK

More than 60 years after the US revolutionised the lives of women by approving the birth control pill, regulators are considering allowing it to be sold over the counter in pharmacies for the first time amid a nationwide battle over reproductive rights.

Two US Food and Drug Administration advisory committees will in November study an application by HRA Pharma, a subsidiary of Perrigo Company, to sell a previously prescription-only oral contraceptive pill.

It is the first such application to be considered by the agency, which is also in talks with another company, Cadence Health, over its plan to sell contraceptive pills in the same manner.

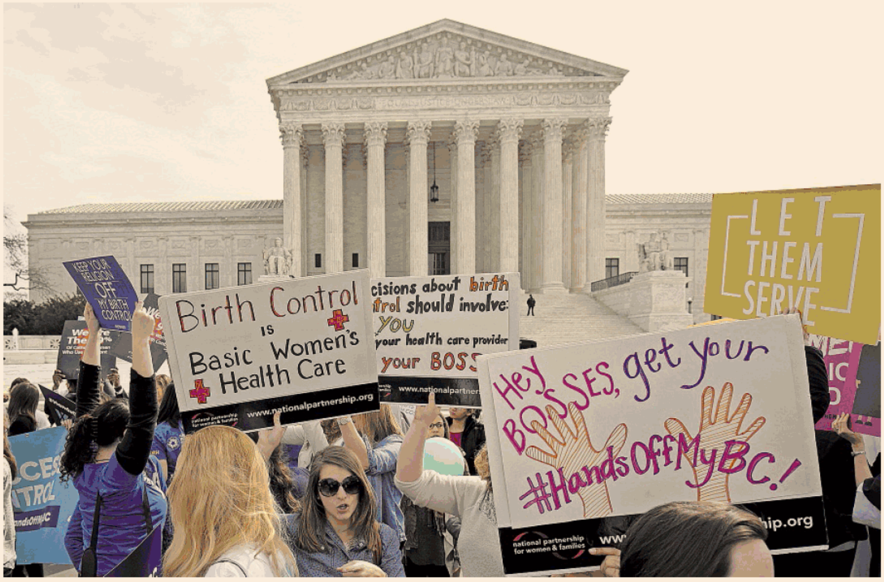
Both companies told the Financial Times expanding access to birth control would help tackle high rates of unintended pregnancies while abortion rights are being severely restricted following the Supreme Court's decision in June to overturn Roe vs Wade.

"The overturn of Roe makes access to contraceptives much more important than it was prior. It has always been important but it is more important now, particularly in states with [abortion] restrictions," said Samantha Miller, co-chief executive of Cadence.

More than 100 countries provide oral contraceptives over the counter, but in the US women still require a prescription from a doctor to obtain them. Most major medical groups, including the American Medical Association, support the change, saying it would lead to fewer unplanned pregnancies.

About 45 per cent of pregnancies in the US, roughly 3mn every year, are unintended, according to research by the Guttmacher Institute. Their prevalence is higher among black women, women on low incomes and those without a high school education.

Research from the institute and the UN Development Programme found unintended pregnancy rates in the US overall to be higher on average than in several countries in Europe such as




Rally: a protest in Washington in support of birth control. Women in the US still require a prescription from a doctor to obtain contraceptives
Joshua Roberts/Reuters

uninsured and rural dwellers. "A doctor's visit can become prohibitively expensive for people who are uninsured . . . and many young people on their parent's insurance would not want them to know they are getting birth control pills," she said.

Reproductive rights campaigners say expanding access to birth control pills at a time when abortion rights are under attack is critical, amid fears that contraception could soon be challenged.

In a concurring opinion in the abortion case, Supreme Court justice Clarence Thomas suggested earlier this year that other landmark judgments, including those establishing a right to contraception, should also be revisited.

In July, an attempt by Senate Democrats to fast-track a bill seeking to enshrine a right to contraception into expanding access to the pill. In March, more than 50 lawmakers from the Pro-Choice Caucus wrote to the FDA urging the agency to "follow the science" and take "swift" action to authorise over-the-counter sales. So far, there has not been a major backlash from conservatives towards HRA's application in June to sell its pills over the counter, but some groups have expressed concerns about the impact on young people.

Kristan Hawkins, president of Students for Life of America, said she had "tremendous concerns" with drugs given to children without a caring adult being involved, particularly given the potential for medical side-effects. "It's wise to have medically supervised distribution of such drugs so women survive their exposure to them," she said.

Medical experts say there can be neg-

> 'The pill has been on the market for 60 years, women know how to use it, they know that it's basically safe to use'

avoid some birth control pills. Advocates for moving to over-the-counter sales say proper labelling can inform consumers about potential risks. In the UK, a brief consultation with a pharmacist is required before selling the pill.

HRA said its pill was safe for most women to use and had undergone lengthy trials as part of a seven-year pre-application process for over-the-counter access. HRA's pill, branded Opill, is a "mini pill" that contains progestin, a man-made form of the hormone progesterone preventing pregnancy. Cadence plans to ask the FDA to approve a combination pill, which includes progestin and a second hormone, oestrogen.

"The pill has been on the market for 60 years, women know how to use it, they know that it's basically safe to use. So it makes sense that the pill is also

East Asia

# North Korea raises tension with ballistic missile test over Japan

KANA INAGAKI — TOKYO
CHRISTIAN DAVIES — SEOUL

North Korea has fired a ballistic missile over Japan for the first time since 2017, sparking emergency public alerts amid a sharp rise in provocations by Pyongyang.

Officials in Seoul and Tokyo said the missile was launched from North Korea's northern Jagang province yesterday and fell outside Japan's exclusive economic zone, which stretches 200 nautical miles from the coast.

Fumio Kishida, Japan's prime minister, condemned the launch as "barbaric", while the US described it as "dangerous and reckless". Some train services in northern Japan were briefly suspended but government officials said no damage had been reported.

North Korea has carried out more than 20 separate missile tests this year.

Yesterday's launch was the fifth in 10 days, following trilateral military drills between the US, South Korea and Japan and a recent visit to the region by Kamala Harris, the US vice-president.

Japan estimated the missile reached an altitude of 1,000km and travelled about 4,600km.

"It was the longest ever range," said Yasukazu Hamada, Japan's defence minister. "Whatever the motive, the repeated ballistic missile launches by North Korea are unacceptable and we cannot overlook the significant improvement in its missile technology."

Shunji Hiraiwa, an expert on North Korea at Nanzan University in Japan, said the range implied that Pyongyang might have achieved its goal of developing a missile that could reach Guam, the US territory in the western Pacific. "It is a serious progress in technology within the past five years."

Several missile experts have concluded that the projectile was probably a Hwasong-12 intermediate-range ballistic missile, which was last tested from the same site in Jagang province in January. North Korea also fired two short-range ballistic missiles on Saturday from a site near Pyongyang into the Sea of Japan, which is known in Korea as the East Sea.

On Monday, Japan announced the missile launched on Saturday had travelled further than initially thought, citing its "irregular trajectory".

An analysis published by Nikkei last week suggested that almost 40 per cent of North Korean missiles tested since 2019 had "variable trajectories", illustrating Pyongyang's progress in developing a new generation of manoeuvrable weapons that can be both more precise and harder to intercept and destroy.

North Korea's flurry of missile tests followed its adoption last month of an updated nuclear law that envisages pre-emptive strikes in a range of scenarios.

Announcing the new policy, North Korean leader Kim Jong Un declared that "there will never be any declaration of 'giving up our nukes' or 'denuclearisation', nor any kind of negotiations or bargaining to meet the other side's conditions".

Go Myong-hyun, senior fellow at the Asan Institute for Policy Studies in Seoul, noted that the last time North

Spain, Germany and Switzerland, and on a par with the UK and Sweden.

Cynthia Harper, professor of reproductive sciences at University of California, San Francisco, said over-the-counter access would benefit people who did not have regular access to healthcare providers, such as adolescents, the

federal law failed after encountering Republican opposition. "I don't think it [birth control] is the next target. I think it is already a target," said Dana Singiser, founder of Contraceptive Access Initiative, a group lobbying for over-the-counter access to birth control.

Some support exists in Congress for

ative side-effects with birth control pills, such as bleeding between periods and headaches, but these do not impact everyone and usually go away after a few months. Serious problems are rare but some groups, including people who smoke or have had certain types of cancers or blood disorders, are advised to

offered as a choice to be available over the counter without prescription," said Frédérique Welgryn, HRA's chief strategic operations and innovation officer.

HRA launched a similar over-the-counter pill in the UK last year, which it priced at about £10 a month. Welgryn expects an FDA decision early next year.

Korea fired a missile over Japan, it conducted a nuclear test a week later.

Pyongyang has finalised preparations for its seventh nuclear test, according to the US and South Korean governments, although it is not expected to go ahead with it before China's party congress this month.



Balkans

# Veteran Bosnia leader Izetbegović loses presidential election

MARTON DUNAI — BUDAPEST

Bakir Izetbegović, one of Bosnia's longtime leaders, lost out in his bid for the country's three-person presidency to a moderate opponent, after a general election that otherwise maintained entrenched divisions between the Balkan state's three main ethnic groups.

Izetbegović, part of the presidency for two terms until 2018 who leads the nationalist Party of Democratic Action, was comprehensively defeated in Sunday's vote by Denis Bećirović, a joint candidate representing almost a dozen, mostly liberal and centrist parties.

"It's time for a positive turnround in Bosnia," Bećirović told reporters as the margin of his victory became clear and Izetbegović conceded defeat. The results were provisional as not all votes had been counted as of yesterday.

Bosnia's presidency gives representation to each of its three main ethnic groups: the mostly Muslim Bosniaks, Catholic Croats and Orthodox Serbs.

The rejection of Izetbegović, whose father was Bosnia's first president, and defeat for the candidate of another of Bosnia's main parties, the Croatian conservative HDZ, indicated a shift away from nationalism, analysts said. Croatians will be represented by Željko Komšić, a veteran social democrat.

Yet although weakened, Izetbegović's PDA and the HDZ both retained strong positions in the other governing bodies that were up for election, suggesting any improvements would not come quickly, analysts said.

Srecko Latal, an analyst at the Balkan Investigative Reporting Network, said: "Expectations that Bosnia will one morning turn into Belgium are not realistic. We have serious legal, technical, political and social problems. If the change is to be real change, then it has to be slow."

The constitution of Bosnia, which emerged from the break-up of the former Yugoslavia following the war in the 1990s, was drawn up in a way that seeks to maintain a fragile political balance. Although these government structures have largely kept the peace, their complexities also make political progress difficult. The stability has been undermined in recent years by political strife between Bosniaks and Croats, just as the Serbs have openly debated the idea of secession.

> 'Expectations that Bosnia will one morning turn into Belgium are not realistic. We have serious problems'

Bosnian Serb leader Milorad Dodik, a key Russian ally, was on Sunday elected president of the Serb Republic, while the candidate from his SNSD party won the vote for the three-man presidency.

But the margin of victory narrowed considerably, indicating Bosnians were growing tired of his rhetoric and closeness to Vladimir Putin, analysts said. Dodik, whom the US has blacklisted for alleged corruption, has burnished his close ties with Russia's president, visiting him twice in the past three months.

But Maxim Samorukov of the Carnegie Endowment for International Peace said Putin's endorsement was not the vote winner it once was, particularly since the war in Ukraine.

Bosnia's intricate constitutional checks and balances have led to frequent obstruction and dysfunction in government, as veto powers have been used and abused.

One of its two main constituent parts, the Bosniak-Croat Federation, had been unable to form a government for the entire previous term.

**Hell on wheels** Shock of sharp decline in retail unit sales at CarMax causes its stock to crash with loss of $3bn in market cap LEX

# Companies & Markets

## Bridgewater founder Dalio relinquishes control of firm

- Lengthy transition process finalised
- All voting rights shifted to board

ORTENCA ALIAJ — NEW YORK

Ray Dalio, founder of hedge fund Bridgewater Associates, has given up control of the firm, ending a drawn-out transition of power that had come to define the industry's succession problems.

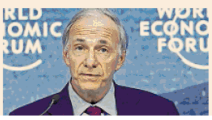
The 73-year-old, who until last month was one of three co-chief investment officers at the firm and sat on its investment committee, had transferred all his voting rights to the board of directors, said people familiar with the details.

Dalio will remain on the board as founder and CIO mentor.

"The transition of Bridgewater from Ray is done!" said an email to employees sent yesterday by co-chief executives Nir Bar Dea and Mark Bertolini.

"This process wasn't easy and we didn't always agree, but together, we've now finished something that very few firms or founders have accomplished, shifting from being a founder-led boutique to being an enduring institution led successfully by the next generation."

Dalio founded Bridgewater in 1975 and built it into the largest hedge fund with $151bn in assets. The firm became known for its culture of "radical transparency" as much as for its investing, with employees encouraged to openly



challenge each other and conversations often taped. The approach drew criticism from outsiders, while some employees found it difficult to fit in with its way of working.

The drawn-out succession process at Bridgewater has involved a series of different people in the chief executive role.

Planning for the future leadership began in earnest more than a decade ago when Greg Jensen and Eileen Murray, a former Morgan Stanley executive who was hired in 2011, jointly led the firm.

Jensen moved out of the co-chief role in 2016 after reportedly clashing with Dalio, but remained at the firm as co-CIO.

Dalio brought in Jon Rubinstein, an Apple executive, to take Jensen's role alongside Murray, but he was deemed not a "cultural fit" and stayed less than a year.

Rubinstein's role was given to David McCormick, a former army ranger and insurance executive.

Meanwhile, Murray left in 2019 and subsequently sued the firm over its alleged refusal to pay her deferred compensation after she disclosed a gender discrimination dispute. The two sides later settled the case.

McCormick was left as the sole chief but resigned in January to run for the US Senate, which led to Dalio bringing in the current co-chiefs.

Bridgewater's investments are still in the hands of Dalio's lieutenants, Bob Prince and Greg Jensen. While the firm struggled in the coronavirus-induced rout, it has delivered strong performance this year, with its Pure Alpha fund

## Recovery mode H&M 'cautiously positive' on China as it emerges from consumer backlash


H&M sparked anger when it expressed concern about use of forced labour in Xinjiang — Koki Kataoka/Yomiuri Shimbun/Reuters

RICHARD MILNE
NORDIC AND BALTIC CORRESPONDENT

**H&M is "cautiously positive" about China as it struggles to regain its footing in the country after a long-running consumer boycott in what was once one of the clothes retailer's biggest markets.**

In some of her first public comments since the backlash that began in March 2021, chief executive Helena Helmersson said the Swedish retailer was recovering in China.

She said: "We are cautiously positive. We are taking steps in the right direction, but it's slow. It's still a complex situation."

second-largest fashion retailer as well as other brands such as Nike, Adidas, Zara and Uniqlo.

H&M had made a statement in 2020 — seized on by Chinese officials the following year — that it was "deeply concerned" about the reports of forced labour in Xinjiang.

The group was kicked off the two biggest online retailers in China, Alibaba's Tmall and JD.com, in 2021. It returned to Tmall in August.

Asked if H&M had been required to make concessions to get its Chinese business back on track, the company said: "We are continuing to work on having a really good customer offering for our customers in China. And

Helmersson referred to the "geopolitical challenges" H&M faced in China and Russia, where it has shut its business after Moscow's invasion of Ukraine.

The retailer blamed the winding down of its Russian operations and rising raw material costs as well as the strength of the dollar for an 89 per cent fall in third-quarter net profit as it launched a SKr2bn ($180mn) cost-cutting programme.

"The situation is extreme. It's all about what to accelerate and where to pull the brake," said Helmersson, adding that the retailer was passing on all cost increases to customers in its women and high fashion

## PwC targets top EY staff unsettled by plan to split

STEPHEN FOLEY — NEW YORK

**PwC is seeking to poach staff from its Big Four rival EY and capitalise on "disruption" and "uncertainty" caused by the latter's decision to split its accounting and consultancy arms.**

Bob Moritz, PwC's global chair, said he was expecting to lure senior managers and even some partners as the firm pursues a big expansion in headcount.

Hiring opportunities had picked up, he said, since EY provided partners with more details of its split.

He said: "Now you've got some basics outlined, you're starting to see a little pick-up in that area.

"People now see one side or the other and [ask], 'Is that the organisation I want to be part of?' and 'Is that the culture I want to be part of?'"

Moritz reiterated PwC's commitment to keeping its consulting and audit arms together, saying it was "watching and assessing" EY's move but had not changed its conclusion that a "multi-competency" model strengthened both sides of the firm.

"We want to be extremely certain and definitive . . . to give our people certainty, that there's a long-term sustainable future for them, and it's full of career opportunities," he said.

"My hope is that with a little disruption in the industry — that creates opportunity [and] we can pick up on the uncertainty, not necessarily just [at] EY."

EY said last month that its global leadership had decided in favour of splitting the business. The decision will go to each of its local partnerships for approval. Votes will begin around the end of the year, with the aim of floating the consulting business on the stock market in late 2023.

EY partners are in line for big windfalls if they stay through the split. Consulting partners will be handed a 75 per cent share of the advisory business, potentially worth as much as seven to nine times their annual salary. Audit partners could get cash payouts of two to four times their annual earnings.

Moritz said it would be easier to lure

Ray Dalio's fund became known for a culture of 'radical transparency'

up 34.55 per cent in the year to the end of September.

Dalio acknowledged in a LinkedIn post published yesterday that the handover process "hasn't been easy", but said he intended to be an investor, board member and mentor until the day he died.

plex situation.

H&M bore the brunt of consumer outrage in China against foreign brands that tried to distance themselves from the use of forced labour in the western region of Xinjiang.

An online campaign, fanned by state media, called for a boycott of the

ing for our customers in China. And China is definitely an important market for us.

"Having said that, we are not really back at the level we would have liked, but we are continuing to work on it and are confident as regards the future."

tomers in its women and high-fashion segments, but doing less so in children's wear.

The cost-cutting would involve job losses as the company trimmed overheads to have a "simpler and more efficient organisation," the chief executive said.

senior managers, one or two layers below partner.

EY has said the split will create two faster-growing companies with more opportunities for its staff, including a more rapid path to partner.

"They [PwC] should be worried about us poaching from them," the firm said.



# Chinese tech investors select carefully to mitigate political risk

INSIDE BUSINESS
ASIA

Eleanor Olcott

In a brightly lit corner of a showroom in Hong Kong, a 300kg black robot disappears under a stack of shelves. The rack levitates and glides towards a warehouse picker, who removes an item before the shelf is spirited away by algorithms guiding it to find the most strategic place to park based on the popularity of the goods on the shelves.

The choreographed shelving dance is orchestrated by Geek+, a Beijing-based robotics start-up that has, despite international concern over Chinese technology policies, secured foreign backers, including Intel Capital and Warburg Pincus.

Following a bruising regulatory onslaught by Beijing on its internet companies and a flurry of US sanctions against Chinese technology groups, many investors have curbed their exposure to China tech, with some declaring it uninvestable.

But in the shadow of this pervasive pessimism, bright spots exist and foreign capital is still flowing into high-tech sectors. Data from China's ministry of commerce showed that foreign direct investment in China's high-tech manufacturing and high-tech services sectors rose 43 per cent and 31 per cent in the first eight months of 2022 compared with the same period in 2021.

Venture capitalists and private equity groups unicorn-hunting in China tech have to keep politics at the forefront of their investment decisions, though.

"You must pick the right sectors with policy tailwind before selecting the company. If you don't have insight on policy trends, you're investing in the dark," said a private equity investor at a China-focused tech fund.

That means finding companies that align with China's strategic goals but will not be caught on the wrong end of US sanctions. Looking to appease Beijing while not offending Washington, many China funds have narrowed in on healthcare, biopharma and high-tech niches with no military application, such as warehouse robotics.

Trying to find this sweet spot has boosted the appeal of companies such as Geek+, whose technology aligns with Beijing's push to accelerate automation. With China's population set to start shrinking this year, policymakers want machines to replace more human labour. In traditional warehouses, pickers can spend more than 70 per cent of their time walking between shelves.

'You must pick the right sectors . . . If you don't have insight on policy trends, you're investing in the dark'

Beijing has directed Chinese companies to replace foreign tech with domestic alternatives where possible, giving rise to an ecosystem that allows companies, including Geek+, to grow. The Beijing-based start-up, along with two other Chinese robotics makers — Hai Robotics and Hikvision — currently dominate the growing market for autonomous mobile robots (AMR). These robots, powered by Intel chips, mimic the movements of a warehouse picker rather than transport items on a track or a conveyor belt.

According to the International Federation of Robotics, demand for AMR increased 45 per cent in 2021, propelled by the pandemic revealing the need to accelerate supply-chain automation. Geek+, yet to turn a profit, sold 20,000 robots last year, making $300mn in sales, and projects that it will sell 30,000 in 2022. The company also has an expanding roster of clients in the west.

This growth story has appealed to investors. In August, Geek+ raised $100mn in a fresh fundraising round, giving it a $2bn valuation. However, while the political winds in Beijing have favoured such companies, there is still deep uncertainty about when investors can cash out.

Geek+ robots are programmed to find the most efficient routes, cutting down the time between a customer ordering online to the package arriving at their door. In the past, Chinese tech start-ups were guided by a similar logic: how to identify the most efficient pathway to go public. As one veteran Chinese tech investor said, founders once ran their companies like a "box-ticking exercise of fulfilling whatever criteria stock market exchanges had to go public".

But that raison d'être changed last year after ride-hailing group Didi's disastrous initial public offering. Days after the blockbuster $4.4bn flotation, Chinese regulators launched a probe into the company over alleged data abuses and later Didi delisted from the New York Stock Exchange. Subsequently, the golden pipeline of Chinese tech companies going public has nearly dried up.

"Getting a company to go public is still the focus for investors. But the process is fraught with policy and geopolitical risk. So much has changed over the past year," said the private equity investor.

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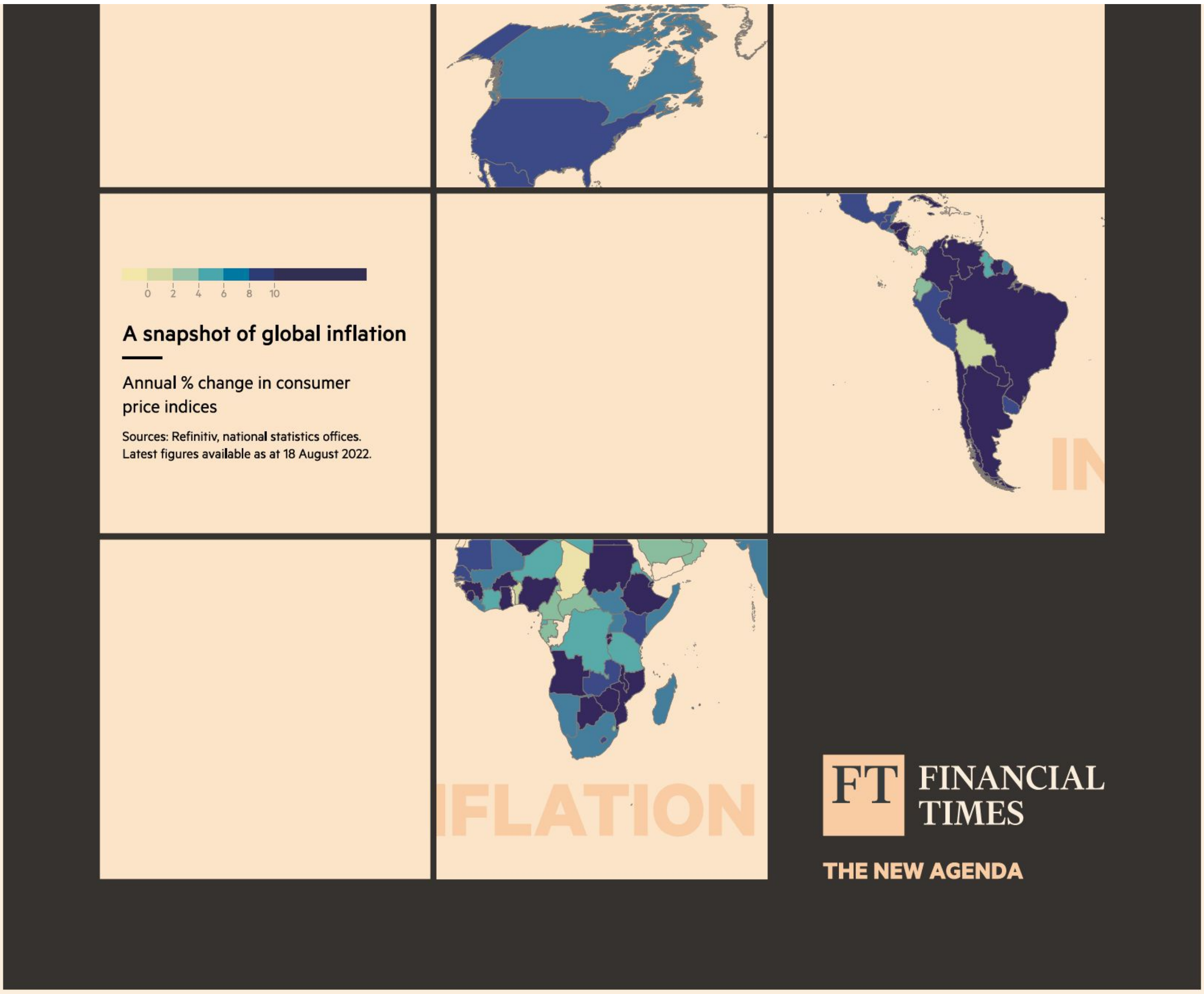





COMPANIES & MARKETS

Technology

# Arm staff losses cloud future in UK

Disproportionate British exodus adds to concerns power is shifting abroad

ANNA GROSS — LONDON
LEO LEWIS — TOKYO

Arm has shed 40 per cent of the workforce recruited as part of a pledge made by SoftBank to the UK government when it bought the chip designer, as concerns grow that the company's nexus of power is shifting abroad.

When Japanese conglomerate SoftBank bought the UK group in 2016, it made a commitment to double the 1,770 British staff over the following five years. It succeeded, according to figures released by Arm, and by September last year, UK staff peaked at more than 3,500 of a total of 6,950.

Since then, however, the company has cut 18 per cent of its global workforce, with the UK taking a larger hit proportionally. The reduction was driven in part by management refocusing the business and exacerbated by an exodus of staff unsettled by uncertainty about the company's future, according to former employees who spoke to the Financial Times.

In March, Arm announced it would axe between 12 and 15 per cent of staff, as it sought to streamline ahead of a proposed public listing.

It now has 2,800 employees in the UK, meaning that since September of last year it has lost 700. Its workforce in the rest of the world has shrunk by 550.

'Arm is about people, and this is a business where you want . . . to see some stability in staffing'

SoftBank's plan to sell Arm to chipmaker Nvidia for up to $66bn fell apart in February after more than a year of wrangling with regulators in the UK, US and EU. Masayoshi Son, the conglomerate's founder and chief executive, said he would instead take the company public in New York, seeking a valuation of more than $50bn.

But with initial public offering markets all but closed on both sides of the Atlantic, uncertainty persists about if and when any such listing would take place, how much the Japanese group will be able to raise and whether Son might pursue a different arrangement.

One SoftBank investor told the FT he had been concerned about the number of people leaving Arm, given that it signalled staff might have concerns about the strength of the business. "Arm is about people, and this is a business where you want, as an investor, to see some stability in staffing," they said.

One former employee said uncertainty about whether the company would be sold or taken public — and knock-on questions about the viability of their jobs — had been "very confusing and disheartening for employees".

Arm said it was "seeing attrition rates in line with current industry norms".

"Across the technology sector, businesses are being impacted by the after-effects of the global pandemic and resulting 'great resignation'," it added.

"We continue to hire and invest heavily in our engineering talent, with a focus on delivering a robust compute product road map that enables our partner ecosystem to build the future on Arm."

Mining. Separation

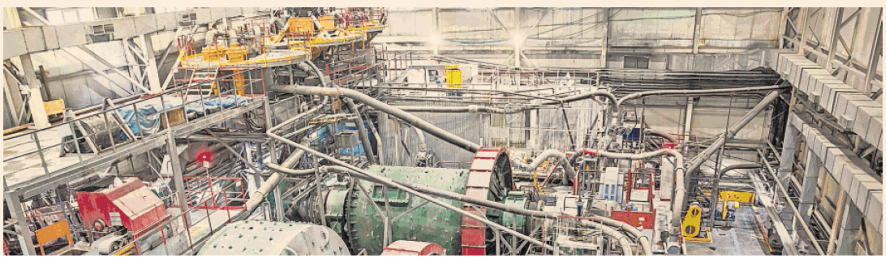
# Polymetal seeks new home as sanctions bite

Anglo-Russian group hopes to escape Moscow's rules on 'unfriendly' jurisdictions

LESLIE HOOK AND MAX SEDDON

Polymetal is working to redomicile from Jersey to somewhere deemed more friendly by Moscow as a first step towards separating the Anglo-Russian miner's assets, its chief executive has said.

The company's efforts are widely seen as a bellwether for foreign-based owners to restructure their Russian operations



Energy

# German grid operator warns of cuts in power exports to France

OLAF STORBECK — FRANKFURT

Germany may have to slash electricity exports to France and other countries this winter to prevent a breakdown of its power grid, a senior executive of the country's largest grid operator has warned.

Hendrik Neumann, chief technical officer of Amprion, the biggest of Germany's four power grid operators, said a temporary halt could even become necessary to avoid electricity shortages and bottlenecks in a "last resort". However, he said such a scenario was likely to be for a matter of hours rather than days.

The warning comes at a time of heightened tensions over Berlin's response to the energy crisis, with some EU states saying the €200bn "protective shield" for German businesses and consumers announced last week risked undermining European unity.

Amid accusations that Germany was using its economic firepower to protect its households in a way others could not afford, Italy's outgoing prime minister Mario Draghi said that "faced with the common threats of our times, we cannot divide ourselves according to the space in our national budgets".

Any power cut or reduction of German electricity exports may worsen supply shortages in France, where almost half of the country's 56 nuclear power plants are currently off the grid.

France is pressing state utility EDF to honour a scheduled restart this winter of all 32 nuclear reactors that had gone without taking significant losses on divesting them — a common issue for companies since the invasion of Ukraine.

In his first interview since Russia invaded in February, Vitaly Nesis said he was "hopeful" of a restructure, estimating its likelihood at "more than 50 per cent but less than 100 per cent".

Until recently a FTSE 100 company and one of the most profitable gold miners in the world, Polymetal has become emblematic of the difficulties of navigating mounting sanctions against Russia despite not being directly targeted itself.

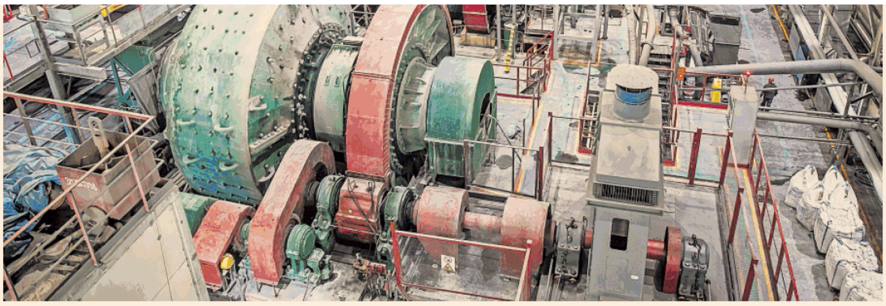
The group has eight gold and silver mines in Russia as well as two in Kazakhstan, with its management headquarters in St Petersburg. Its main holding company is incorporated in Cyprus and is in turn owned by a Jersey-domiciled entity that is listed on the London Stock Exchange.

Polymetal wants to split its assets to insulate the non-Russian business from the effects of western sanctions, but Moscow has banned asset sales for gold miners domiciled in "unfriendly" places such as the Channel island.

The company, which is also listed in Moscow, has battled on in its quest to separate into two as the western response to the war has made it harder to perform normal business functions.

Polymetal last week lost two board directors, Riccardo Orcel and Giacomo Baizini. Nesis said their departure was linked to "the sanctions risk that impacted both their professional and personal lives". There are reports the EU will ban Europeans from serving on the boards of Russian state companies, even though Polymetal is privately held.

Orcel, who spent only six months on the board, said he was leaving because his role was "now complete", having helped establish a process to divest its Russian assets.



Vitaly Nesis, below, said he was 'hopeful' of a restructure for Polymetal's assets, which include the Mayskoye mine in Russia, above Sergei Anashkevich

Sanctions against Russia led six Polymetal board members to quit in March and its auditor Deloitte to resign in April. Polymetal and several other Russia-linked companies were ejected from the FTSE 100 in March. Its shares have dropped more than 80 per cent this year.

Many international companies have chosen to dispose of their Russian assets to avoid the legal tangle of sanctions — often accepting fire-sale prices in the process.

Canada's Kinross Gold sold its Russian assets for $680mn in March — even though analysts had valued its mines at $1.6bn before the war. Société Générale took a €3.1bn hit when it sold its Russian lender Rosbank to oligarch Vladimir Potanin in April. But Nesis said Polymetal would not take that approach.

"If you ask me, I believe a disposal of the Russian assets to a third-party buyer is not on the table right now," he said. "We received very vocal feedback from our investors that now is not the time to sell. The prices are very discounted."

'We received very vocal feedback from our investors that now is not the time to sell. The prices are very discounted'

Instead, Polymetal will take steps to separate its assets in Russia and outside Russia, creating two listed companies.

The first step in the process is to re-establish the rights of shareholders whose shares are frozen in Russia's National Settlement Depository, which accounts for 22 per cent of the company's shares. Polymetal is proposing to offer "certificated" shares to affected investors. All shareholders will vote on that proposal next week.

Polymetal is taking steps to change its domicile from Jersey to a location deemed more friendly by Russia. After the redomicile happens, "we believe all significant blocks towards the separation of the company along the jurisdictional lines will be removed, and we will reach our final destination", Nesis said. "This is the game plan."

The sanctions on Russia are hitting Polymetal's ability to obtain mining equipment and made it difficult for the company to sell gold. The G7 has banned imports of Russian gold, and EU sanctions forbid selling gold to the Russian central bank.

"We have gone through a very rough, very difficult period of time," said Nesis, referring to gold sales.

Polymetal had to create a "full-powered sales team, from scratch", he added. "We have restarted all of our sales, two to three weeks ago."

The company aimed to sell its gold inventory by the end of the year, he said, mostly to buyers in Asia.

During the first half of 2022, Polymetal reported a net loss of $321mn, compared with a profit of $419mn during the same period a year earlier, because of higher costs and difficulties in selling its gold.

Without access to western mining equipment, the company is switching to Chinese alternatives in most cases. While some machinery can be substituted relatively easily, underground equipment, for example drill rigs, is much harder to replace, Nesis said.

The group's biggest shareholder is a company connected to its founder Alexander Nesis, the brother of the chief executive.

offline this summer for maintenance and because of corrosion problems.

France imported 6,000 gigawatt hours of electricity from Germany in January to March — equal to 5 per cent of the country's total power production in the quarter, according to think-tank Fraunhofer ISE, a fivefold rise compared with the same period last year.

Germany has been a net exporter of electricity for years. Last year it sold 17,400 GWh more power to other countries than it imported, compared with 18,500 GWh a year before, according to data from the grid regulator. The biggest buyers were France and Austria.

"We are assuming a highly stressed situation during the coming winter," Neumann told the Financial Times, adding that the energy crisis caused by the war in Ukraine was only one of several "overlapping issues". Along with the shutdowns of French power plants, disrupted coal deliveries caused by low water on main rivers also caused problems.

Neumann said he did not agree with German economics minister Robert Habeck, who in July said the country was not facing an electricity problem. "If that was the case, we would not have been asked [by the government] to conduct a special analysis [on the electricity market in the winter]," he said.

As a result of that review, the German government this month decided to postpone the scheduled decommissioning this year of two of the country's three remaining nuclear power plants.

Neumann called for all three plants to remain in service, as it was still uncertain how tight the market would be.

"All I can say is that three nuclear power plants would be better than two," he said. However, he pointed out that Amprion's view was just a technical one.

"The government needs to draw the political conclusions and take the political responsibility."

*Additional reporting by Sarah White in Paris*

Financials

# Curtius exit adds to Tiger Global's troubles

ANTOINE GARA — NEW YORK

**John Curtius, a partner at Tiger Global who oversaw a flurry of venture capital investments over the past five years, is poised to leave the firm in a departure set to deepen the turmoil at the hedge fund.**

Curtius oversaw a number of Tiger Global's prominent recent software investments, such as Databricks, Toast and Snowflake.

He will leave the firm next year, said two people familiar with the matter.

Curtius, Tiger Global's founder Chase Coleman and partner Scott Shleifer had begun discussing his exit over the summer, according to two people familiar with the matter.

Curtius plans to raise a new fund focused on early-stage software companies, said a person familiar with the matter.

Curtius joined Tiger in 2017 from hedge fund Elliott Management and reported to Shleifer, who runs the firm's venture business.

According to PitchBook data, Curtius led more than 100 venture investments made by Tiger Global into early and growth-stage venture capital businesses, becoming one of the most prolific investors in Silicon Valley.

Within Tiger, Curtius became one of the firm's most active investors, playing a significant role in investing its private funds, which are separate from Tiger's hedge fund.

Tiger has established a reputation for speed in getting deals done, often beating competitors by quickly agreeing to finance deals without requiring board seats.

Curtius is listed as a board member on just two of his investments, according to PitchBook data.

Tiger Global's flagship fund has slumped 50 per cent in value this year, weighed down by a deep correction in public market valuations.

In letters to investors, the group said it had been hit hardest by public software holdings and the inability of its hedges to damp market volatility.

"We are grateful for all of his contributions to Tiger Global and have appreciated his work ethic and intellect," Tiger Global management said in a letter to investors yesterday, informing them of Curtius's departure, which was seen by the Financial Times.

In the letter, Tiger confirmed to investors that its public funds lost money for the third quarter and that it had marked down its sprawling portfolio of private venture capital investments every month this year.

"We head into the final quarter of 2022 having accepted that this is not a year in which the scoreboard will make us proud and with our minds set squarely on the future," Tiger said in the letter.

Tiger Global and Curtius declined to comment.

Industrials

# Ferguson bets on US chip factory windfall

OLIVER TELLING — LONDON

**Plumbing and heating equipment supplier Ferguson is betting on a big windfall from new semiconductor factories in the US, as Washington unleashes grants for chipmakers in an effort to counter China's influence.**

The Anglo-American group's chief executive, Kevin Murphy, said demand for its products from chipmakers would compensate for declining sales to the residential sector as rising interest rates hit housebuilding activity.

"The onshoring of chip manufacturing . . . those are large projects for us in everything from underground water transmission [to] fire protection," he said. "There's a good amount of megaprojects . . . that are good for the country, good for our business."

Ferguson is a significant distributor of heating, ventilation and air conditioning equipment, as well as industrial products and services.

Murphy's comments underline hopes that a drive to bring semiconductor manufacturing back to the US will provide broad economic benefits. In July, Congress passed the $280bn Chips and Science Act that included billions in grants for semiconductor makers in the US amid fears over China's rise as a tech power and its aggression on Taiwan.

"The projects that we're engaged in right now are multiyear projects that will provide good business opportunities for us," said Murphy, whose group is based in the UK but generates about 95 per cent of its revenue in the US.

UK group Ferguson generates about 95% of its revenue in the US

Murphy acknowledged that Ferguson might suffer a hit to income from the residential market, which is responsible for just over half its revenue. "As you can imagine, with interest rates rising, there's concern as to what new house construction might look like," he said. "[But] we think that can be largely offset as we think about the non-residential side of our business."

Ferguson, a former FTSE 100 company, has increasingly shifted its focus to the US. In 2021, the group spun off its UK business before switching its primary listing from London to the New York Stock Exchange in May this year.

The group reported a jump in revenues during the 12 months to July, buoyed by acquisitions of US companies. Sales expanded 25 per cent over the previous year to $28bn, while operating profits rose 44 per cent to $2.8bn.



COMPANIES & MARKETS

# Riddle over scale of Credit Suisse capital hole

## Some analysts estimate an extra SFr4bn will be needed as bank contends with social media flap about its balance sheet

OWEN WALKER AND ROBERT SMITH
LONDON

Credit Suisse has spent the past few days battling social media rumours about its balance sheet strength and trying to persuade investors and clients that its plummeting share price and spiking credit default swaps do not tell the true story of its health.

At the centre of the storm is a question that analysts and commentators have been asking since Credit Suisse announced in the summer that it would strip back its investment bank and cut out SFr1.5bn ($1.5bn) of costs: how big will the capital hole be?

Last month analysts at Deutsche Bank estimated that the moves would leave the Swiss lender needing to find an additional SFr4bn due to restructuring costs, the need to grow other business lines, and regulatory pressure to strengthen its capital ratios.

Paring the investment bank and laying off thousands of workers would lead to redundancy costs and potentially writing off losses on winding down high-risk trades. The bank would also need to invest in other parts of its business — notably wealth management — to grow revenue streams and make up for the lost investment bank income.

By Friday, analysts at Keefe, Bruyette

For a lender whose market value has rapidly shrunk, the prospect of going cap in hand to investors seems increasingly daunting Pascal Mora/Bloomberg

"UBS burnt through billions in the financial crisis and got bailed out. This is not Credit Suisse today."

Comparisons were drawn over the weekend to the sharp sell-off in Deutsche Bank's debt in 2016, when concerns that the bank would have to skip some coupon payments on its capital bonds drove sharp moves in the CDS market.

"We would be wary of drawing parallels with banks in 2008 or Deutsche Bank in 2016," said Citigroup analyst Andrew Coombs. "The market appears to be pricing in a highly dilutive capital raise. We do not think this is a foregone conclusion, so would argue Credit Suisse is a buy for the brave at these levels."

When it comes to the bank's liquidity levels, Credit Suisse has a liquidity coverage ratio of 191 per cent, higher than most of its peers. The ratio is a reflection of the amount of highly liquid financial assets the bank holds that can be used to meet short-term obligations.

"From our perspective, looking at company financials at the end of

& Woods were putting the figure at SFr6bn. They argued that this would leave Credit Suisse, after asset sales, asking investors for SFr4bn of capital "to accommodate a clear growth plan and/or offset any unknowns such as litigation or client attrition fears".

For a bank whose market capitalisation has shrunk to SFr10bn in recent weeks following a 25 per cent share price drop, the prospect of going cap in hand to investors, who have already had to weather losses from scandals such as Archegos and Greensill, seems increasingly daunting.

Managers at the lender — which has said it will unveil a detailed plan for its stripped-down investment bank by the end of the month — are adamant that a capital raise would be a last resort.

"I want to be clear: we have not sounded out investors for capital," said a banker who spent the weekend calling top clients and counterparties trying to reassure them about the bank's health. "We will be doing asset sales and divestitures just so we can fund this very strong pivot we intend to achieve towards a stable business."

The bank plans to sell parts of its investment bank, potentially including its prized securitised products business, which analysts said could raise up to SFr2bn.

Credit Suisse managers had been forced into the charm offensive following a spike in spreads on the group's credit default swaps last week, which indicated that investors were becoming increasingly bearish on the group. Over the weekend, social media and web forums were awash with rumours about the bank's imminent collapse.

By Monday it had become clear that the bank's communication campaign had failed to calm jittery markets. Traders and investors rushed to sell Credit Suisse shares and bonds while buying CDS.

Credit Suisse's five-year CDS rose more than 100 basis points on Monday, with some traders quoting it as high as 350bp, according to quotes seen by the Financial Times. The bank's shares fell to historic lows of below SFr3.60, down close to 10 per cent when the market opened.

The two issues that appear of most concern to investors and social media commentators are the bank's capital position, which reflects its ability to absorb losses, and its liquidity levels, which would be put to the test in periods of short-term stress.

> Managers were forced into a charm offensive after a spike in spreads on the group's CDS

The bank insists that neither present a risk.

At its latest quarterly results in July, Credit Suisse reported a common equity tier one ratio, which reflects its financial resilience, of 13.5 per cent, well within its target of 13 to 14 per cent for this year. That is up from 11.4 per cent in 2015 and 12.9 per cent in 2020, and equates to SFr37bn of capital.

Compared with other European banks, Credit Suisse has a similar CET1 ratio to the likes of UBS, HSBC, Deutsche Bank and BNP Paribas.

On top of that, the bank has SFr15.7bn of additional tier one capital, which is raised from issuing contingent convertible bonds, or cocos, because they can be converted into equity in times of stress.

Credit Suisse raised $1.5bn of AT1 capital over the summer, with a bond offering that paid 9.75 per cent. While at the time the issuance looked pricey, the bank has since been downgraded by several credit agencies and the bond is trading at a 12.5 per cent yield.

In addition, at its last financial results, the bank had SFr44.2bn of "gone concern capital", which is additional capital required by the Swiss regulator to absorb losses without triggering a bankruptcy.

"We would need to burn through SFr97bn of capital before anything happens to clients or employees," said a Credit Suisse executive, totting up the CET1, AT1 and gone concern capital.

the second quarter, we see Credit Suisse's capital and liquidity position as healthy," said JPMorgan analyst Kian Abouhossein.

By the end of Monday, the bank's shareholders appeared calmed by the reassuring messages sent by analysts, even if there were increasingly loud calls for the unveiling of the new strategic plan to be brought forward. At the close of the market in Zurich, Credit Suisse shares had recovered to roughly where they had started the day at SFr4.

In Australia, an ABC journalist who had sent a widely circulated tweet on Saturday suggesting a large international investment bank was "on the brink" had deleted the post and his employer said it had reminded him of its social media guidelines.

**Credit Suisse tries to calm investors**


Sources: Refinitiv; Tradeweb; Citigroup



Technology

## Naver stock hit after $1.2bn Poshmark move

SONG JUNG-A — SEOUL

**Shares in Naver, South Korea's biggest internet group, dropped yesterday after it announced a $1.2bn deal to buy Poshmark, a US online clothing marketplace, as it pushes into the booming second-hand fashion market.**

The deal is Naver's biggest acquisition and its first foray into Silicon Valley as the South Korean company accelerates its global expansion.

But the size of the deal took investors by surprise, driving Naver shares down 8.8 per cent to their lowest point in more than two years. The shares have plunged more than 50 per cent this year as a result of a global tech sector rout.

Naver will buy all of Poshmark's shares for $17.90 each, a 15 per cent premium to Monday's closing price. Trading of Poshmark shares was halted on the news after surging 14 per cent in after-hours trading.

With the deal, Naver will be able to build its presence in the US online fashion "recommerce" market by coupling technological advances, including live streaming features popular in Asia, with Poshmark's social shopping platform and loyal customer base.

"The combination will create the strongest platform for powering communities and refashioning commerce," said Choi Soo-yeon, Naver's chief executive. "Naver's leading technology in search, AI recommendation and ecommerce tools will help power the next phase of Poshmark's global growth."

The US online fashion recommerce market is estimated at $80bn and is projected to expand by 20 per cent annually to $130bn by 2025, according to Activate Consulting.

Naver is South Korea's biggest online search engine, as well as offering internet services including games, webtoons, metaverse experiences and ecommerce. Poshmark has more than 80mn registered users across the US.

Poshmark will continue to be led by chief executive Manish Chandra. The company's shares have fallen in the past year and a half on concerns about slowing growth and weakening profitability. The company's gross merchandise value is expected to increase about 10 per cent this year after an average of 25 per cent in the past three years.

The size of the deal for the US online clothing marketplace was a surprise

But Naver expects Poshmark to regain its growth and profitability in the near future thanks to its robust user base and high retention rate.

"There is a difficult trade-off between growth and margins," Kim Nam-sun, Naver's chief financial officer, told analysts during a conference call yesterday. "But it will be hard to maintain the strategy of prioritising profitability at the expense of growth."

Naver said the timing of the deal was "appropriate" and its price was "attractive", despite the deteriorating global economic environment. The deal is expected to close by the first quarter of next year.

But analysts questioned the high price tag. "The deal looks expensive as Poshmark is likely to post about Won100bn ($70mn) of losses this year," said Oh Dong-hwan, an analyst at Samsung Securities. "It is especially so as all ecommerce companies are grappling with slowing growth after the pandemic-induced boom."

Earlier yesterday, Citigroup analysts downgraded Naver's stock to a sell rating, saying its price-to-earnings ratio was too high compared with its overseas rivals.

See Lex



COMPANIES & MARKETS

Fixed income. Volatility

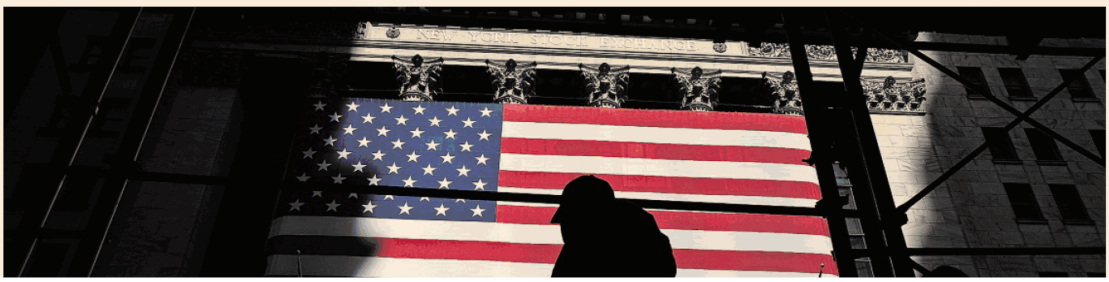
# Rising levels of stress in financial system increase 'accident' risks

US Treasuries, corporate bonds and money markets are increasingly stretched

ERIC PLATT AND KATE DUGUID
NEW YORK

Investors and Wall Street analysts are sounding the alarm about a possible 'market accident' as successive bouts of tumult in US stocks and bonds and a surging dollar cause rising levels of stress in the financial system.

A gauge of strain in US markets — produced by the Treasury's Office of Financial Research — has soared to its



highest level since the early pandemic ructions of March 2020.

Even as equities on Wall Street start the new quarter with gains, the OFR's Financial Stress index is near a two-year high at 3.1, where zero denotes normal market functioning. This has added to a growing list of benchmarks that suggest trading conditions in US government debt, corporate bonds and money markets are increasingly stretched.

"The velocity of things breaking around the world . . . is obviously a 'neon swan' telling us that we are clearly now in the market accident stage," said Charlie McElligott, a strategist at Nomura.

Rising concerns have been fuelled by a series of big rate increases by the US Federal Reserve to curb inflation.

Higher borrowing costs and fears of an economic slowdown have led a steep sell-off in public markets while strengthening the US currency to the detriment of its global peers.

Rate rises by the European Central Bank and the Bank of England — as well as aborted tax plans by the UK government — have also amplified swings in the market this year as global policymakers attempt to rein in price growth.

"When financial conditions tighten this much, everyone is looking for who or what will be the cause for central banks to blink," said Michael Edwards, deputy chief investment officer of hedge fund Weiss Multi-Strategy Advisers.

"They [the Fed] are determined to get financial conditions tighter, and [because] the economy is very strong . . . they have to use funding markets as the transmission mechanism. So someone will get hurt," he said.

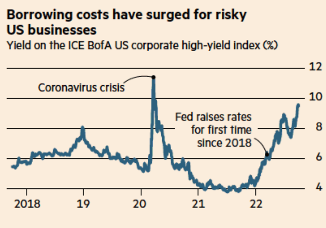
McElligott pointed to the 20 per cent slide in the Japanese yen this year, a sell-off in British sovereign debt in recent weeks, and a smattering of loans stuck on banks' balance sheets that lenders are unable to offload to investors even with deep discounts as signs of strains in markets.

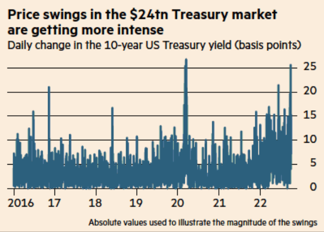
He added that the strength of the dollar was "causing tremendous strains economically . . . and, increasingly, metastasising in markets".

Market stress means that markets are not operating as they should: companies aren't easily able to obtain funding, it is harder to buy and sell securities, prices are volatile and investors are less willing to take on risk.

Conditions have been deteriorating all year but until late it has been evident primarily in the stock market, where

Flagging confidence: conditions have been deteriorating all year but until recently it has been evident primarily in the stock market — Spencer Platt/Getty


valuations have dropped precipitously as borrowing costs have risen and the prospects of growth have been slashed.

Private companies have been unable to list their shares publicly and banks have had to withdraw planned debt financings for their clients after investors refused to open their cheque books.

Last month, banks were forced to hold $6.5bn of debt funding the buyout of software maker Citrix on their own balance sheets after they failed to find willing buyers for the debt.

"This is a story about boiling lobsters," said George Goncalves, head of US macro strategy at MUFG. "You put them in cold water and slowly turn the heat up. That is what is happening in markets. The Fed is turning up the heat. But because the market is still flush with liquidity, it's not yet clear where the weakness is."

JPMorgan Chase economist Bruce Kasman on Friday said the relative health of the banking system and small financing needs for much of the corporate world meant the vulnerabilities to the financial system remained low.

However, the US bank warned that the increase in the OFR's index is evidence of the broader spread of stress throughout financial markets — and decreased appetite for risk — wrought by the strong dollar and higher US interest rates.

'This is a story about boiling lobsters. You put them in cold water and slowly turn the heat up'

"Risks to global financial stability are an increasingly known unknown for the outlook," Kasman said.

The corporate bond market is also showing increasing signs of strain, according to Marty Fridson, chief investment officer at Lehmann, Livian, Fridson Advisors.

Fridson noted that the premium investors demanded to hold risky, junk-rated corporate debt over haven Treasuries has increased significantly over the past month.

By his calculations, the junk bond market now reflects a 22 per cent chance of recession, up from just 2 per cent in mid-September.

Corporate defaults more than doubled from July to August, according to rating agency Moody's. Strategists with Bank of America warned on Friday that their gauge measuring stress in the credit market was at a "borderline critical level" and that "market dysfunction starts" if it rises much further.

Separately, a Goldman Sachs index that measures market impairments and dislocations is being driven higher by stress in funding markets as well as heightened volatility in the $24tn US government debt market.

The 10-year Treasury yield, which is a benchmark for borrowing costs worldwide, has risen this year from about 1.5 per cent to 3.6 per cent — and last week it briefly breached 4 per cent for the first time in 12 years.

Volatility in that market has also reached the highest level since the coronavirus-induced ructions of 2020, according to the Ice BofA Move index.

The volatility can also be seen on a day-to-day basis — the biggest move in the 10-year Treasury in 2021 was a 0.16 percentage point drop on November 26. There have been seven days so far this year with bigger moves.

While policymakers at the Fed remain steadfast in raising rates, they too are on the lookout for potential dangers from the market drawdown.

"As monetary policy tightens globally to combat high inflation, it is important to consider how cross-border spillovers and spillbacks might interact with financial vulnerabilities," Lael Brainard, the Fed's vice chair, said on Friday. "We are attentive to financial vulnerabilities that could be exacerbated by the advent of additional adverse shocks."



Fixed income

# Retreat from bond funds with illiquid assets threatens stability, IMF warns

**ADRIENNE KLASA AND GEORGE HAMMOND**

The IMF has warned that a surge of outflows from funds allowing frequent investor withdrawals but holding harder to sell assets could amplify market stress and "potentially undermine the stability of the financial system".

Withdrawals from open-ended bond funds have increased in recent months, the IMF noted, and another shock could "trigger further outflows" with a mismatch between redemptions and illiquid holdings posing a "major potential vulnerability".

The international body singled out less frequently traded securities such as corporate bonds, emerging market assets and real estate as most at risk during periods of market volatility when investors can move to sell in unison.

"Pressures from these investor runs could force funds to sell assets quickly, which would further depress valuations," the IMF wrote in a blog post yesterday.

"That, in turn, would amplify the impact of the initial shock and potentially undermine the stability of the financial system," it added.

A number of UK property funds moved this week to limit withdrawals in a sign of how strategies based on harder to trade assets struggle when convulsing equity and bond markets compel investors to rush for the exit.


The IMF has pointed to worries with emerging market corporate bonds

Open-ended funds have grown to manage about $41tn in assets, or one-fifth of holdings managed by the financial sector outside of banks, in the past two years.

Most of these funds invest in relatively easy to trade assets such as stocks and bonds but the desire to allow investors to diversify has led to the expansion of funds with exposures to less liquid holdings.

These dynamics can also be damaging to emerging markets where liquidity already tends to be weaker even in more stable periods.

"A decline in the liquidity of funds domiciled in advanced economies can have significant cross-border spillover effects and increase the return volatility of emerging market corporate bonds," the IMF said.

Concerns about open-ended funds are not new.

Property funds came under fire in 2016 and again in 2020 when the respective shocks of the Brexit vote and the outbreak of the pandemic forced a number of them to gate, locking in tens of billions of pounds of investor funds.

Fixed income

# JPMorgan declines to add India to widely followed global debt index

**JONATHAN WHEATLEY** — LONDON
**HUDSON LOCKETT** — HONG KONG

JPMorgan has excluded India from a widely followed bond index until at least next year after investors raised concerns about the domestic market's ability to handle the large volume of capital inflows expected to follow.

India's rupee-denominated bonds had been on "positive watch" for a year, prompting expectations among some analysts and investors that a decision would be made this month to add the debt to the GBI-EM Global Diversified index with inclusion to follow in 2023.

Inclusion would have allowed a big chunk of India's $1tn rupee-denominated bond market to join the index at a weighting of up to 10 per cent, opening the door to a potential $20bn to $30bn of inflows.

JPMorgan's decision not to include the bonds was due to investor concerns over India's market infrastructure, according to a person familiar with the matter.

Gloria Kim, head of index research at JPMorgan, said India's market had "made significant strides in easing the access for foreign portfolio investors . . . [We] will continue to engage with the regulators and market participants and gather feedback on sufficient resolutions for the remaining hurdles".

The bank opened consultations from the middle of this year with fund managers handling about 85 per cent of the $240bn in assets that follow the benchmark.

Managers "overwhelmingly" voiced concerns about India's lengthy investor registration process and the ability of its market utilities to handle the volume of trade clearing, settlement and custody that would follow inclusion, the person familiar with the process said.

'We will continue to engage with the regulators and gather feedback on the remaining hurdles'

The person added that India was likely to remain on "index watch" — without the positive outlook of its previous status — for a further six to nine months.

A strategist at one western investment bank in Asia said foreign investors were concerned about India's capacity to handle clearing and settlement, particularly on the matter of trade matching, which ensures that buy and sell orders from both parties in a transaction line up.

Important parts of this process are still handled manually in India, such as matching the time stamp down to the minute and size of a trade to two decimal places, with discrepancies resulting in the cancellation of a transaction.

Another major challenge has been where and how bond trading should be settled — whether outside India's borders on a platform such as Euroclear, which is familiar to global financial institutions, or in India.

An exemption to capital gains tax for foreign investors, which would have paved the way for easier settlement at Euroclear, had been anticipated by analysts ahead of this year's fiscal announcements in February but failed to materialise.

"With operational issues, it's always a work in progress," the strategist said. "It's an emerging market . . . you're not trading US Treasuries."

**See Lex**



COMPANIES & MARKETS

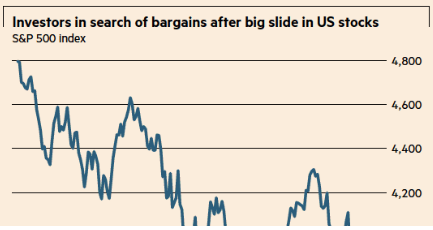
## The day in the markets

### What you need to know

- **Wall Street stocks extend rally after streak of quarterly losses**
- **Traders hope for pivot from potential rate increases as economic activity cools**
- **US Treasuries attract buyers while gilts and sterling also rally**

US stocks rallied sharply for the second day as investors scooped up bargains after the longest streak of quarterly declines since 2008 and weak economic data eased worries over Federal Reserve rate increases.

The S&P 500 added 2.7 per cent in morning trading in New York, having




# Volatility virus strikes again with flash crash in gilts

Eric Lonergan

Markets Insight

Whatever one's view of the UK government's so called "mini" Budget, the bond market crash

"risk categories". Low, medium and high risk are typically defined by ranges of expected portfolio volatility.

Why does any of this matter? Crashes

rise rapidly, and bond prices to fall. Such bond yield rises have meant future company profits are discounted at a higher rate just as the probability of morning trading in New York, having closed 2.6 per cent higher on Monday.

The technology-heavy Nasdaq Composite rose 3.2 per cent. Elsewhere, the pan-regional Stoxx Europe 600 closed up more than 3 per cent.

The rally comes after three straight quarters of declines for the S&P 500, as the Fed has led the charge on raising interest rates aggressively to curb stubbornly high inflation.

Higher borrowing costs and fears of the Fed inducing a recession with tighter monetary policy have weighed heavily on share prices.

But with the S&P 500 down 21 per cent so far this year, some analysts and investors are pointing to opportunities to buy stocks on the cheap.

"We turn tactically bullish equities for a [fourth-quarter] sharp rally," analysts at Cantor Fitzgerald said this week. "We believe that inflation is falling sharply as we speak and will soon be recognised by the Fed," they added.

Employment data from the Bureau of Labor Statistics provided further encouragement to investors yesterday that the Fed would slow its interest rate rises. The number of job openings in the US dropped in August to 10.1mn, below economists' expectations of 10.8mn and the previous figure of 11.2mn.

Markets were yesterday pricing in expectations of US interest rates reaching just under 4.5 per cent by March 2023, down from estimates of almost 4.7 per cent in late September.

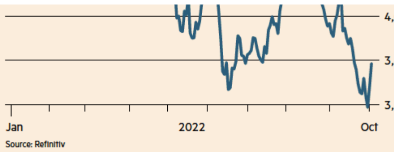
Government bond prices rose following gains in the previous session with the yield on the 10-year US Treasury note slipping 4 basis points to 3.6 per cent.

The two-year yield, which is more sensitive to changes in interest rate expectations, lost 2bp to 4.08 per cent.

UK gilts rallied more sharply with the 10-year yield falling 8bp to 3.87 per cent.

The gilt market was last week gripped by volatility after Westminster's proposed tax cuts and extensive borrowing plans spooked investors and sparked a historic sell-off in long-dated debt.

The pound advanced 1.1 per cent to $1.14 against the dollar, back to levels last seen before chancellor Kwasi Kwarteng unveiled his "mini" Budget 11 days ago.
**Ian Johnston and Harriet Clarfelt**



Source: Refinitiv

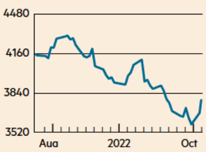
## Markets update

| | US | Eurozone | Japan | UK | China | Brazil |
|---|---|---|---|---|---|---|
| **Stocks** | **S&P 500** | **Eurofirst 300** | **Nikkei 225** | **FTSE100** | **Shanghai Comp** | **Bovespa** |
| Level | 3783.16 | 1596.78 | 26992.21 | 7086.46 | 3024.39 | 117033.63 |
| % change on day | 2.85 | 3.18 | 2.96 | 2.57 | -0.55 | 0.77 |
| **Currency** | **$ index (DXY)** | **$ per €** | **Yen per $** | **$ per £** | **Rmb per $** | **Real per $** |
| Level | 110.989 | 0.996 | 144.455 | 1.140 | 7.091 | 5.140 |
| % change on day | -0.677 | 1.426 | -0.007 | 1.064 | 0.000 | -0.855 |
| **Govt. bonds** | **10-year Treasury** | **10-year Bund** | **10-year JGB** | **10-year Gilt** | **10-year bond** | **10-year bond** |
| Yield | 3.613 | 1.864 | 0.227 | 3.871 | 2.756 | 12.431 |
| Basis point change on day | -0.080 | -4.900 | -1.250 | -8.800 | 0.000 | 11.800 |
| **World index, Commods** | **FTSE All-World** | **Oil - Brent** | **Oil - WTI** | **Gold** | **Silver** | **Metals (LMEX)** |
| Level | 383.47 | 92.03 | 86.74 | 1668.40 | 19.42 | 3537.20 |
| % change on day | 3.13 | 3.57 | 3.72 | -0.20 | 2.08 | -0.11 |

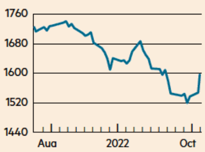
Yesterday's close apart from: Currencies = 16:00 GMT; S&P, Bovespa, All World, Oil = 17:00 GMT; Gold, Silver = London pm fix. Bond data supplied by Tullett Prebon.

## Main equity markets

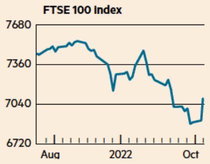
S&P 500 index




Eurofirst 300 index




FTSE 100 index




### Biggest movers

| % | US | | Eurozone | | UK | |
|---|---|---|---|---|---|---|
| Ups | Norwegian Cruise Line Holdings Ltd | 13.90 | Thyssenkrupp | 8.68 | Flutter Entertainment | 9.24 |
| | Royal Caribbean | 13.27 | Alstom | 7.04 | Ocado | 8.87 |
| | Carnival | 13.21 | Santander | 6.98 | Intermediate Capital | 8.37 |
| | Illumina | 9.69 | Raiffeisen Bank Internat | 6.46 | Int Consolidated Airlines S.a. | 7.90 |
| | American Airlines | 8.98 | Axa | 6.41 | Hargreaves Lansdown | 7.33 |
| Downs | Welltower | -1.77 | Edp | -0.79 | Centrica | -0.92 |
| | Teleflex | -0.96 | Atlantia | -0.04 | Sse | -0.83 |
| | Essex Property Trust | -0.82 | Kpn | 0.07 | Aveva | -0.38 |
| | Regeneron Pharmaceuticals | -0.60 | Danske Bank | 0.11 | British Land | -0.37 |
| | Mid-america Apartment Communities | -0.34 | Edf | 0.13 | Segro | -0.34 |

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

**Twitter** jumped following a report that Elon Musk would go through and buy the social media platform.

Bloomberg, quoting people familiar with the matter, said the Tesla chief had made a proposal in a letter addressed to Twitter for his original $54.20 a share offer.

Musk had been trying to back out of buying the network for months in a dispute that was scheduled to be settled in court this year.

Shares rose about 13 per cent to $48 before being halted.

A reassuring update sent **Rivian** rallying. The electric truck and van maker said it delivered 6,584 vehicles for the quarter ending September 30, up from 4,467 vehicles for the previous quarter and on track to hit its annual production target of 25,000 units.

Another auto group, **Ford**, climbed on news that its electric vehicles sales had tripled in September, outpacing the segment, it said.

Online clothes marketplace **Poshmark** rose sharply on announcing it was being bought by South Korean internet group Naver for $17.90 a share — a 15 per cent premium on Monday's closing price.

The deal, which was expected to close by the first quarter of 2023, gave the Californian reseller an enterprise value of $1.2bn. *Ray Douglas*

## Europe

France's **M6** fell sharply on news that media conglomerate Bertelsmann had decided to retain its controlling stake in the TV broadcaster.

The German group said it had "received several financially attractive offers for its 48.3 per cent" holding but "considered the legal risks and uncertainties to be too high".

A boost in funding helped lift Norway's **Nel** with the renewable energy group announcing that it had been granted $5.6mn from the US Department of Defence.

The money was earmarked for a 19-month project aimed at accelerating the development of renewable hydrogen generation for industrial applications.

Belgium pharma product developer **Ion Beam Applications** rallied following news that it had secured a contract to install a radiopharmaceutical production centre in Georgia.

KBC Securities noted that, while the contract was small, estimated to be below €5mn, it reconfirmed IAB's "ongoing momentum across the different divisions".

Swiss chemical company **Sika** jumped after upgrading its fiscal-year sales outlook and revealing that it was in the process of looking for a "competent buyer" for part of its admixture business.
*Ray Douglas*

## London

**Watkin Jones** tumbled following a profit warning in which the developer of residential rental homes said that underlying operating profit would be "around 10 per cent below current market expectations" for the full year.

Management said it saw "some pricing and margin softness on sales concluded in the second half, with purchasers facing increased funding costs".

Yesterday's steep slide reflected "concerns on the sensitivity of its customer to the rising rate environment", said Jefferies.

Online furniture retailer **Made.com** surged after disclosing that it had "begun discussions with a number of interested parties regarding the sale of the group".

A solid third-quarter update lifted baker **Greggs**, which posted a 9.7 per cent rise in like-for-like sales in company-managed shops compared with the same period in 2021.

Greggs left its full-year guidance unchanged, suggesting that the company had "managed its cost base effectively" in the face of inflationary pressures, said Danni Hewson, AJ Bell analyst.

**Hargreaves Lansdown** climbed following a ratings upgrade by Jefferies, which raised the investment platform from "underperform" to "hold" on the grounds that it remained a "good and highly profitable business". *Ray Douglas*

the bond market crash last week exaggerated its significance. It is true that the Bank of England may need to raise interest rates more than it would have otherwise, although even this is highly uncertain.

But what is clear is that the current government will be fortunate to survive another two years, not 30. So how can one explain market expectations for interest rates over 30 years rising from 2.5 per cent in August to in excess of 5 per cent last week?

The proximate cause of this latest panic appears to be collateral calls on UK pension funds to cover losses on hedges of their liabilities. But rapid falls in market prices, or "flash crashes", are occurring with increasing frequency. Each post mortem reveals a different strategy or market participant being forced to sell. But there is a deeper cause.

The biggest structural change in investor behaviour in the last 30 years is the near universal adoption of volatility as a measure of risk. Volatility is simply the standard deviation of the price of a security or market or how much the price moves away from its mean in a given time period.

It is rarely appreciated that volatility is relevant to a universe of investors far beyond those funds that explicitly seek to exploit volatility for returns.

It is a relevant factor to almost all the large pools of capital in financial markets. Virtually all risk-management tools, used globally across all the big financial institutions, measure portfolio risk based on volatility.

Even financial advisers categorise people in the retail market according to

Why does any of this matter? Crashes are caused by correlated investor behaviour — the herd. If investors act in unison trying to sell an asset, the price has to move a great deal for the market to clear. If vast swaths of financial capital are shrinking portfolios in response to rising volatility, this will beget higher volatility and dramatic swings in price. This process is now embedded in financial market behaviour.

Such dynamics have been compounded in major asset classes by a

> Risk management in fact amplifies the simplest of responses — when prices fall, most people panic

fundamental change in the correlation between bonds and equities. To understand a portfolio's volatility, you also need to make assumptions about the correlation of the main components.

Consistently during the last 30 years, government bonds have been negatively correlated with equity markets during phases of steep and persistent stock market declines.

Owning government bonds has acted like owning an insurance policy against the stock market. During steep declines in equity markets, bond prices have typically risen, damping the volatility of overall portfolios.

This year, that correlation has changed. A sustained inflation problem and a huge shock to interest rate expectations has caused global yield curves to

higher rate just as the probability of recession is rising, causing double-digit declines in stock markets. Far from acting like diversifying insurance policies, adding bonds to an equity portfolio has acted like adding leverage.

If everyone now targets volatility, there is a persistent source of herd behaviour, so price crashes become a permanent feature of financial markets.

The roots of this intellectual virus are strong: it is deeply embedded in modern financial economics, it is facilitated by technology, and it amplifies behavioural biases and investor emotion.

The great economist Frank Knight did untold damage when for convenience rather than accuracy he defined "risk" as a measurable probability and "uncertainty" as unmeasurable. Most risk, properly understood, is not measurable.

Finance theory, with insufficient reflection, took Knight's arbitrary line as gospel and concluded that the only measure required is market price.

Feeding technology with almost limitless time series of data, it is little surprise that the financial system is transformed. The deepest irony is that the quantitative "science" of risk management in fact amplifies the simplest of human emotional responses — when prices start falling, most people panic.

This backdrop suggests that the timing of this cavalier interim Budget explains much of its impact. Attempts to re-establish fiscal credibility may help at the margins but the real forces at work in this market lie elsewhere.

*Eric Lonergan is a fund manager at M&G and author of 'Supercharge Me: Net Zero Faster'*





# 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 $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2.85% | 3.28% | 2.58% | 2.57% | 3.18% | 2.96% | -0.83% | 3.13% | 1.426% | 1.064% | -0.007% | 0.345% | 1.64% | -0.20% |

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

AMERICAS

Sep 05 - - — Index — All World
S&P 500 New York

Sep 05 - Oct 04 — Index — All World
S&P/TSX COMP Toronto

EUROPE

Sep 05 - Oct 04 — Index — All World
FTSE 100 London

Sep 05 - Oct 04 — Index — All World
Xetra Dax Frankfurt

ASIA

Sep 05 - Oct 04 — Index — All World
Nikkei 225 Tokyo

Sep 05 - Oct 04 — Index — All World
Kospi Seoul

3,924.26 3,783.16 Day 2.85% Month -10.61% Year -14.73% | 19,270.85 19,284.03 Day 2.72% Month -3.71% Year -5.49% | 7,281.19 7,086.46 Day 2.57% Month -6.13% Year 2.66% | 12,760.78 12,670.48 Day 3.78% Month -3.19% Year NaN% | 27,661.47 26,992.21 Day 2.96% Month -6.71% Year -11.51% | 2,403.68 2,209.38 Day 2.50% Month -11.37% Year -29.65%

Nasdaq Composite New York | IPC Mexico City | FTSE Eurofirst 300 Europe | Ibex 35 Madrid | Hang Seng Hong Kong | FTSE Straits Times Singapore

11,630.86 11,170.59 Day 3.28% Month -12.18% Year -25.83% | 45,888.63 45,782.12 Day 1.08% Month -5.31% Year -10.56% | 1,632.93 1,596.78 Day 3.18% Month -7.40% Year -8.84% | 7,862.70 7,696.60 Day 3.14% Month -7.69% Year -12.14% | 19,452.09 17,079.51 Day -0.83% Month -13.61% Year -31.46% | 3,215.48 3,138.90 Day 1.02% Month -3.38% Year 2.14%

Dow Jones Industrial New York | Bovespa São Paulo | CAC 40 Paris | FTSE MIB Milan | Shanghai Composite Shanghai | BSE Sensex Mumbai

| Country | Index | Latest | Previous |
|---|---|---|---|
| | FTSE B35 | 9000.71 | 8988.96 |
| | Shanghai A | 3169.60 | 3187.27 |
| | Shanghai B | 283.63 | 284.04 |
| | Shanghai Comp | 3024.39 | 3041.20 |
| | Shenzhen A | 2000.08 | 2026.46 |
| | Shenzhen B | 1136.38 | 1148.10 |
| Colombia | COLCAP | 1261.61 | 1260.21 |
| Croatia | CROBEX | 2013.05 | 2011.29 |
| Hong Kong | Hang Seng | 17079.51 | 17222.83 |
| | HS China Enterprise | 5856.82 | 5914.08 |
| | HSCC Red Chip | 3365.78 | 3338.65 |
| Hungary | Bux | 39911.20 | 38420.33 |
| India | BSE Sensex | 58065.47 | 56751.79 |
| | Nifty 500 | 14965.80 | 14638.50 |
| Indonesia | Jakarta Comp | 7072.26 | 7009.72 |
| Ireland | ISEQ Overall | 6695.92 | 6340.01 |
| Israel | Tel Aviv 125 | 1839.71 | 1883.93 |
| Malaysia | FTSE Bursa KLCI | 1409.36 | 1397.62 |
| Mexico | IPC | 45922.12 | 45429.75 |
| Morocco | MASI | 11613.11 | 11613.11 |
| Netherlands | AEX | 669.59 | 645.80 |
| | AEX All Share | 913.36 | 881.88 |
| New Zealand | NZX 50 | 11090.03 | 10959.45 |
| Nigeria | SE All Share | 49171.70 | 49161.45 |
| Norway | Oslo All Share | 1017.37 | 1006.88 |
| Pakistan | KSE 100 | 41350.43 | 41211.70 |
| | FTSE/JSE Top 40 | 59839.46 | 57849.66 |
| South Korea | Kospi | 2209.38 | 2155.49 |
| | Kospi 200 | 288.27 | 281.36 |
| Spain | IBEX 35 | 7696.60 | 7462.00 |
| Sri Lanka | CSE All Share | 9237.05 | 9649.86 |
| Sweden | OMX Stockholm 30 | 1909.64 | 1839.51 |
| | OMX Stockholm AS | 735.97 | 710.63 |
| Switzerland | SMI Index | 10590.92 | 10290.71 |
| | Nasdaq 100 | 11582.98 | 11229.73 |
| | Nasdaq Cmp | 11170.59 | 10815.44 |
| | NYSE Comp | 14278.24 | 13855.72 |
| | S&P 500 | 3783.16 | 3678.43 |
| | Wilshire 5000 | 37860.47 | 36744.59 |
| Venezuela | IBC | 8689.58 | 8680.79 |
| Vietnam | VNI | 1078.14 | 1086.44 |
| | FTSEurofirst 80 (Eur) | 4777.78 | 4589.60 |
| | MSCI ACWI Fr ($) | 563.99 | 553.37 |
| | MSCI All World ($) | 2429.91 | 2378.65 |
| | MSCI Europe (Eur) | 1575.30 | 1565.33 |
| | MSCI Pacific ($) | 2325.19 | 2305.99 |
| | S&P Euro (Eur) | 1589.58 | 1528.16 |
| | S&P Europe 350 (Eur) | 1635.52 | 1584.80 |
| | S&P Global 1200 ($) | 2760.26 | 2675.98 |
| | Stoxx 50 (Eur) | 3444.02 | 3347.44 |

(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 | 114.8 | 255.49 | 13.09 |
| Apple | 59.7 | 145.28 | 2.83 |
| Microsoft | 39.3 | 248.54 | 7.80 |
| Nvidia | 36.8 | 132.08 | 6.96 |
| Amazon.com | 36.7 | 122.55 | 6.67 |
| Advanced Micro Devices | 26.5 | 68.63 | 2.52 |
| Netflix | 20.7 | 239.14 | 0.10 |
| Alphabet | 11.6 | 101.30 | 2.66 |
| Alphabet | 9.6 | 102.17 | 2.87 |
| Exxon Mobil | 9.2 | 94.37 | 2.45 |

| BIGGEST MOVERS | Close price | Day's change | Day's chng% |
|---|---|---|---|
| **Ups** | | | |
| Norwegian Cruise Line Holdings Ltd | 12.99 | 1.59 | 13.90 |
| Royal Caribbean | 42.58 | 4.99 | 13.27 |
| Carnival | 7.76 | 0.91 | 13.21 |
| Illumina | 205.39 | 18.15 | 9.69 |
| American Airlines | 12.99 | 1.07 | 8.98 |
| **Downs** | | | |
| Welltower | 64.22 | -1.16 | -1.77 |
| Teleflex | 206.51 | -2.00 | -0.96 |
| Essex Property Trust | 244.78 | -2.02 | -0.82 |
| Regeneron Pharmaceuticals | 730.72 | -4.41 | -0.60 |
| Mid-america Apartment Communities | 158.05 | -0.54 | -0.34 |

Based on the constituents of the S&P500

### LONDON

| ACTIVE STOCKS | stock traded m's | close price | Day's change |
|---|---|---|---|
| Glencore | 300.9 | 500.80 | 14.25 |
| Shell | 236.8 | 2338.00 | 38.50 |
| Hsbc Holdings | 233.6 | 481.95 | 20.55 |
| Bp | 212.7 | 454.50 | 11.80 |
| Astrazeneca | 205.3 | 9958.00 | 152.00 |
| Diageo | 144.6 | 3791.50 | 84.00 |
| Unilever | 135.1 | 3963.00 | 86.50 |
| Flutter Entertainment | 119.3 | 10590.00 | 896.00 |
| Lloyds Banking | 111.7 | 43.12 | 1.34 |
| Reckitt Benckiser | 109.0 | 5966.00 | 40.00 |

| BIGGEST MOVERS | Close price | Day's change | Day's chng% |
|---|---|---|---|
| **Ups** | | | |
| Just | 64.80 | 6.60 | 11.34 |
| Liontrust Asset Management | 828.00 | 83.00 | 11.14 |
| Greggs | 1901.00 | 178.00 | 10.33 |
| Currys | 63.95 | 5.95 | 10.26 |
| Aj Bell | 306.40 | 27.80 | 9.98 |
| **Downs** | | | |
| Drax | 571.00 | -31.50 | -5.23 |
| Aston Martin Lagonda Global Holdings | 107.55 | -2.30 | -2.09 |
| Derwent London | 2022.00 | -40.00 | -1.94 |
| Balanced Commercial Property Trust | 79.40 | -1.50 | -1.85 |
| Hikma Pharmaceuticals | 1338.00 | -19.50 | -1.44 |

Based on the constituents of the FTSE 350 index

### EURO MARKETS

| ACTIVE STOCKS | stock traded m's | close price | Day's change |
|---|---|---|---|
| Roche Gs | 633.4 | 340.57 | 10.90 |
| Bbva | 374.5 | 4.90 | 0.22 |
| Nestle N | 359.8 | 110.01 | 1.04 |
| Asml Holding | 351.4 | 465.85 | 24.55 |
| Novartis N | 310.5 | 78.78 | 1.01 |
| Totalenergies | 213.6 | 51.48 | 1.72 |
| Unicredit | 213.3 | 11.06 | 0.36 |
| Lvmh | 201.3 | 644.40 | 36.40 |
| Eni | 194.2 | 11.54 | 0.30 |
| Intesa Sanpaolo | 182.2 | 1.79 | 0.05 |

| BIGGEST MOVERS | Close price | Day's change | Day's chng% |
|---|---|---|---|
| **Ups** | | | |
| Cs N | 4.39 | 0.36 | 8.86 |
| Santander | 2.64 | 0.17 | 6.98 |
| Essilorluxottica | 152.10 | 9.85 | 6.92 |
| Adyen | 1398.40 | 84.60 | 6.44 |
| Axa | 23.66 | 1.43 | 6.41 |
| **Downs** | | | |
| Orsted A/s Dk 10 | 11.38 | -0.28 | -2.41 |
| Vonovia Se Na O.n. | 22.53 | -0.27 | -1.18 |
| Mowi | 13.45 | -0.15 | -1.12 |
| Edf | 11.95 | 0.02 | 0.13 |
| Orange | 9.44 | 0.02 | 0.17 |

Based on the constituents of the FTSEurofirst 300 Eurozone index

### TOKYO

| ACTIVE STOCKS | stock traded m's | close price | Day's change |
|---|---|---|---|
| Softbank . | 959.2 | 5235.00 | 254.00 |
| Tokyo Electron | 787.6 | 38340.00 | 1000.00 |
| Toyota Motor | 785.4 | 2004.00 | 62.50 |
| Sony | 648.4 | 9749.00 | 240.00 |
| Nintendo Co., | 632.3 | 6050.00 | 230.00 |
| Fast Retailing Co., | 529.7 | 77860.00 | 1540.00 |
| Nippon Yusen Kabushiki Kaisha | 469.6 | 2609.00 | 10.00 |
| Keyence | 450.6 | 50250.00 | 1820.00 |
| Mitsubishi Ufj Fin,. | 445.8 | 668.20 | 20.20 |
| Mitsui O.s.k.lines, | 441.7 | 2776.00 | 44.00 |

| BIGGEST MOVERS | Close price | Day's change | Day's chng% |
|---|---|---|---|
| **Ups** | | | |
| Itochu | 3859.00 | 297.00 | 8.34 |
| Nippon Sheet Glass , | 581.00 | 42.00 | 7.79 |
| Marubeni | 1374.00 | 90.50 | 7.05 |
| Sumitomo (sumitomo Shoji Kaisha) | 1930.00 | 105.00 | 5.75 |
| Tokyo Electric Power ,orporated | 473.00 | 25.00 | 5.58 |
| **Downs** | | | |
| Kawasaki Kisen Kaisha, | 2109.00 | -21.00 | -0.99 |
| Eisai Co., | 7464.00 | 3.00 | 0.04 |
| Nippon Yusen Kabushiki Kaisha | 2609.00 | 10.00 | 0.38 |
| Mazda Motor | 986.00 | 6.00 | 0.61 |
| Sumitomo Dainippon Pharma Co Ltd | 1034.00 | 8.00 | 0.78 |

Based on the constituents of the Nikkei 225 index

## UK MARKET WINNERS AND LOSERS

| FTSE 100 | Oct 04 price(p) | %Chg week | %Chg ytd |
|---|---|---|---|
| **Winners** | | | |
| Fresnillo | 829.80 | 16.3 | -5.7 |
| Burberry | 1911.50 | 13.5 | 5.0 |
| Ashtead | 4345.00 | 11.6 | - |
| Anglo American | 2917.00 | 10.4 | -3.4 |
| Land Securities | 530.00 | 9.2 | - |
| Segro | 754.00 | 8.6 | - |
| Persimmon | 1303.50 | 7.9 | - |
| Unite | 880.00 | 7.6 | - |
| Rolls-royce Holdings | 74.47 | 7.6 | - |
| Spirax-sarco Eng | 10830.00 | 6.9 | -32.5 |
| Berkeley Holdings (the) | 3466.00 | 6.9 | - |
| Rio Tinto | 5089.00 | 6.4 | 3.9 |
| **Losers** | | | |
| Ocado | 507.00 | -6.3 | - |
| Next | 5030.00 | -4.6 | - |
| Sainsbury (j) | 180.60 | -4.5 | - |
| British American Tobacco | 3258.50 | -3.4 | 19.1 |
| M&g | 173.05 | -3.4 | - |
| Centrica | 71.40 | -3.4 | 0.0 |
| Barclays | 150.74 | -3.3 | - |
| Unilever | 3963.00 | -2.8 | -0.3 |
| Tesco | 210.00 | -2.8 | - |
| Hsbc Holdings | 481.95 | -2.8 | 7.5 |
| Frasers | 688.50 | -2.7 | - |
| Auto Trader | 535.80 | -2.5 | -27.3 |

| FTSE 250 | Oct 04 price(p) | %Chg week | %Chg ytd |
|---|---|---|---|
| **Winners** | | | |
| Telecom Plus | 2260.00 | 32.6 | 40.6 |
| Essentra | 220.00 | 24.9 | - |
| Warehouse Reit | 124.00 | 16.5 | - |
| Puretech Health | 245.50 | 15.3 | - |
| Bluefield Solar ome Fund | 139.00 | 14.9 | 12.3 |
| Tp Icap | 204.00 | 14.0 | 33.7 |
| Great Portland Estates | 460.00 | 12.4 | -0.1 |
| Travis Perkins | 829.00 | 12.3 | -48.5 |
| Supermarket ome Reit | 108.50 | 12.3 | - |
| Gcp Infrastructure Investments | 103.60 | 12.1 | -5.0 |
| Int Public Partnerships Ld | 159.40 | 11.8 | -5.6 |
| Sdcl Energy Efficiency ome Trust | 107.00 | 11.5 | -9.5 |
| **Losers** | | | |
| Aston Martin Lagonda Global Holdings | 107.55 | -28.2 | - |
| Carnival | 580.00 | -21.7 | - |
| Synthomer | 115.40 | -17.0 | - |
| Mitchells & Butlers | 117.90 | -15.7 | -53.0 |
| Tui Ag | 114.95 | -14.0 | - |
| Wizz Air Holdings | 1523.00 | -9.4 | - |
| Drax | 571.00 | -8.4 | -6.8 |
| Bh Macro | 4580.00 | -8.1 | 21.2 |
| 888 Holdings | 100.60 | -6.9 | - |
| Wetherspoon ( J.d.) | 419.60 | -6.5 | - |
| Games Workshop | 6025.00 | -6.2 | - |
| Rathbones | 1696.00 | -6.1 | - |

| FTSE SmallCap | Oct 04 price(p) | %Chg week | %Chg ytd |
|---|---|---|---|
| **Winners** | | | |
| Pharos Energy | 22.70 | 16.4 | -9.9 |
| Picton Property ome Ld | 82.10 | 14.0 | - |
| Residential Secure ome | 103.50 | 13.0 | -4.1 |
| Abrdn Eur Logistics ome | 86.00 | 12.9 | - |
| Custodian Reit | 98.00 | 12.8 | -6.8 |
| Hochschild Mining | 60.95 | 12.6 | - |
| Abrdn Property ome Trust | 63.40 | 12.2 | - |
| Schroder Real Estate Investment Trust | 45.50 | 10.8 | - |
| Avon Protection | 1094.00 | 10.5 | -4.5 |
| Ao World | 48.90 | 10.4 | - |
| Prs Reit (the) | 92.70 | 10.1 | - |
| Jpmorgan Mid Capital Investment Trust | 854.00 | 10.1 | - |
| **Losers** | | | |
| Lsl Property Services | 251.00 | -19.3 | - |
| Secure Trust Bank | 790.00 | -14.1 | -40.0 |
| Xaar | 175.00 | -12.1 | -2.8 |
| Saga | 90.90 | -10.7 | -66.3 |
| Pod Point Holdings | 55.65 | -10.6 | - |
| Foresight Holdings | 377.00 | -10.1 | - |
| Capital & Regional | 49.80 | -9.5 | - |
| Oxford Biomedica | 341.50 | -9.2 | - |
| Lookers | 66.00 | -8.8 | 2.3 |
| Rank | 68.20 | -8.8 | - |
| Dfs Furniture | 111.80 | -8.7 | - |
| Jpmorgan Global Core Real Assets | 103.00 | -8.0 | 12.3 |

| Industry Sectors | Oct 04 price(p) | %Chg week | %Chg ytd |
|---|---|---|---|
| **Winners** | | | |
| Personal Goods | 29737.94 | 1.2 | - |
| Industrial Metals | 6966.30 | 1.1 | 9.4 |
| Aerospace & Defense | 4739.00 | 0.7 | 12.8 |
| Oil & Gas Producers | 8080.90 | 0.2 | 41.3 |
| Beverages | 28747.97 | -0.7 | -7.6 |
| Industrial Transportation | 3175.58 | -1.3 | - |
| Mining | 10021.90 | -1.8 | - |
| Media | 8751.42 | -2.2 | - |
| Electronic & Electrical Equip. | 8385.42 | -2.3 | - |
| Industrial Engineering | 13495.76 | -2.7 | - |
| Health Care Equip.& Services | 10692.53 | -3.0 | 29.6 |
| Support Services | 9703.51 | -3.6 | - |
| **Losers** | | | |
| Automobiles & Parts | 1204.70 | -26.9 | -66.6 |
| Real Estate Investment Trusts | 2155.05 | -17.7 | - |
| Real Estate & Investment Servic | 2043.60 | -17.5 | - |
| Electricity | 9601.30 | -14.2 | -5.1 |
| Gas Water & Multiutilities index | 5157.51 | -14.0 | - |
| Household Goods | 9493.75 | -11.0 | - |
| Food Producers | 5033.50 | -10.0 | - |
| Banks | 3054.06 | -8.9 | 0.4 |
| Nonlife Insurance | 2992.45 | -6.9 | -9.1 |
| Chemicals | 11436.27 | -6.6 | - |
| Tobacco | 34765.98 | -6.1 | 18.6 |
| Travel & Leisure | 5748.74 | -6.1 | - |

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

## CURRENCIES

| Oct 4 | 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 | 148.5600 | 0.3275 | 147.9136 | 2.3865 | 169.4034 | 2.1962 |
| Australia | Australian Dollar | 1.5388 | 0.0002 | 1.5321 | 0.0216 | 1.7547 | 0.0192 |
| Bahrain | Bahrainin Dinar | 0.3775 | - | 0.3758 | 0.0052 | 0.4304 | 0.0046 |
| Bolivia | Bolivian Boliviano | 6.9100 | - | 6.8799 | 0.0960 | 7.8795 | 0.0850 |
| Brazil | Brazilian Real | 5.1400 | -0.0443 | 5.1176 | 0.0279 | 5.8611 | 0.0132 |
| Canada | Canadian Dollar | 1.3592 | -0.0073 | 1.3532 | 0.0117 | 1.5498 | 0.0085 |
| Chile | Chilean Peso | 931.9500 | -24.8800 | 927.8951 | -11.4721 | 1062.7054 | -16.6048 |
| China | Chinese Yuan | 7.0912 | - | 7.0603 | 0.0986 | 8.0861 | 0.0872 |
| Colombia | Colombian Peso | 4484.5550 | -56.0000 | 4465.0432 | 7.3564 | 5113.7529 | -8.0225 |
| Costa Rica | Costa Rican Colon | 628.5350 | 1.1350 | 625.8003 | 9.8508 | 716.7203 | 9.0092 |
| Czech Republic | Czech Koruna | 24.6392 | -0.3621 | 24.5319 | -0.0131 | 28.0961 | -0.1055 |
| Denmark | Danish Krone | 7.4700 | -0.1051 | 7.4375 | 0.0007 | 8.5181 | -0.0266 |
| Egypt | Egyptian Pound | 19.6610 | 0.0706 | 19.5755 | 0.3426 | 22.4195 | 0.3214 |
| Hong Kong | Hong Kong Dollar | 7.8500 | - | 7.8158 | 0.1091 | 8.9513 | 0.0965 |
| Hungary | Hungarian Forint | 420.3787 | -8.6256 | 418.5497 | -2.6251 | 479.3590 | -4.5605 |
| India | Indian Rupee | 81.5150 | -0.3681 | 81.1603 | 0.7716 | 92.9518 | 0.5871 |
| Indonesia | Indonesian Rupiah | 15247.5000 | -55.0000 | 15181.1644 | 157.9385 | 17386.7687 | 125.4496 |
| Israel | Israeli Shekel | 3.5052 | -0.0449 | 3.4899 | 0.0047 | 3.9969 | -0.0075 |
| Japan | Japanese Yen | 144.4550 | -0.0100 | 143.8265 | 1.9981 | 164.7225 | 1.7650 |
| ..One Month | | 144.4546 | -0.0109 | 143.8264 | 1.9978 | 164.7221 | 1.7643 |
| ..Three Month | | 144.4534 | -0.0132 | 143.8260 | 1.9971 | 164.7210 | 1.7621 |
| ..One Year | | 144.4482 | -0.0236 | 143.8232 | 1.9915 | 164.7221 | 1.7565 |
| Kenya | Kenyan Shilling | 120.8000 | 0.0500 | 120.2744 | 1.7282 | 137.7486 | 1.5418 |
| Kuwait | Kuwaiti Dinar | 0.3096 | -0.0001 | 0.3082 | 0.0042 | 0.3530 | 0.0037 |
| Malaysia | Malaysian Ringgit | 4.6435 | -0.0045 | 4.6233 | 0.0601 | 5.2950 | 0.0520 |
| Mexico | Mexican Peso | 19.9893 | -0.0018 | 19.9023 | 0.2761 | 22.7938 | 0.2438 |
| New Zealand | New Zealand Dollar | 1.7411 | -0.0084 | 1.7335 | 0.0160 | 1.9854 | 0.0120 |
| Nigeria | Nigerian Naira | 435.7500 | 0.2500 | 433.8541 | 6.3023 | 496.8870 | 5.6403 |
| Norway | Norwegian Krone | 10.5203 | -0.1889 | 10.4745 | -0.0392 | 11.9963 | -0.0837 |
| Pakistan | Pakistani Rupee | 225.0250 | -2.1850 | 224.0459 | 0.9827 | 256.5967 | 0.3024 |
| Peru | Peruvian Nuevo Sol | 3.9522 | -0.0165 | 3.9351 | 0.0388 | 4.5068 | 0.0300 |
| Philippines | Philippine Peso | 58.6850 | -0.3095 | 58.4297 | 0.5119 | 66.9187 | 0.3725 |
| Poland | Polish Zloty | 4.8280 | -0.0852 | 4.8070 | -0.0165 | 5.5054 | -0.0367 |
| Romania | Romanian Leu | 4.9609 | -0.0795 | 4.9393 | -0.0090 | 5.6569 | -0.0286 |
| Russia | Russian Ruble | 59.3000 | -0.6250 | 59.0420 | 0.2107 | 67.6200 | 0.0242 |
| Saudi Arabia | Saudi Riyal | 3.7590 | - | 3.7426 | 0.0522 | 4.2864 | 0.0462 |
| Singapore | Singapore Dollar | 1.4256 | -0.0047 | 1.4194 | 0.0152 | 1.6256 | 0.0122 |
| South Africa | South African Rand | 17.6457 | -0.2119 | 17.5689 | 0.0373 | 20.1214 | -0.0220 |
| South Korea | South Korean Won | 1426.5500 | -4.1500 | 1420.3432 | 15.7543 | 1626.6992 | 12.8607 |
| Sweden | Swedish Krona | 10.8959 | -0.1229 | 10.8484 | 0.0308 | 12.4246 | -0.0046 |
| Switzerland | Swiss Franc | 0.9813 | -0.0094 | 0.9770 | 0.0044 | 1.1190 | 0.0015 |
| Taiwan | New Taiwan Dollar | 31.7535 | -0.1240 | 31.6153 | 0.3196 | 36.2086 | 0.2506 |
| Thailand | Thai Baht | 37.5500 | -0.5975 | 37.3866 | -0.0647 | 42.8184 | -0.2122 |
| Tunisia | Tunisian Dinar | 3.2591 | -0.0080 | 3.2449 | 0.0374 | 3.7164 | 0.0311 |
| Turkey | Turkish Lira | 18.5785 | 0.0372 | 18.4977 | 0.2948 | 21.1851 | 0.2705 |
| United Arab Emirates | UAE Dirham | 3.6731 | -0.0001 | 3.6571 | 0.0510 | 4.1884 | 0.0451 |
| United Kingdom | Pound Sterling | 0.8770 | -0.0096 | 0.8731 | 0.0028 | - | - |
| ..One Month | | 0.8770 | -0.0096 | 0.8730 | 0.0028 | - | - |
| ..Three Month | | 0.8772 | -0.0095 | 0.8727 | 0.0028 | - | - |
| ..One Year | | 0.8767 | -0.0094 | 0.8707 | 0.0029 | - | - |
| United States | United States Dollar | - | - | 0.9956 | 0.0139 | 1.1403 | 0.0123 |
| ..One Month | | - | - | 0.9954 | -0.1324 | 1.1404 | 0.0123 |
| ..Three Month | | - | - | 0.9949 | -0.1324 | 1.1406 | 0.0123 |
| ..One Year | | - | - | 0.9931 | -0.1325 | 1.1401 | 0.0124 |
| Vietnam | Vietnamese Dong | 23885.0000 | -5.0000 | 23781.0997 | 327.0720 | 27236.1565 | 288.0801 |
| European Union | Euro | 1.0044 | -0.0142 | - | - | 1.1453 | -0.0037 |
| ..One Month | | 1.0042 | -0.0142 | - | - | 1.1452 | -0.0037 |
| ..Three Month | | 1.0036 | -0.0142 | - | - | 1.1448 | -0.0037 |
| ..One Year | | 1.0018 | -0.0143 | - | - | 1.1429 | -0.0036 |

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 04 | Day's chge% | Euro Index | £ Strlg Oct 03 | £ Strlg Sep 30 | Year ago | Div yield% | Cover | P/E ratio | X/D adj | Total Return |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FTSE 100 (100) | 7086.46 | 2.57 | 6332.34 | 6908.76 | 6893.81 | 7011.01 | 3.80 | 1.95 | 13.46 | 233.05 | 7242.47 |
| FTSE 250 (250) | 17822.15 | 3.11 | 15925.57 | 17284.88 | 17168.34 | 22654.92 | 3.30 | 1.24 | 24.40 | 436.89 | 14745.71 |
| FTSE 250 ex Inv Co (174) | 17899.81 | 3.03 | 15994.96 | 17373.13 | 17199.96 | 23715.37 | 3.48 | 1.50 | 19.13 | 470.25 | 15113.33 |
| FTSE 350 (350) | 3908.75 | 2.65 | 3492.79 | 3807.86 | 3797.10 | 4026.29 | 3.73 | 1.86 | 14.40 | 123.75 | 7926.17 |
| FTSE 350 ex Investment Trusts (271) | 3842.55 | 2.61 | 3433.64 | 3744.79 | 3732.44 | 3926.70 | 3.80 | 1.93 | 13.64 | 124.40 | 4027.13 |

## FT 30 INDEX

| | Oct 04 | Oct 03 | Sep 30 | Sep 29 | Sep 28 | Yr Ago | High | Low |
|---|---|---|---|---|---|---|---|---|
| FT 30 | 2305.20 | 2230.80 | 2220.20 | 2196.70 | 2268.10 | 0.00 | 2880.10 | 2174.60 |
| 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2230.8 | 2274.1 | 2289.3 | 2290.6 | 2296.7 | 2296 | 2296.5 | 2299.6 | 2302 | 2306.3 | 2230.8 |

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

## FT WILSHIRE 5000 INDEX SERIES

## FTSE SECTORS: LEADERS & LAGGARDS

Year to date percentage changes

| | | | | | |
|---|---|---|---|---|---|
| Oil & Gas Producers | 41.58 | Health Care Eq & Srv | -7.83 | Industrials | -20.58 |
| Oil & Gas | 40.91 | FTSE All{HY-}Share Index | -7.96 | Consumer Services | -22.49 |
| Tobacco | 18.70 | Telecommunications | -10.24 | Support Services | -23.87 |
| Aerospace & Defense | 12.78 | Utilities | -11.24 | Construct & Material | -23.99 |
| Mining | 9.11 | Media | -12.86 | FTSE 250 Index | -24.10 |
| Basic Materials | 1.84 | Gas Water & Multi | -13.38 | Food Producers | -24.98 |
| Banks | 0.13 | Software & Comp Serv | -13.86 | Household Goods & Ho | -26.41 |

## FTSE 100 SUMMARY

| FTSE 100 | Closing Price | Day's Change | FTSE 100 | Closing Price | Day's Change |
|---|---|---|---|---|---|
| 3I Group PLC | 1152.5 | 54.00 | International Consolidated Airlines Group S.A. | 101.06 | 7.40 |
| Admiral Group PLC | 2012 | 106.00 | Intertek Group PLC | 3801 | 127.00 |
| Airtel Africa PLC | 138.20 | 4.90 | Jd Sports Fashion PLC | 107.95 | 4.30 |
| Anglo American PLC | 2917 | 122.00 | Kingfisher PLC | 230.90 | 6.10 |
| Antofagasta PLC | 1143 | 12.00 | Land Securities Group PLC | 530.00 | -1.00 |
| Ashtead Group PLC | 4345 | 223.00 | Legal & General Group PLC | 235.00 | 13.10 |

## FTSE GLOBAL EQUITY INDEX SERIES

## UK STOCK MARKET TRADING DATA

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

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## UK COMPANY RESULTS

## UK RECENT EQUITY ISSUES



MARKET DATA

FT500: THE WORLD'S LARGEST COMPANIES

| Stock | Price | Day Chg | 52 Week High | 52 Week Low | Yld | P/E | MCap m |
|---|---|---|---|---|---|---|---|
| **Australia (A$)** | | | | | | | |
| ANZ Bank | 23.90 | 1.13 | 28.75 | 20.78 | 5.95 | 10.63 | 46437.64 |
| BHP Group | 40.07 | 1.47 | 53.72 | 35.56 | 9.66 | 9.99 | 131820.01 |
| CmwBkAu | 94.79 | 4.18 | 110.19 | 86.98 | 3.48 | 18.92 | 104689.29 |
| CSL | 287.40 | 4.14 | 319.78 | 240.10 | 0.99 | 43.67 | 90061.82 |
| NatAusBk | 29.87 | 1.14 | 33.75 | 25.43 | 2.83 | 16.88 | 61218.61 |
| Telstra | 3.85 | 0.01 | 4.20 | 3.62 | 2.45 | 33.23 | 28908.25 |
| Wesfarmers | 44.40 | 1.60 | 61.34 | 40.03 | 3.78 | 24.22 | 32715.01 |
| Westpac Bank | 21.43 | 0.83 | 26.44 | 18.80 | 3.90 | 16.54 | 48757.61 |
| Woolworths | 33.99 | 0.49 | 41.13 | 32.62 | 2.99 | 41.14 | 26813.11 |
| **Belgium (€)** | | | | | | | |
| AnBshInBv | 48.36 | 1.92 | 58.72 | 45.56 | 1.06 | 25.08 | 83645.02 |
| KBC Grp | 50.54 | 1.96 | 86.50 | 45.53 | 6.55 | 8.55 | 20977.62 |
| **Brazil (R$)** | | | | | | | |
| Ambev | 16.21 | -0.09 | 18.12 | 12.81 | 3.26 | 26.11 | 49671.93 |
| Bradesco | 17.37 | -0.02 | 17.72 | 13.53 | 4.48 | 8.57 | 16459.68 |
| Cielo | 5.51 | -0.29 | 6.22 | 2.01 | 2.48 | 19.89 | 2912.4 |
| ItauHldFin | 24.95 | 0.20 | 25.16 | 18.86 | 2.91 | 10.53 | 24068.19 |
| Petrobras | 36.09 | 0.08 | 40.51 | 26.54 | 12.46 | 5.49 | 52256.97 |
| Vale | 75.95 | 1.95 | 107.11 | 61.85 | 16.02 | 3.62 | 70614.83 |
| **Canada (C$)** | | | | | | | |
| Bausch Hlth | 9.95 | 0.37 | 36.26 | 5.10 | - | -3.29 | 2642.72 |
| BCE | 60.39 | 0.33 | 74.09 | 57.51 | 5.25 | 22.30 | 40519.21 |
| BkMontrl | 125.83 | 2.62 | 154.47 | 118.79 | 3.26 | 10.67 | 62700.86 |
| BkNvaS | 67.40 | 1.82 | 95.00 | 64.91 | 4.99 | 9.30 | 59077.71 |
| Brookfield | 59.73 | 2.23 | 79.04 | 55.27 | 1.00 | 21.84 | 72146.08 |
| CanadPcR | 96.90 | 1.25 | 106.93 | 82.59 | 0.71 | 25.59 | 66310.19 |
| CanImp | 62.82 | 1.26 | 167.50 | 59.03 | 8.66 | 4.80 | 41823.83 |
| CanNatRs | 71.11 | 2.77 | 88.18 | 46.89 | 2.54 | 12.15 | 58306.08 |
| CanNatRy | 155.31 | 1.57 | 171.48 | 137.26 | 1.43 | 24.88 | 77941.78 |
| Enbridge | 53.54 | 1.05 | 59.69 | 46.88 | 5.65 | 20.59 | 79761.71 |
| GtWesLif | 31.56 | 1.10 | 41.50 | 29.42 | 5.54 | 9.78 | 21637.2 |
| ImpOil | 64.72 | 1.90 | 72.96 | 40.55 | 1.44 | 20.53 | 29595.79 |
| Manulife | 22.81 | 0.81 | 28.09 | 21.23 | 4.65 | 7.11 | 31859.97 |
| Nutrien | 120.10 | 4.61 | 147.93 | 82.48 | 1.75 | 19.01 | 47653.4 |
| RylBkC | 128.92 | 3.47 | 149.60 | 118.24 | 3.13 | 12.63 | 132114.24 |
| SHOP | 43.05 | 5.25 | 222.87 | 36.25 | - | 1.64 | 31586.49 |
| Suncor En | 42.92 | 1.16 | 53.62 | 26.78 | 2.22 | 17.10 | 43150.53 |
| ThmReut | 144.58 | 2.22 | 156.62 | 119.23 | 1.28 | 10.99 | 51280.61 |
| TntoDom | 88.50 | 2.13 | 109.08 | 77.27 | 3.35 | 12.23 | 118138.07 |
| TrnCan | 58.31 | 0.47 | 74.44 | 55.60 | 5.41 | 34.60 | 43410.21 |
| **China (HK$)** | | | | | | | |
| AgricBkCh | 2.33 | -0.02 | 3.15 | 2.30 | 8.51 | 3.28 | 9123.9 |
| Bk China | 2.55 | -0.02 | 3.20 | 2.52 | 8.11 | 3.39 | 27163.86 |
| BkofComm | 4.07 | -0.07 | 5.74 | 4.04 | 7.99 | 3.61 | 18152.6 |
| BOE Tech | 0.65 | -0.08 | 0.98 | 0.57 | - | 11.24 | 16.47 |
| Ch Coms Cons | 3.20 | -0.10 | 5.17 | 3.16 | 5.91 | 2.85 | 1801.19 |
| Ch Evrbrght | 2.12 | -0.04 | 3.11 | 2.10 | 10.50 | 3.08 | 3424.15 |
| Ch Rail Cons | 3.90 | -0.12 | 5.95 | 3.85 | 6.25 | 2.22 | 1031.55 |
| Ch Rail Gp | 3.83 | -0.02 | 5.88 | 3.61 | 4.99 | 3.31 | 2052.79 |
| ChConstBk | 4.46 | -0.08 | 6.23 | 4.37 | 7.74 | 3.48 | 136595.5 |
| China Vanke | 15.04 | 0.74 | 22.75 | 13.06 | 8.80 | 7.27 | 3652.76 |
| ChinaCitic | 3.10 | -0.02 | 4.08 | 3.06 | 8.41 | 3.08 | 5877.11 |
| ChinaLife | 9.76 | -0.30 | 15.04 | 9.69 | 6.50 | 4.58 | 9251.76 |
| ChinaMBank | 35.60 | -0.90 | 70.80 | 35.30 | 3.73 | 7.04 | 20820.01 |
| ChinaMob | 49.50 | -0.40 | 58.65 | 45.90 | 6.05 | 8.19 | 129016.43 |
| ChinaPcIns | 14.18 | -0.28 | 26.20 | 13.94 | 8.61 | 4.95 | 5013.25 |
| ChMinsheng | 2.21 | -0.04 | 3.29 | 2.19 | 10.34 | 3.07 | 2342.41 |
| ChMrchSecs | 12.34 | -0.02 | 18.68 | 12.06 | 3.36 | 11.62 | 12915.7 |
| Chna Utd Coms | 3.35 | 0.01 | 4.25 | 3.30 | 3.17 | 17.74 | 14627.26 |
| ChShenEgy | 23.35 | -0.10 | 27.65 | 15.74 | 8.16 | 7.59 | 10046.46 |
| ChShpbldng | 3.41 | -0.02 | 4.56 | 3.36 | - | -267.57 | 10619.66 |
| ChStConEng | 5.15 | 0.14 | 6.40 | 4.52 | 3.95 | 4.21 | 29656.69 |
| ChUncHK | 3.49 | -0.04 | 4.43 | 3.47 | 4.19 | 8.25 | 13603.62 |
| CNNC Intl | 5.85 | -0.03 | 8.92 | 5.78 | 2.02 | 16.14 | 15551.02 |
| CSR | 2.52 | -0.02 | 3.80 | 2.48 | 7.63 | 7.43 | 1403.2 |
| Daqin | 6.77 | 0.09 | 7.25 | 5.95 | 6.72 | 10.82 | 14193.46 |
| GuosenSec | 8.60 | 0.03 | 12.30 | 8.55 | 2.53 | 10.43 | 10705.27 |
| HaitongSecs | 3.85 | -0.31 | 7.34 | 3.81 | 6.95 | 4.48 | 1672.22 |
| Hngzh HikVDT | 30.42 | 0.01 | 58.45 | 28.10 | 2.49 | 17.64 | 39361.98 |
| Hunng Pwr | 3.39 | -0.03 | 5.74 | 3.08 | 5.42 | -4.08 | 2029.86 |
| IM Baotou Stl | 1.84 | - | 3.27 | 1.75 | - | 33.06 | 8219.6 |
| In&CmBkCh | 3.63 | -0.05 | 4.94 | 3.59 | 7.78 | 3.57 | 40135.3 |
| IndstrlBk | 16.65 | 0.11 | 23.22 | 16.49 | 4.42 | 4.82 | 48777.51 |
| Kweichow | 1872.5 | -7.85 | 2216.96 | 1593 | 0.98 | 44.52 | 331711.24 |
| Midea | 0.43 | 0.02 | 0.61 | 0.40 | - | -4.95 | 16.30 |
| New Ch Life Ins | 14.10 | -0.88 | 25.15 | 14.04 | 10.10 | 2.87 | 1857.45 |
| PetroChina | 3.22 | - | 4.49 | 3.18 | 6.89 | 6.96 | 8654.56 |
| PingAnIns | 37.50 | -1.70 | 69.40 | 37.00 | 6.21 | 6.39 | 35577.82 |
| PingAnBnk | 11.84 | -0.02 | 20.59 | 11.81 | 1.39 | 7.46 | 32401.05 |
| Pwr Cons Corp | 6.97 | 0.08 | 9.81 | 5.99 | 1.21 | 15.29 | 10803.56 |
| SaicMtr | 14.30 | 0.03 | 23.45 | 14.25 | 3.94 | 7.55 | 23560.63 |
| ShenwanHong | 0.10 | 0.01 | 0.18 | 0.05 | - | 3.14 | 111.08 |
| ShgPdgBk | 7.04 | 0.05 | 9.25 | 6.95 | 6.19 | 4.75 | 29140.25 |
| Sinopec Corp | 3.35 | -0.02 | 4.28 | 3.25 | 3.87 | 4.33 | 10887.86 |
| Sinopec Oil | 1.84 | 0.01 | 2.67 | 1.70 | - | 645.67 | 3520.98 |
| **Denmark (kr)** | | | | | | | |
| DanskeBk | 93.72 | 0.10 | 133.25 | 86.84 | 2.05 | 6.68 | 10817.12 |
| MollerMrsk | 14875 | 575.00 | 24070 | 13185 | 2.20 | 2.52 | 16672.59 |
| NovoB | 785.80 | 12.20 | 863.60 | 604.40 | 1.14 | 39.40 | 183307.47 |
| **Finland (€)** | | | | | | | |
| Nokia | 4.65 | 0.15 | 5.71 | 4.12 | - | 16.67 | 26366.68 |
| SampoA | 45.31 | 0.98 | 48.74 | 35.85 | 3.63 | 10.02 | 24047.92 |
| **France (€)** | | | | | | | |
| Airbus Grpe | 94.70 | 5.49 | 120.36 | 86.52 | - | 18.05 | 74311.75 |
| AirLiquide | 122.84 | 5.04 | 153.40 | 114.70 | 2.15 | 23.57 | 64006.11 |
| AXA | 23.82 | 1.59 | 29.09 | 20.34 | 5.77 | 8.34 | 55402.82 |
| BNP Parib | 45.48 | 1.60 | 68.07 | 40.67 | 5.66 | 6.81 | 55887.01 |
| ChristianDior | 631.50 | 39.00 | 733.50 | 513.00 | 1.07 | 23.97 | 113494.52 |
| Cred Agr | 8.82 | 0.36 | 14.27 | 8.09 | 8.72 | 5.01 | 26727.71 |
| Danone | 49.17 | 1.46 | 58.47 | 46.48 | 3.79 | 17.39 | 33086.36 |
| EDF | 11.96 | 0.02 | 12.67 | 6.64 | 3.92 | 9.56 | 46261.9 |
| Engie SA | 12.32 | 0.21 | 14.61 | 9.79 | 4.14 | 9.02 | 29867.31 |
| EssilorLuxottica | 152.15 | 9.90 | 195.00 | 132.70 | 0.68 | 48.24 | 67779.21 |
| Hermes Intl | 1303 | 75.00 | 1678 | 957.60 | 0.34 | 58.16 | 136958.43 |
| LOreal | 338.20 | 11.50 | 433.65 | 300.45 | 1.14 | 42.84 | 180731.91 |
| LVMH | 646.80 | 38.80 | 741.60 | 535.00 | 1.04 | 28.16 | 324090.57 |
| Orange | 9.49 | 0.07 | 11.94 | 8.93 | 6.08 | 3276.53 | 25144.69 |
| PernodRic | 188.05 | 4.75 | 214.50 | 166.60 | 1.60 | 29.52 | 48295.95 |
| Renault | 29.51 | 1.07 | 38.07 | 20.47 | - | -22.91 | 8687.32 |
| Safran | 99.15 | 4.96 | 123.12 | 87.85 | 0.42 | 1031.11 | 42176.78 |
| Sanofi | 80.01 | 0.21 | 106.08 | 76.45 | 3.85 | 16.82 | 100969.82 |
| Sant Gbn | 39.92 | 1.78 | 64.82 | 35.20 | 3.28 | 9.93 | 20667.96 |
| Schneider | 123.98 | 7.36 | 173.78 | 110.02 | 2.02 | 22.74 | 70496.03 |
| SocGen | 21.59 | 0.83 | 37.68 | 18.34 | 2.47 | 3.79 | 18269.15 |
| Total | 51.31 | 1.55 | 57.41 | 40.09 | 5.06 | 10.25 | 133802.91 |
| UnibailR | 44.86 | 1.98 | 73.09 | 39.68 | - | -6.64 | 6196.98 |
| Vinci | 85.26 | 1.68 | 103.74 | 80.74 | 3.03 | 19.66 | 50726.42 |
| Vivendi | 8.30 | 0.22 | 12.16 | 7.76 | 6.95 | -15.41 | 9156.61 |
| **Germany (€)** | | | | | | | |
| Allianz | 167.20 | 5.66 | 232.50 | 156.22 | 5.52 | 10.98 | 67997.01 |
| BASF | 42.30 | 1.36 | 69.15 | 37.90 | 7.50 | 7.28 | 38682.6 |
| Bayer | 48.65 | 0.69 | 67.99 | 43.91 | 3.95 | 49.60 | 47582.09 |
| BMW | 72.85 | 2.12 | 97.60 | 67.58 | 2.51 | 4.04 | 43664.54 |
| Continental | 49.04 | 1.85 | 111.96 | 44.33 | - | 7.86 | 9765.62 |
| Deut Bank | 8.07 | 0.44 | 14.64 | 7.25 | - | 8.26 | 16606.29 |
| Deut Tlkm | 18.41 | 0.55 | 19.61 | 14.47 | 3.13 | 22.00 | 91381.44 |
| DeutsPost | 32.77 | 1.16 | 58.31 | 29.68 | 4.06 | 8.62 | 40421.14 |
| E.ON | 8.25 | 0.13 | 12.54 | 7.60 | 5.48 | 4.76 | 21685.54 |
| Fresenius Med | 29.81 | 1.01 | 63.66 | 27.98 | 4.32 | 9.37 | 8696.46 |
| Fresenius SE | 22.55 | 0.73 | 42.50 | 20.98 | 3.84 | 7.41 | 12539.43 |
| HenkelKgaA | 59.35 | 0.95 | 75.80 | 56.55 | 2.96 | 16.42 | 15351.8 |
| Linde | 287.50 | 8.15 | 315.35 | 244.00 | 1.25 | 46.45 | 142656.7 |
| Mercedes-Benz | 55.00 | 2.01 | 77.90 | 50.19 | 2.36 | 5.72 | 58585.05 |
| MuenchRkv | 256.50 | 9.90 | 282.25 | 205.15 | 3.67 | 12.74 | 35779.02 |
| SAP | 88.51 | 3.70 | 129.74 | 81.35 | 2.01 | 20.64 | 108261.8 |
| Siemens | 106.32 | 5.40 | 156.98 | 93.67 | 3.17 | 16.63 | 89978.79 |
| Volkswgn | 173.40 | 4.60 | 301.40 | 160.50 | 2.66 | 6.09 | 50945.94 |
| **Hong Kong (HK$)** | | | | | | | |
| AIA | 65.35 | -0.10 | 92.50 | 64.10 | 1.71 | 17.89 | 99356.01 |
| BOC Hold | 25.75 | -0.40 | 32.75 | 23.10 | 4.04 | 14.13 | 34681.68 |
| Ch OSLnd&Inv | 21.45 | 1.00 | 27.35 | 16.10 | 4.70 | 5.70 | 29906.9 |
| ChngKng | 46.85 | -0.35 | 57.00 | 43.75 | 3.17 | 11.47 | 21745.6 |
| Citic Ltd | 7.37 | -0.03 | 9.26 | 6.96 | 6.12 | 3.65 | 27311.68 |
| Citic Secs | 12.70 | -0.64 | 21.32 | 12.54 | 3.16 | 6.99 | 4238.87 |
| CK Hutchison | 43.30 | -0.10 | 60.45 | 42.80 | 4.41 | 5.87 | 21150.87 |
| CNOOC | 9.48 | 0.07 | 12.54 | 7.55 | 4.00 | 8.85 | 53897.14 |
| HangSeng | 117.80 | -1.40 | 169.50 | 116.60 | 4.34 | 20.27 | 28690.01 |
| HK Exc&Clr | 266.60 | -3.00 | 495.00 | 263.00 | 2.88 | 32.15 | 43058.28 |
| MTR | 35.60 | -0.45 | 43.70 | 35.30 | 2.90 | 27.57 | 28113.9 |
| SandsCh | 19.96 | 0.26 | 24.90 | 13.52 | - | -23.58 | 20578.47 |
| SHK Props | 86.90 | 0.05 | 104.70 | 84.95 | 4.78 | 10.62 | 32078.8 |
| Tencent | 263.80 | -2.60 | 515.00 | 259.40 | 0.51 | 11.10 | 322474.64 |
| **India (Rs)** | | | | | | | |
| BhartiartI | 808.70 | 5.35 | 816.75 | 628.75 | - | 187.26 | 59083.93 |
| HDFC Bk | 1453 | 39.80 | 1725 | 1271.6 | - | 26.72 | 99284.19 |
| Hind Unilevr | 2667.95 | 45.45 | 2734 | 1927 | 1.11 | 77.52 | 76901.09 |
| HsngDevFin | 2349.45 | 66.40 | 3021.1 | 2026 | 0.90 | 21.69 | 52379.67 |
| ICICI Bk | 867.65 | 19.30 | 936.65 | 642.15 | 0.21 | 29.85 | 74159.27 |
| Infosys | 1429.4 | 35.65 | 1923.3 | 1360 | 1.96 | 30.63 | 73786.02 |
| ITC | 332.85 | 8.45 | 348.75 | 207.00 | 2.98 | 30.00 | 50629.57 |
| L&T | 1871.55 | 52.25 | 2035 | 1456.35 | 0.89 | 33.67 | 32260.32 |
| OilNatGas | 133.90 | 1.50 | 189.80 | 119.85 | 6.27 | 4.11 | 20664.87 |
| RelianceIn | 2413.2 | 43.70 | 2856.15 | 2222 | 0.27 | 29.95 | 200302.99 |
| SBI NewA | 532.70 | 12.95 | 578.50 | 430.70 | 0.69 | 16.11 | 58322.25 |
| SunPhrmInds | 944.55 | 0.05 | 967.85 | 733.70 | 0.73 | 38.18 | 27802.16 |
| Tata Cons | 3091.15 | 106.20 | 3989.9 | 2950.1 | 1.09 | 32.02 | 138755.77 |
| **Israel (ILS)** | | | | | | | |
| TevaPha | 28.70 | 1.30 | 37.23 | 23.83 | - | 25.76 | 8960.47 |
| **Italy (€)** | | | | | | | |
| Enel | 4.46 | 0.11 | 7.37 | 4.19 | 7.90 | 21.59 | 45181.54 |
| ENI | 11.54 | 0.30 | 14.85 | 10.43 | 5.62 | 5.05 | 41427.53 |
| Generali | 14.50 | 0.48 | 21.55 | 13.68 | 9.75 | 8.47 | 22825.75 |
| IntSPaolo | 1.79 | 0.05 | 2.92 | 1.58 | 1.97 | 57.63 | 34590.5 |
| Unicred | 11.06 | 0.36 | 15.93 | 7.75 | 1.04 | 17.08 | 24645.36 |
| **Japan (¥)** | | | | | | | |
| AstellasPh | 1965 | 43.00 | 2205 | 1739 | 2.47 | 28.69 | 24972.81 |
| Bridgestne | 4894 | 108.00 | 5509 | 4042 | 3.58 | 10.80 | 24179.42 |
| Canon | 3281 | 102.00 | 3516 | 2467 | 3.14 | 15.40 | 30293.72 |
| CntJpRwy | 16715 | 365.00 | 17810 | 14660 | 0.82 | -30.40 | 23836.42 |
| Denso | 7040 | 164.00 | 9575 | 6549 | 2.10 | 18.71 | 38400.42 |
| EastJpRwy | 7490 | 205.00 | 7838 | 6373 | 1.41 | -7.29 | 19595.82 |
| Fanuc | 21030 | 580.00 | 25300 | 18740 | 2.27 | 24.26 | 29394.31 |
| FastRetail | 77860 | 1540 | 88230 | 54310 | 0.71 | 35.45 | 57172.79 |
| Fuji Hvy Ind | 2317 | 84.00 | 2684 | 1664.5 | 2.55 | 25.82 | 12337.27 |
| Hitachi | 6480 | 226.00 | 7460 | 4750 | 1.87 | 9.21 | 43448.45 |
| HondaMtr | 3279 | 69.00 | 3755 | 3043 | 4.15 | 6.73 | 41117.81 |
| JapanTob | 2405 | 48.50 | 2441 | 2000 | 6.00 | 11.87 | 33297.56 |
| KDDI | 4319 | 132.00 | 4636 | 3237 | 2.93 | 14.04 | 68847.83 |
| Keyence | 50250 | 1820 | 75090 | 44880 | 0.42 | 40.73 | 84602.03 |
| MitsbCp | 4241 | 195.00 | 4845 | 3355 | 3.44 | 9.18 | 43278.87 |
| MitsuEst | 935.95 | 19.92 | 972.04 | 876.51 | - | - | - |
| MitsubishiEle | 1343.5 | 37.00 | 1629 | 1225.5 | 3.14 | 11.65 | 19969.98 |
| MitsuiFud | 835.12 | 28.23 | 949.18 | 684.38 | - | - | - |
| MitUFJFin | 668.20 | 20.20 | 828.30 | 601.40 | 4.11 | 6.57 | 61437.99 |
| Mizuho Fin | 1604 | 47.50 | 1683.5 | 1397 | 5.14 | 7.44 | 28195.32 |
| Murata Mfg | 6943 | 153.00 | 9410 | 6604 | 1.83 | 13.52 | 32480.81 |
| Nippon T&T | 3968 | 131.00 | 4055 | 3054 | 2.79 | 12.11 | 99492.2 |
| NipponTT | 3968 | 131.00 | 4055 | 3054 | 2.79 | 12.11 | 99492.2 |
| Nissan Mt | 479.40 | 9.70 | 654.30 | 436.50 | - | 14.76 | 14007.2 |
| Nomura | 486.20 | 11.20 | 578.70 | 460.30 | 5.00 | -31.71 | 10883.36 |
| Nppn Stl | 2101.5 | 75.50 | 2318.5 | 1690.5 | 4.02 | 3.15 | 13825.07 |
| Panasonic | 1047 | 22.00 | 1541 | 1006.5 | 2.52 | 10.04 | 17786.83 |
| Seven & I | 5816 | 257.00 | 6083 | 4552 | 1.87 | 20.99 | 35689.63 |
| ShnEtsuCh | 15165 | 215.00 | 20870 | 14185 | 2.02 | 13.77 | 43741.59 |
| Softbank | 5235 | 254.00 | 7217 | 4210 | 0.89 | 4.27 | 62439.26 |
| Sony | 9749 | 240.00 | 14745 | 9213 | 0.65 | 11.80 | 85108.08 |
| SumitomoF | 4162 | 140.00 | 4461 | 3672 | 5.08 | 7.68 | 39607.25 |
| Takeda Ph | 3874 | 148.00 | 4063 | 2993 | 4.91 | 13.18 | 42433.5 |
| TokioMarine | 2618.5 | 58.50 | 2787.33 | 1886 | 8.87 | 4.04 | 36978.57 |
| Toyota | 2004 | 62.50 | 2375.5 | 1805 | 2.69 | 8.57 | 226335.05 |
| **Mexico (Mex$)** | | | | | | | |
| AmerMvl | 17.06 | 0.12 | 21.44 | 15.66 | 1.88 | 14.01 | 36337.51 |
| FEMSA UBD | 130.14 | 1.74 | 178.81 | 120.63 | 1.53 | 108.03 | 14070.35 |
| WalMrtMex | 72.35 | 0.90 | 82.93 | 64.81 | 0.69 | 36.61 | 63200.67 |
| **Netherlands (€)** | | | | | | | |
| ASML Hld | 468.85 | 27.55 | 777.50 | 403.45 | 0.69 | 37.64 | 189746.36 |
| Heineken | 91.94 | 2.48 | 100.95 | 77.50 | 1.02 | 16.57 | 52727.26 |
| ING | 9.50 | 0.59 | 14.00 | 7.90 | 6.08 | 8.03 | 35622.25 |
| Unilever | 45.41 | 0.86 | 48.81 | 39.36 | 3.16 | 23.31 | 131658.71 |
| **Norway (Kr)** | | | | | | | |
| DNB | 178.25 | 4.80 | 220.50 | 168.05 | 9.80 | 11.34 | 26420.75 |
| Equinor | 369.40 | -0.85 | 410.95 | 210.20 | 1.34 | 15.86 | 111500.51 |
| Telenor | 101.85 | 0.25 | 148.80 | 99.36 | 8.88 | 17.13 | 13548.55 |
| **Qatar (QR)** | | | | | | | |
| QatarNtBk | 19.80 | 0.16 | 27.00 | 18.40 | 2.38 | 17.12 | 50218 |
| **Saudi Arabia (SR)** | | | | | | | |
| AlRajhiBnk | 83.00 | 0.50 | 117.40 | 77.13 | 2.41 | 16.87 | 88321.36 |
| Natnlcombnk | 63.50 | 0.80 | 82.00 | 59.60 | 1.90 | 25.56 | 75645.91 |
| SaudiBasic | 90.10 | 0.40 | 141.40 | 86.10 | 3.01 | 14.05 | 71907.42 |
| SaudiTelec | 39.30 | -0.10 | 49.12 | 37.10 | 8.49 | 8.33 | 52274.55 |
| **Singapore (S$)** | | | | | | | |
| DBS | 33.38 | 0.23 | 37.49 | 29.45 | 3.28 | 14.51 | 60257.79 |
| JardnMt US$ | 52.83 | 0.23 | 62.10 | 49.50 | 2.74 | 10.44 | 15290.86 |
| OCBC | 11.93 | 0.17 | 13.54 | 10.98 | 3.13 | 12.62 | 37643.72 |
| SingTel | 2.61 | 0.01 | 2.88 | 2.31 | 2.55 | 46.73 | 30221.56 |
| UOB | 26.15 | 0.08 | 33.33 | 25.47 | 3.37 | 12.34 | 30717.61 |
| **South Africa (R)** | | | | | | | |
| Firstrand | 61.50 | 0.61 | 79.34 | 53.25 | 3.98 | 11.79 | 19550.64 |
| MTN Grp | 122.89 | 2.89 | 211.49 | 117.03 | - | 17.75 | 13122.92 |
| Naspers N | 2318.4 | 47.40 | 2853.25 | 1392.5 | 0.24 | 13.20 | 57220.39 |
| **South Korea (KRW)** | | | | | | | |
| HyundMobis | 198000 | 7000 | 275000 | 189500 | 2.04 | 7.64 | 13126.4 |
| KoreaElePwr | 19850 | -250.00 | 25100 | 18900 | 6.24 | -11.47 | 8932.73 |
| SK Hynix | 86200 | 3100 | 134000 | 80400 | 1.80 | 6.10 | 43989.91 |
| SmsungEl | 55200 | 2100 | 80800 | 51800 | 2.64 | 9.46 | 230999.24 |
| **Spain (€)** | | | | | | | |
| BBVA | 4.90 | 0.22 | 6.29 | 3.97 | 7.29 | 6.94 | 31171.22 |
| BcoSantdr | 2.64 | 0.17 | 3.48 | 2.32 | 2.79 | 5.49 | 44085.81 |
| CaixaBnk | 3.44 | 0.14 | 3.64 | 2.22 | 0.75 | 23.54 | 27632.06 |
| Iberdrola | 9.86 | 0.14 | 11.49 | 8.47 | 4.11 | 17.59 | 62469.97 |
| Inditex | 22.08 | 0.78 | 32.41 | 18.55 | 0.96 | 24.22 | 68516.26 |
| Repsol | 12.41 | 0.21 | 16.23 | 9.60 | 4.65 | 7.87 | 17945.81 |
| Telefonica | 3.50 | 0.03 | 5.06 | 3.33 | 9.51 | 2.66 | 20125.37 |
| **Sweden (SKr)** | | | | | | | |
| AtlasCpcoB | 99.39 | 5.95 | 133.60 | 22.08 | 7.44 | 6.61 | 14238.03 |
| Ericsson | 69.18 | 2.23 | 117.32 | 64.16 | 3.29 | 10.15 | 19507.29 |
| H & M | 113.54 | 6.10 | 191.86 | 98.25 | 5.62 | 15.58 | 15220.9 |
| Investor | 170.92 | 5.36 | 228.75 | 158.22 | 2.07 | 7.32 | 28580.19 |
| Nordea Bk | 98.21 | 2.79 | 113.78 | 85.25 | 15.07 | 11.41 | 33670.39 |
| SEB | 110.20 | 4.00 | 141.85 | 91.64 | 9.28 | 9.17 | 21791.19 |
| SvnskaHn | 94.12 | 2.58 | 108.15 | 80.88 | 5.38 | 9.19 | 16799.28 |
| Swedbank | 148.40 | 3.60 | 196.70 | 124.50 | 9.93 | 7.89 | 15417.76 |
| Telia Co | 32.95 | 0.10 | 41.70 | 31.88 | 6.15 | 11.57 | 12367.41 |
| Volvo | 166.44 | 6.58 | 218.65 | 148.24 | 3.95 | 10.79 | 24264.65 |
| **Switzerland (SFr)** | | | | | | | |
| ABB | 25.85 | 1.50 | 34.07 | 23.98 | 2.92 | 13.00 | 51756.51 |
| CredSuisse | 4.29 | 0.35 | 10.18 | 3.52 | 2.11 | -7.06 | 11583 |
| Nestle | 107.48 | 1.02 | 128.90 | 104.60 | 2.32 | 19.56 | 301202.5 |
| Novartis | 76.97 | 0.99 | 88.42 | 73.01 | 3.56 | 8.76 | 188540.13 |
| Richemont | 101.40 | 5.24 | 146.10 | 90.28 | 1.75 | 25.34 | 53939.47 |
| Roche | 332.75 | 10.65 | 404.20 | 298.60 | 2.40 | 23.37 | 238232.69 |
| Swiss Re | 75.50 | 2.32 | 102.20 | 69.02 | 7.10 | 19.12 | 24427.85 |
| Swisscom | 471.90 | -1.20 | 587.40 | 461.60 | 4.23 | 14.71 | 24911.18 |
| UBS | 15.33 | 0.65 | 19.90 | 13.10 | 2.05 | 8.27 | 55044.38 |
| Zurich Fin | 409.80 | 10.40 | 461.70 | 374.60 | 4.44 | 14.31 | 62833.56 |
| **Taiwan (NT$)** | | | | | | | |
| Chunghwa Telecom | 112.00 | 0.50 | 132.50 | 110.00 | 3.69 | 25.26 | 27361.83 |
| Formosa PetChem | 81.10 | -0.30 | 106.00 | 78.30 | 0.70 | 16.18 | 24329.78 |
| HonHaiPrc | 102.50 | 1.50 | 116.00 | 99.50 | 3.77 | 10.70 | 44749.6 |
| MediaTek | 573.00 | 25.00 | 1200 | 533.00 | 6.24 | 8.45 | 28859.95 |
| TaiwanSem | 429.00 | 12.00 | 650.00 | 422.00 | 2.41 | 17.69 | 350327.73 |
| **Thailand (THB)** | | | | | | | |
| PTT Explor | 34.50 | 0.50 | 41.25 | 32.75 | 5.54 | 9.62 | 26242.82 |
| **United Arab Emirates (Dhs)** | | | | | | | |
| Emirtestele | 23.50 | 0.14 | 38.98 | 11.60 | 2.84 | 26.37 | 55640.7 |
| **United Kingdom (p)** | | | | | | | |
| Anglo American | 2917 | 122.00 | 4996.8 | 2487.5 | 6.11 | 5.78 | 46721.2 |
| AscBrFd | 1309 | 46.50 | 2066 | 1223 | 0.47 | 21.64 | 11816.97 |
| AstraZen | 9958 | 152.00 | 11540 | 8090.32 | 2.08 | 1686.08 | 143806.99 |
| Aviva | 408.70 | 11.30 | 606.58 | 341.92 | 5.22 | 53.78 | 18703.39 |
| Barclays | 150.74 | 5.66 | 209.45 | 140.06 | 1.99 | 3.66 | 29330.73 |
| BP | 454.50 | 11.80 | 469.60 | 310.53 | 3.46 | 16.49 | 103294.21 |
| BrAmTob | 3258.5 | 14.50 | 3645 | 2507.5 | 6.62 | 11.02 | 69276.95 |
| BT | 129.40 | 2.70 | 201.40 | 120.05 | - | 12.56 | 14640.26 |
| Compass | 1837.5 | 47.50 | 1970.5 | 1435 | 0.76 | 44.71 | 34459.21 |
| Diageo | 3791.5 | 84.00 | 4364.1 | 3282.5 | 1.91 | 29.17 | 108840.69 |
| GlaxoSmh | 1328.4 | 8.80 | 2753.96 | 1280.92 | 6.02 | 15.34 | 74494.6 |
| Glencore | 500.80 | 14.25 | 548.30 | 346.40 | 1.77 | 18.33 | 82374.5 |
| HSBC | 481.95 | 20.55 | 567.20 | 344.46 | 3.35 | 10.53 | 110189.31 |
| Imperial Brands | 1882.5 | 21.00 | 1966.5 | 1434.23 | 7.34 | 6.29 | 20473.11 |
| Jardine Mathes. | 62.50 | - | 60.50 | 50.06 | 2.32 | 12.35 | 18089.69 |
| LlydsBkg | 43.12 | 1.34 | 4824.5 | 38.10 | 5.96 | 5.99 | 35436.92 |
| LSE Group | 7718 | 78.00 | 8612 | 6230 | 0.99 | 78.92 | 30450.97 |
| Natl Grid | 931.40 | -2.00 | 1271.45 | 880.60 | 5.28 | 21.71 | 35649.37 |
| Natwest Group | 232.30 | 5.30 | 284.42 | 196.92 | 4.52 | 9.15 | 31696.95 |
| Prudential | 946.20 | 63.80 | 1519 | 850.20 | 1.24 | 15.37 | 27915.63 |
| ReckittB | 5966 | 40.00 | 6824 | 4905.16 | 2.93 | -25.82 | 47907.39 |
| RELX | 2270 | 70.00 | 2634.82 | 2056 | 2.10 | 29.95 | 49646.4 |
| RioTinto | 5089 | 149.00 | 6343 | 4354 | 9.87 | 5.32 | 77830.85 |
| RollsRoyce | 74.47 | 4.70 | 161.91 | 64.44 | - | 50.66 | 1579.34 |
| Shell PLC | 2338 | 38.50 | 2459.23 | 1534.2 | 2.59 | 12.32 | 122560.93 |
| StandCh | 588.00 | 23.60 | 641.00 | 406.20 | 1.51 | 13.19 | 22104.86 |
| Tesco | 210.00 | 1.10 | 304.10 | 199.78 | 4.36 | 10.69 | 19606.64 |
| Unilever | 3963 | 86.50 | 4178 | 3267.5 | 3.65 | 20.35 | 55663.8 |
| Vodafone | 104.98 | 1.26 | 141.60 | 99.59 | 7.37 | -234.85 | 31930.94 |
| WPP | 782.40 | 33.00 | 1231.5 | 719.60 | 3.39 | 14.90 | 11295.9 |
| **United States of America ($)** | | | | | | | |
| 21stC Fox A | 32.11 | 0.85 | 44.95 | 30.31 | 1.23 | 15.44 | 9805.33 |
| 3M | 115.46 | 2.24 | 186.30 | 110.39 | 4.32 | 13.55 | 65763.62 |
| AbbottLb | 102.12 | 2.60 | 142.60 | 96.67 | 1.48 | 30.79 | 178834.56 |
| Abbvie | 141.54 | 3.22 | 175.91 | 106.86 | 3.09 | 26.06 | 250247.54 |
| Accenture | 274.04 | 9.15 | 417.37 | 254.27 | 1.14 | 33.05 | 182014.16 |
| Activision Bli. | 74.82 | 0.46 | 82.34 | 56.40 | 0.53 | 25.83 | 58528.27 |
| Adobe | 295.48 | 10.24 | 699.54 | 274.73 | - | 34.53 | 137366.33 |
| Advanced Micro | 68.63 | 2.52 | 164.46 | 62.83 | - | 31.72 | 110790.84 |
| AEP | 90.25 | 2.02 | 105.60 | 80.22 | 2.80 | 21.61 | 46364.49 |
| Aflac | 59.60 | 1.74 | 67.20 | 52.07 | 1.86 | 11.08 | 37662.22 |
| AirProd | 245.94 | 7.61 | 316.39 | 216.24 | 2.05 | 30.68 | 54548.13 |
| Allstate | 132.27 | 3.99 | 144.46 | 106.11 | 2.06 | 9.25 | 35752 |
| Alphabet | 101.30 | 2.66 | 151.55 | 95.56 | - | 1.07 | 607412.79 |
| Altria | 42.13 | 0.76 | 57.05 | 40.35 | 7.03 | 37.34 | 75868.51 |
| Amazon | 122.55 | 6.67 | 188.11 | 101.26 | - | 2.25 | 1248484.84 |
| AmerAir | 12.99 | 1.07 | 22.35 | 11.65 | - | -4.12 | 8441.5 |
| AmerExpr | 145.15 | 5.13 | 199.55 | 134.12 | 1.08 | 16.74 | 108825.89 |
| AmerIntGrp | 51.30 | 2.12 | 65.73 | 47.05 | 2.10 | 5.63 | 39005.55 |
| AmerTower | 221.09 | 3.92 | 291.99 | 211.38 | 1.98 | 46.40 | 102934.28 |
| Amgen | 231.99 | 1.55 | 258.45 | 198.64 | 2.55 | 26.81 | 124098.61 |
| Amphenol Corp | 71.42 | 2.03 | 88.45 | 61.67 | 0.92 | 33.80 | 42482.63 |
| Analog Devices | 151.39 | 6.26 | 191.95 | 138.50 | 1.55 | 60.38 | 77866.16 |
| Anthem | 482.58 | 12.71 | - | - | - | - | - |
| Aon Cp | 283.37 | 7.78 | 341.98 | 246.21 | 0.59 | 60.65 | 59769.98 |
| Apple | 145.28 | 2.83 | 182.13 | 129.04 | 0.60 | 28.62 | 2334762.06 |
| Applied Materi. | 90.18 | 3.93 | 167.06 | 81.53 | 0.89 | 14.78 | 77582.7 |
| Aptiv | 87.80 | 4.76 | 180.81 | 77.96 | - | 53.76 | 23787.74 |
| ArcherDan | 85.08 | 2.05 | 98.88 | 60.83 | 1.46 | 21.10 | 47692.58 |
| AT&T | 16.06 | 0.16 | 21.53 | 15.34 | 10.91 | 6.91 | 114407.93 |
| Autodesk | 198.49 | 6.03 | 335.48 | 163.20 | - | 104.26 | 42845.86 |
| AutomData | 235.99 | 3.74 | 261.59 | 192.26 | 1.37 | 43.39 | 98004.68 |
| AutoZone | 2192.78 | -4.93 | 2362.24 | 1634.34 | - | 23.54 | 42732.02 |
| Avago Tech | 474.83 | 18.05 | 677.76 | 443.64 | 2.67 | 31.85 | 192306.84 |
| BakerHu | 23.10 | 0.82 | 39.78 | 20.42 | 2.70 | 63.51 | 23371.52 |
| Bank of NY | 41.26 | 1.60 | 64.63 | 38.30 | 2.65 | 11.84 | 33341.77 |
| BankAm | 32.48 | 1.39 | 50.11 | 29.67 | 2.02 | 10.81 | 260984.56 |
| Baxter | 57.38 | 1.76 | 89.70 | 53.78 | 1.59 | 26.94 | 28897.18 |
| BectonDick | 235.59 | 4.81 | 277.29 | 222.61 | 1.20 | 48.41 | 67189.12 |
| BerkshHat | 424405 | 11105 | 544389.26 | 395202.25 | - | 8.48 | 254610.75 |
| Biogen | 266.51 | 2.21 | 290.76 | 187.16 | - | 30.44 | 38674.08 |
| BlackRock | 588.89 | 16.17 | 973.16 | 543.23 | 2.36 | 18.30 | 88786.2 |
| [illegible] | | | | | | | |
| Intuit | 412.38 | 15.58 | 716.86 | 339.36 | 0.52 | 61.34 | 116237.5 |
| John&John | 164.75 | 1.55 | 186.69 | 155.72 | 2.14 | 25.06 | 433150.29 |
| JohnsonCn | 53.41 | 1.90 | 81.69 | 45.52 | 1.81 | 28.97 | 36785.91 |
| JPMrgnCh | 112.77 | 5.04 | 172.96 | 104.40 | 2.84 | 8.72 | 330706.19 |
| Kimb-Clark | 115.77 | 1.69 | 144.53 | 111.90 | 3.43 | 25.80 | 39084.84 |
| KinderM | 17.49 | 0.39 | 20.20 | 15.01 | 5.35 | 44.87 | 39393.72 |
| KLA Corp | 328.30 | 11.77 | 442.44 | 282.83 | 1.00 | 20.07 | 46555.51 |
| Kraft Heinz | 34.32 | 0.36 | 44.87 | 32.73 | 3.92 | 49.71 | 42057.09 |
| Kroger | 44.48 | 0.73 | 62.78 | 38.22 | 1.49 | 24.11 | 31835.49 |
| LasVegasSd | 41.66 | 3.06 | 48.27 | 28.88 | - | -32.77 | 31830.92 |
| LibertyGbl | 16.90 | 0.39 | 30.42 | 15.58 | - | 0.86 | 2929.82 |
| [illegible] | | | | | | | |
| **Venezuela (VEF)** | | | | | | | |
| Bco de Vnzla | 1.15 | - | 2.14 | 0.32 | 131.08 | - | 513.15 |
| Bco Provncl | 2.60 | -0.15 | 798000 | 1.70 | - | 0.00 | 119.29 |

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 % |
|---|---|---|---|---|---|---|---|
| Biogen | 266.51 | 264.30 | 2.21 | 0.84 | 68.72 | 34.7 | 24.49 |
| Devon Energy | 68.53 | 65.33 | 3.20 | 4.90 | 12.36 | 22.0 | 0.07 |
| EOG Res | 124.42 | 119.93 | 4.49 | 3.74 | 18.97 | 18.0 | 4.83 |
| ConocPhil | 114.78 | 109.97 | 4.81 | 4.37 | 16.02 | 16.2 | 9.20 |
| ImpOil | 64.42 | 62.82 | 1.60 | 2.55 | 8.97 | 16.2 | 2.08 |
| Suncor En | 42.50 | 41.76 | 0.74 | 1.77 | 5.91 | 16.2 | -1.49 |
| Schlmbrg | 39.44 | 38.30 | 1.14 | 2.96 | 5.46 | 16.1 | 6.25 |
| Halliburton | 27.56 | 26.38 | 1.18 | 4.47 | 3.80 | 16.0 | -6.19 |
| Phillips66 | 88.07 | 84.58 | 3.49 | 4.13 | 11.85 | 15.5 | -0.41 |
| ValeroEngy | 116.59 | 112.31 | 4.28 | 3.81 | 15.42 | 15.2 | -1.66 |
| Marathon Pet | 106.57 | 102.79 | 3.78 | 3.68 | 13.72 | 14.8 | 6.09 |
| CanNatRs | 69.88 | 68.34 | 1.54 | 2.25 | 8.94 | 13.6 | -5.59 |
| Cielo | 5.80 | 5.80 | 0.00 | 0.00 | 0.69 | 13.5 | 5.85 |
| Occid Pet | 66.26 | 64.06 | 2.20 | 3.43 | 7.73 | 13.2 | -7.01 |
| SouthCpr | 48.83 | 47.74 | 1.09 | 2.28 | 5.20 | 11.9 | 0.87 |
| Petrobras | 36.30 | 36.01 | 0.29 | 0.81 | 3.82 | 11.8 | 3.03 |
| Chevron Corp | 157.19 | 151.73 | 5.46 | 3.60 | 16.17 | 11.5 | -0.29 |
| BakerHu | 23.10 | 22.28 | 0.82 | 3.68 | 2.34 | 11.3 | -8.19 |
| Sychrony Fin | 31.23 | 29.86 | 1.37 | 4.59 | 3.12 | 11.1 | -9.06 |
| BHP Group | 40.07 | 38.60 | 1.47 | 3.81 | 3.87 | 10.7 | -3.56 |

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 % |
|---|---|---|---|---|---|---|---|
| TokioMarine | 2618.50 | 2560.00 | 58.50 | 2.29 | -5034.50 | -65.8 | -65.99 |
| Carnival | 7.76 | 6.85 | 0.91 | 13.21 | -1.47 | -15.9 | -21.53 |
| HaitongSecs | 3.85 | 4.16 | -0.31 | -7.45 | -0.65 | -14.4 | -27.36 |
| BOE Tech | 0.65 | 0.73 | -0.08 | -10.96 | -0.10 | -13.3 | -19.48 |
| VF Cp | 31.57 | 31.28 | 0.29 | 0.91 | -3.51 | -10.0 | -30.80 |
| PingAnIns | 37.50 | 39.20 | -1.70 | -4.34 | -4.05 | -9.7 | -14.12 |
| Tesla Mtrs | 255.49 | 242.40 | 13.09 | 5.40 | -27.45 | -9.7 | -13.90 |
| Hunng Pwr | 3.39 | 3.42 | -0.03 | -0.88 | -0.36 | -9.6 | -20.79 |
| Volkswgn | 172.10 | 168.80 | 3.30 | 1.95 | -17.90 | -9.4 | -7.00 |
| New Ch Life Ins | 14.10 | 14.98 | -0.88 | -5.87 | -1.46 | -9.4 | -22.38 |
| ShenwanHong | 0.10 | 0.09 | 0.01 | 6.45 | -0.01 | -9.2 | -38.92 |
| Citic Secs | 12.70 | 13.34 | -0.64 | -4.80 | -1.22 | -8.8 | -21.77 |
| Nike | 88.71 | 85.40 | 3.31 | 3.88 | -7.58 | -7.9 | -21.64 |
| BOC Hold | 25.75 | 26.15 | -0.40 | -1.53 | -2.15 | -7.7 | -5.50 |
| CSR | 2.52 | 2.54 | -0.02 | -0.79 | -0.20 | -7.4 | -12.85 |
| MTR | 35.60 | 36.05 | -0.45 | -1.25 | -2.80 | -7.3 | -14.18 |
| Ch Coms Cons | 3.20 | 3.30 | -0.10 | -3.03 | -0.24 | -7.0 | -14.52 |
| Tencent | 263.80 | 266.40 | -2.60 | -0.98 | -19.40 | -6.9 | -16.32 |
| PTT Explor | 34.50 | 34.00 | 0.50 | 1.47 | -2.50 | -6.8 | -6.76 |
| Sinopec Oil | 1.84 | 1.83 | 0.01 | 0.55 | -0.13 | -6.6 | -3.16 |

Based on the FT Global 500 companies in local currency

## BONDS: HIGH YIELD & EMERGING MARKET

| Oct 04 | Red date | Coupon | S* | M* | 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 04 | Red date | Coupon | S* | M* | 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- | 137.45 | 2.19 | -0.03 | 0.02 | - |
| innogy Fin B.V. | 06/30 | 6.25 | BBB | Baa2 | A- | 128.68 | 3.20 | 0.00 | -0.01 | 0.40 |

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

[illegible]

## INTEREST RATES: MARKET

[illegible]

## BOND INDICES

| | Index | Day's change | Month's change | Year change | Return 1 month | Return 1 year |
|---|---|---|---|---|---|---|
| **Markit IBoxx** | | | | | | |
| ABF Pan-Asia unhedged | 186.88 | 0.29 | -6.13 | -14.97 | -5.83 | -14.49 |
| Corporates( £) | 300.08 | -0.51 | -9.18 | -24.18 | -10.74 | -24.26 |
| Corporates(€) | 204.12 | -0.30 | -3.80 | -15.49 | -4.43 | -16.12 |
| Eurozone Sov(€) | 210.80 | -0.39 | -4.39 | -17.15 | -4.73 | -17.77 |
| Gilts( £) | 261.76 | -0.35 | -9.52 | -27.18 | -11.51 | -25.91 |
| Overall( £) | 268.14 | -0.37 | -9.21 | -25.93 | -11.05 | -25.00 |
| Overall(€) | 205.64 | -0.32 | -4.19 | -16.63 | -4.56 | -17.25 |
| **FTSE** | | | | | | |
| Sterling Corporate (£) | - | - | - | - | - | - |
| Euro Corporate (€) | 104.47 | -0.05 | - | - | 0.54 | -1.73 |
| Euro Emerging Mkts (€) | 548.22 | 1.43 | - | - | -22.72 | -27.70 |
| 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 | 662.56 | 9.35 | 43.50 | - | 688.92 | 598.01 |
| Europe 5Y | 138.23 | 2.94 | 12.40 | - | 142.08 | 121.70 |
| Japan 5Y | 115.24 | -0.76 | 10.74 | - | 116.00 | 100.33 |
| Senior Financials 5Y | 153.13 | 5.18 | 15.48 | - | 155.06 | 133.08 |
| **Markit CDX** | | | | | | |
| Emerging Markets 5Y | 319.45 | -13.80 | 30.89 | - | 333.25 | 288.27 |
| Nth Amer High Yld 5Y | 596.23 | -29.24 | - | - | 625.47 | 596.23 |
| Nth Amer Inv Grade 5Y | 106.14 | -4.84 | 5.69 | - | 110.98 | 98.24 |

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

## VOLATILITY INDICES

| | Oct 04 | Day Chng | Prev | 52 wk high | 52 wk low |
|---|---|---|---|---|---|
| VIX | 29.20 | -0.90 | 30.10 | 38.93 | 14.73 |
| VXD | 25.65 | -0.32 | 25.97 | 45.37 | 3.27 |
| VXN | 34.18 | -1.38 | 35.56 | 44.05 | 15.70 |
| VDAX | 29.35 | -1.13 | 30.48 | 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 | 11/22 | 2.25 | 99.92 | 2.88 | -0.04 | 0.09 | 0.45 | 2.86 |
| | 05/32 | 1.25 | 78.56 | 3.95 | -0.16 | 0.27 | 0.27 | - |
| | 02/50 | 1.00 | 86.74 | 2.01 | -0.20 | 0.12 | 0.37 | 1.72 |
| Austria | 02/29 | 0.50 | 87.29 | 2.69 | 0.03 | 0.20 | 0.86 | 2.88 |
| | 02/47 | 1.50 | 75.27 | 2.93 | 0.15 | 0.33 | 0.61 | 2.39 |
| Belgium | 06/27 | 0.80 | 93.16 | 2.35 | 0.03 | 0.16 | 0.79 | 2.73 |
| | 06/47 | 1.60 | 73.91 | 3.13 | 0.13 | 0.33 | 0.50 | 2.32 |
| Canada | 03/25 | 1.25 | 94.34 | 3.73 | 0.05 | 0.01 | 0.19 | 2.86 |
| | 06/30 | 1.25 | 86.81 | 3.21 | 0.11 | 0.05 | 0.10 | 1.79 |
| | 12/48 | 2.75 | 93.30 | 3.13 | 0.16 | 0.10 | 0.08 | 1.15 |
| Denmark | 11/29 | 0.50 | 86.62 | 2.58 | 0.05 | 0.23 | 0.78 | 2.67 |
| | 11/52 | 0.25 | 51.25 | 2.61 | 0.08 | 0.34 | 0.74 | 2.12 |
| Finland | 09/24 | 0.00 | 96.19 | 2.01 | -0.03 | 0.01 | 0.83 | 2.65 |
| | 09/29 | 0.50 | 86.65 | 2.63 | 0.04 | 0.22 | 0.83 | 2.79 |
| France | 05/28 | 0.75 | 91.19 | 2.44 | 0.04 | 0.19 | 0.78 | 2.68 |
| | 05/48 | 2.00 | 81.28 | 3.06 | 0.11 | 0.31 | 0.56 | 2.28 |
| Germany | 08/29 | 0.00 | 86.83 | 2.08 | 0.04 | 0.18 | 0.77 | 2.45 |
| | 08/50 | 0.00 | 55.20 | 2.16 | 0.11 | 0.28 | 0.57 | 1.91 |
| Greece | 01/23 | 3.50 | 100.71 | 1.29 | 0.00 | 0.02 | 0.70 | 1.67 |
| | 01/28 | 3.75 | 97.13 | 4.36 | 0.05 | 0.33 | 0.97 | 4.08 |
| Ireland | 10/22 | 0.00 | 99.94 | 1.55 | 0.03 | 0.16 | 1.01 | 2.14 |
| | 05/26 | 1.00 | 95.87 | 2.20 | 0.01 | 0.12 | 0.74 | 2.63 |
| | 02/45 | 2.00 | 82.95 | 3.06 | 0.09 | 0.30 | 0.52 | 2.37 |
| Italy | 02/25 | 0.35 | 93.62 | 3.21 | -0.03 | 0.25 | 0.97 | 3.38 |
| | 05/30 | 0.40 | 86.82 | 2.30 | 0.13 | 0.73 | 1.19 | 3.13 |
| | 03/48 | 3.45 | 84.57 | 4.47 | 0.09 | 0.36 | 0.61 | 2.78 |
| Japan | 04/25 | 0.05 | 99.98 | 0.06 | 0.00 | 0.03 | 0.04 | -0.02 |
| | 12/29 | 0.10 | 99.10 | 0.23 | -0.01 | 0.04 | 0.03 | 0.24 |
| | 12/49 | 0.40 | 78.92 | 1.32 | -0.05 | 0.08 | 0.18 | 0.67 |
| Netherlands | 07/27 | 0.75 | 93.47 | 2.20 | 0.03 | 0.12 | 0.74 | 2.65 |
| | 01/47 | 2.75 | 104.62 | 2.49 | 0.09 | 0.30 | 0.56 | 2.26 |
| New Zealand | 05/31 | 1.50 | 80.80 | 4.18 | -0.14 | 0.17 | 0.23 | 2.20 |
| | 09/40 | 2.50 | 116.17 | 2.48 | -0.17 | -0.02 | 0.07 | 1.63 |
| Norway | 08/30 | 1.38 | 86.43 | 3.36 | -0.02 | 0.03 | -0.05 | 1.82 |
| Poland | 01/23 | 2.50 | 98.57 | 7.23 | 0.02 | 0.08 | 0.40 | 6.88 |
| | 07/27 | 2.50 | 80.53 | 7.46 | 0.22 | 0.92 | 0.64 | 5.91 |
| | 04/47 | 4.00 | 68.20 | 6.66 | 0.00 | 0.62 | 0.67 | 4.18 |
| Portugal | 04/27 | 4.13 | 106.55 | 2.57 | 0.03 | 0.29 | 0.82 | 2.89 |
| Spain | 10/22 | 0.45 | 99.95 | 1.16 | 0.01 | -0.10 | 0.54 | 1.77 |
| | 10/29 | 0.60 | 84.78 | 3.02 | 0.04 | 0.26 | 0.79 | 2.86 |
| | 10/46 | 2.90 | 88.34 | 3.63 | 0.10 | 0.32 | 0.57 | 2.47 |
| Sweden | 06/30 | 0.13 | 112.90 | -0.16 | 0.10 | 0.53 | 0.73 | 1.51 |
| | 03/39 | 3.50 | 118.44 | 2.16 | 0.04 | 0.28 | 0.17 | 1.49 |
| Switzerland | 04/28 | 4.00 | 115.57 | 1.08 | -0.04 | -0.15 | 0.33 | 1.47 |
| | 06/29 | 0.00 | 92.74 | 1.13 | -0.05 | -0.07 | 0.39 | 1.44 |
| United Kingdom | 07/23 | 0.75 | 97.44 | 3.99 | 0.11 | 0.72 | 1.47 | 3.72 |
| | 07/27 | 1.25 | 86.45 | 4.41 | 0.13 | 0.83 | 1.83 | 3.77 |
| | 07/47 | 1.50 | 60.91 | 4.00 | 0.06 | 0.17 | 1.05 | 2.66 |
| United States | - | - | - | - | - | - | - | - |
| | 03/25 | 0.50 | 91.32 | 4.19 | 0.07 | 0.03 | 0.73 | 3.51 |
| | 02/30 | 1.50 | 85.24 | 3.82 | 0.06 | 0.04 | 0.68 | 2.38 |
| | 02/50 | 0.25 | 67.17 | 1.77 | 0.13 | 0.26 | 0.75 | - |

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

## GILTS: UK CASH MARKET

| Oct 04 | Price £ | Red Yield | Change in Yield Day | Week | Month | Year | 52 Week High | 52 Week Low | Amnt £m |
|---|---|---|---|---|---|---|---|---|---|
| | - | - | - | - | - | - | - | - | - |
| Tr 0.75pc '23 | 97.84 | 3.53 | -3.29 | -13.90 | 23.00 | 1207.41 | 100.82 | 97.34 | 34.36 |
| Tr 0.125pc '24 | 95.18 | 3.91 | -2.49 | -13.50 | 22.96 | 877.50 | 99.44 | 94.34 | 34.76 |
| Tr 2pc '25 | 94.54 | 4.00 | -2.68 | -11.31 | 39.37 | 751.06 | 105.99 | 93.15 | 39.04 |
| Tr 0.125pc '26 | 87.83 | 4.08 | -3.09 | -11.11 | 43.16 | 655.56 | 98.77 | 86.33 | 34.53 |
| Tr 1.25pc '27 | 87.83 | 4.07 | -2.63 | -10.94 | 44.33 | 535.94 | 104.30 | 85.80 | 40.07 |
| Tr 0.875pc '29 | 81.37 | 3.93 | -2.48 | -12.47 | 40.86 | 367.86 | 102.36 | 78.30 | 42.65 |
| Tr 4.25pc '32 | 103.19 | 3.85 | -2.04 | -12.10 | 32.76 | 273.79 | 135.62 | 98.95 | 39.43 |
| Tr 4.25pc '36 | 101.65 | 4.09 | -0.49 | -11.66 | 26.23 | 240.83 | 145.94 | 96.26 | 30.97 |
| Tr 4.5pc '42 | 105.28 | 4.11 | 1.73 | -15.08 | 23.05 | 206.72 | 169.96 | 95.62 | 27.72 |
| Tr 3.75pc '52 | 96.20 | 3.97 | 3.66 | -18.31 | 22.53 | 191.91 | 180.27 | 82.60 | 24.55 |
| Tr 4pc '60 | 104.42 | 3.78 | 5.29 | -20.08 | 21.15 | 193.02 | 213.01 | 87.32 | 24.57 |

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

## GILTS: UK FTSE ACTUARIES INDICES

| Price Indices / Fixed Coupon | Oct 04 | Day's chg % | Total Return | Return 1 month | Return 1 year | Yield |
|---|---|---|---|---|---|---|
| 1 Up to 5 Years | 79.95 | 0.28 | 2297.90 | -2.10 | -6.68 | 4.03 |
| 2 5 - 10 Years | 143.90 | 0.62 | 3029.99 | -6.65 | -17.40 | 3.95 |
| 3 10 - 15 Years | 152.37 | 0.58 | 3500.85 | -8.17 | -24.11 | 4.03 |
| 4 5 - 15 Years | 145.02 | 0.61 | 3143.45 | -7.06 | -19.43 | 3.98 |
| 5 Over 15 Years | 212.88 | -2.25 | 3636.55 | -12.44 | -37.84 | 3.93 |
| 7 All stocks | 133.05 | -0.51 | 2955.46 | -7.44 | -23.75 | 3.95 |

| Index Linked | Oct 04 | Day's chg % | Month chg % | Year's chg % | Total Return | Return 1 month | Return 1 year |
|---|---|---|---|---|---|---|---|
| 1 Up to 5 Years | 317.12 | -0.27 | -3.00 | 1.24 | 2674.47 | -2.97 | 2.38 |
| 2 Over 5 years | 546.14 | -2.82 | -13.24 | -35.95 | 4157.37 | -13.19 | -35.69 |
| 3 5-15 years | 436.99 | -0.53 | -10.19 | -16.82 | 3528.63 | -10.15 | -16.20 |
| 4 Over 15 years | 632.83 | -4.15 | -14.90 | -43.80 | 4677.54 | -14.84 | -43.66 |
| 5 All stocks | 514.92 | -2.43 | -11.78 | -32.03 | 3997.95 | -11.73 | -31.70 |

| Yield Indices | Oct 04 | Oct 03 | Yr ago | | Oct 04 | Oct 03 | Yr ago |
|---|---|---|---|---|---|---|---|
| 5 Yrs | 3.95 | 4.06 | 0.57 | 20 Yrs | 4.11 | 4.05 | 1.38 |
| 10 Yrs | 3.99 | 4.07 | 1.01 | 45 Yrs | 3.63 | 3.44 | 1.24 |
| 15 Yrs | 4.09 | 4.10 | 1.27 | | | | |

| Real yield | inflation 0% Oct 04 | Dur yrs | Previous | Yr ago | inflation 5% Oct 04 | Dur yrs | Previous | Yr ago |
|---|---|---|---|---|---|---|---|---|
| Up to 5 yrs | 0.05 | 1.55 | -0.12 | -3.52 | -0.57 | 1.55 | -0.75 | -3.89 |
| Over 5 yrs | 0.24 | 19.34 | 0.09 | -2.27 | 0.21 | 19.39 | 0.07 | -2.29 |
| 5-15 yrs | 0.23 | 8.60 | 0.17 | -2.78 | 0.14 | 8.61 | 0.08 | -2.88 |
| Over 15 yrs | 0.24 | 25.80 | 0.08 | -2.22 | 0.23 | 25.81 | 0.07 | -2.23 |
| All stocks | 0.24 | 16.58 | 0.09 | -2.29 | 0.20 | 16.66 | 0.06 | -2.31 |

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

[illegible]

## BONDS: INDEX-LINKED

| | Price Sep 28 | Yield Sep 28 | Yield Prev | Month return | Value stock | Market | No of stocks |
|---|---|---|---|---|---|---|---|
| Can 4.25%' 26 | 111.44 | 1.412 | 1.572 | -0.37 | 5.25 | 72565.37 | 8 |
| Fr 0.25%' 24 | 103.83 | -1.802 | -1.792 | -2.93 | 17.92 | 240751.99 | 17 |
| Swe 1.00%' 25 | 123.48 | -0.664 | -0.659 | -0.91 | 35.15 | 211164.43 | 6 |
| UK 0.125%' 24 | 102.09 | -1.271 | -0.643 | -3.83 | 15.24 | 524731.75 | 31 |
| UK 2.50%' 24 | 365.22 | -0.472 | 0.115 | -4.23 | 6.82 | 524731.75 | 31 |
| UK 2.00%' 35 | 228.99 | 0.530 | 1.114 | -14.98 | 9.08 | 524731.75 | 31 |
| US 0.625%' 24 | 98.00 | 2.202 | 2.529 | -1.25 | 40.98 | 1567445.89 | 46 |
| US 3.625%' 28 | 110.55 | 1.628 | 1.941 | -4.30 | 16.78 | 1567445.89 | 46 |

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 | 3.95 | 1.87 | 0.13 | Netherlands | 2.20 | 0.13 | -1.62 |
| Austria | 2.69 | 0.62 | -1.13 | New Zealand | 4.18 | 2.10 | 0.36 |
| Canada | 3.21 | 1.13 | -0.61 | Norway | 3.36 | 1.29 | -0.46 |
| Denmark | 2.58 | 0.50 | -1.24 | Portugal | 2.57 | 0.49 | -1.25 |
| Finland | 2.63 | 0.55 | -1.19 | Spain | 3.02 | 0.94 | -0.80 |
| Germany | 2.08 | 0.00 | -1.74 | Sweden | -0.16 | -2.23 | -3.98 |
| Italy | 2.30 | 0.22 | -1.52 | Switzerland | 1.13 | -0.95 | -2.69 |
| Japan | 0.23 | -1.85 | -3.59 | United States | 3.82 | 1.74 | 0.00 |

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

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ARTS

*A New York show hopes to redeem the reputation of tailor-turned-painter Morris Hirshfield. By Ariella Budick*

# Intense visions of an outsider

A cat lounges on a gold and green love seat, sizzling with electric power. White fur crackles along its flanks. Two yellow eyes glare from its snowball face. Once seen, this fierce feline can't be forgotten — except that, for decades, it was.

The American Folk Art Museum's energising exhibition *Morris Hirshfield Rediscovered* tells the story of a painter who found his calling late in life, was briefly hailed, then drummed out of the club of 20th-century American artists.

In 1939, the collector and tastemaker Sidney Janis was prowling around a gallery in New York, hoping to flesh out the show he was curating at the Museum of Modern Art, *Contemporary Unknown American Painters*. He spotted a pair of canvases turned towards the wall, waiting to be returned to the artist. Janis flipped one over and found himself staring back at that baleful cat, "a strangely compelling creature which, sitting possessively upon a remarkable couch, immediately took possession of me".

The art world's elite agreed. Picasso, Duchamp, Mondrian and Peggy Guggenheim praised him. Even the astringent critic Clement Greenberg decreed that Hirshfield "would hold his own against any competition" of living painters. MoMA bought both of Janis's discoveries, "Angora Cat" and "Beach Girl", and in 1943 gave the 71-year-old Hirshfield a solo show.

It took him a lifetime to become an overnight success. Born in 1872 to poor Jewish parents in what was then Russian Poland, Hirshfield sailed to New York City at 18 and changed his name from Moishe to Morris. The entrepreneurial immigrant started out cutting fabric in a women's cloak and suit factory on Manhattan's Lower East Side. Later, he and his brother opened a tailor shop, which lasted a dozen years before folding.

But Hirshfield then hit it big in slippers. Even during the Depression, his company, E-Z Walk, brought in $1mn a year and allowed him to live in a spacious house in Borough Park, Brooklyn. (The Folk Art Museum commissioned the designer Liz Blahd to reproduce 14 of his designs, a rainbow of stylish boudoir footwear.) Eventually, that success, too, imploded.

Impoverished and unemployed, Hirshfield downsized to a tiny apartment in Bensonhurst and finally had time to paint. He spent two years labouring over the two works that Janis stumbled on. Rather than spend money on virgin canvas, he picked up someone else's paintings and buried them in pigment. In "Angora Cat" (1937-39) the *pentimento* is barely noticeable: a small metallic figurine decoratively affixed to the wall. In "Beach Girl", the original peeks through more decisively, with Hirshfield's brushstrokes converging on a figure's Leonardo-esque face.

Clockwise from above: 'Tiger' (1940); 'Girl in Flowered Dress' (1945); 'Angora Cat' (1937-39)


Art historian Richard Meyer, who curated the Folk Art Museum's show with splendid passion, connects the painting to Hirshfield's decades of experience with cloth. In what Meyer calls the artist's "textile imaginary", each of the components mimics a different fabric. "The sky becomes loop strands of creamy blue yarn, the sand gives way to gray boiled wool, the water converts into salt-and-pepper tweed," he writes in the superb catalogue.

Hirshfield's painting "Tailor Made Girl" (1939) depicts a symmetrical figure outfitted in blue, holding a vase of flowers. It's a formal, even iconic pose, the well-dressed woman standing in for a Christian saint, with a crown of permed hair cast in the role of halo. In reproduction, the work looks like an assemblage of flattened, simplified forms. In reality, the nose juts out into three dimensions, a sculptural schnozz that gets lost on the printed page.

That year also yielded "Lion", a predator perched on petite paws. With its bulbous nose and long, elegant whiskers, the animal has been read as a self-portrait. Meyer also detects a trace of Bert Lahr in *The Wizard of Oz*. Hirshfield's king of beasts stands regally wrapped in its mane the way Henry VIII enfolded himself in ermine, radiating supernatural potency.

A companion piece, "Tiger" (1940), represents the acme of Hirshfield's achievement — a dangerous place to reach. The curve of the beast's back extends the swoops and swells of a verdant mountain range and links the tapestry-like vegetation in the foreground with the roiling pelt of clouds. "Among 20th-century American paintings, I do not know . . . a more unforgettable animal picture than Hirshfield's 'Tiger'," announced MoMA's founding director Alfred Barr in 1942.

Barr put his reputation where his heart was and in 1943 mounted *The Paintings of Morris Hirshfield*, which included the artist's complete opus: 30 paintings in all. Critics reacted viciously. A condescending consensus emerged, condemning the show as a museum's grotesque dalliance with amateurishness. This was a tragic moment in gatekeeping, when ossified criteria of prestige interfered with critics' ability to see what was right before their eyes. Barr lost his job. Hirshfield was demoted to the status of an overambitious "primitive". The modern canon had room for exactly one self-taught outsider: Henri Rousseau.

One possible — and partial — explanation for the disaster is that, as the current exhibition makes clear, Hirshfield's creativity had already begun to ebb. The intensity of the first experiments had tapered off, replaced by compulsively repetitive renderings of the female body. Even so, André Breton and his band of exiled surrealists embraced these barely animate, mannequin-like nudes, and Hirshfield repaid their admiration with a cover illustration for the surrealist magazine View.

The prejudices that snuffed out Hirshfield's fame have largely, but not entirely crumbled. Meyer recounts that he approached MoMA and suggested it might want to re-examine Hirshfield (and make good use of its holdings) with a new retrospective. The museum declined to reopen old wounds, and the show wound up in an institution dedicated to challenging the distinctions between unschooled and learned art. The work of redemption goes on.

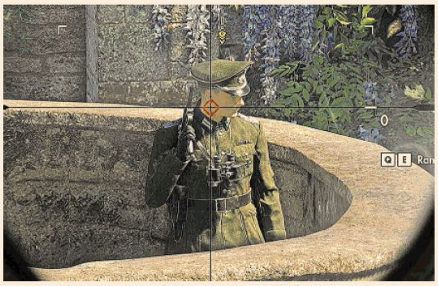
*To January 29 2023, folkartmuseum.org*



# On the frontier between war and fun

GAMING

Tom Faber



An Imperial War Museum exhibition on games includes 'Sniper Elite 5'

It looks just like a normal Xbox 360 controller, one I might have held through long gaming sessions during my teenage years. Yet the gadget in the glass case at London's Imperial War Museum had another purpose entirely — it controlled the camera of Desert Hawk, an unmanned aerial vehicle used for military surveillance in the Afghanistan and Iraq wars. The manufacturer, Lockheed Martin, realised that Xbox controllers were cheaper than military-grade alternatives and did the job just as well. Many new recruits had already used gaming controllers to engage in fantasies of war; now they could use them for the real thing.

This uncomfortable elision of war and entertainment is explored in IWM London's new exhibition, *War Games*. In a survey of 40 years of gaming history, the exhibition asks: what can games teach us about conflict?

"There's always a tension when playing at war because war is primarily about violence and destruction, while the defining characteristic of games is fun," says co-curator Ian Kikuchi. Fans of the first-person shooter genre know that the easiest way to resolve this tension is simply to make the violence feel fun. We see the team behind stealth shooter *Sniper Elite 5* discussing how they fine-tune each rifle to make it satisfying to fire and how much care goes into programming each gruesome headshot. There is nothing inherently wrong with enjoying this — entertainment media have long given audiences a safe

*of Duty: Modern Warfare* slavishly pursue graphical fidelity, a goal that remains a core concern for many gamers. It is curious to note that players of modern shooters demand the utmost realism in terms of weapon design and blood spatter physics but also desire a depiction of war that strips out all the boredom, the trauma — in other words, the humanity.

> Players of modern shooters want a depiction of war that strips out the boredom, the trauma

Several indie games have tried to explore the emotional realities of war and to generate greater empathy. The exhibition presents *Through the Darkest of Times*, in which you direct opposition to the Nazi party in 1930s Berlin, and *This War of Mine*, where you control civilians struggling to survive in a city under siege. Most moving is *Bury Me, My Love*, with these retellings of war stories: a blanket carried across Europe by a second world war refugee and the charred musical instrument of an Iraqi man who fled his home in Mosul to escape Isis.

We also see a demo of the controversial *Six Days in Fallujah*, which has attracted criticism from gamers who are concerned about whether it can sensitively portray the plight of Iraqi civilians while extolling the heroism of US marines. This raises questions about whether games can provide a sufficiently sensitive canvas to portray recent conflict — there are no games about the war in Ukraine just yet, although the industry has united in support of Ukrainian developers.

"More than anything, games tell us about the stories we want to tell about conflict," says Kikuchi. "They overemphasise the difference that individuals can make. Conflicts are rarely solved by one surgical strike or a special forces squad." To walk through the exhibition is to understand that war is beyond the control of any one individual.


space to explore their darker impulses and ideas. Gore can be a thrilling spectacle as long as we know it's not real.

Yet war games are constantly edging towards greater realism. The exhibition includes the rifle on which the *Sniper Elite 5* team modelled their digital version. And in a video, the creators of *Call* an innovative game casting players as a man communicating via text message with his wife as she tries to escape Syria. The messages you send dictate whether she makes it to Europe safely, ends up in a refugee camp or drowns at sea.

Alongside the games are objects from the museum's collections that resonate

Games might mine the topic for enjoyable spectacle or explore its darker undercurrents, but they mostly peddle a fantasy. "They reveal our desire to be in control of our destiny," says Kikuchi, "in a way which real war always denies us."

*To May 28 2023, iwm.org.uk*



FT BIG READ. CHINA

FT series The impact of falling house prices is spreading to the broader economy, as a rash of debt defaults by developers morphs into a fiscal crunch at the local government level.

*By James Kynge, Sun Yu and Thomas Hale*

# A slow-motion financial crisis

Lucy Wang finds herself at the sharp end of a crisis seeping through China's housing market. She dreamt that buying an under-construction apartment in the northern city of Zhengzhou would be a ticket to a new life.

For a young woman from a farming village, the Rmb250,000 ($34,839) down payment she used to secure the property represented a big outlay. Half the money had come from her parents, who had put aside years of meagre savings from selling the potatoes and wheat they grew on the family plot.

Everything seemed set fair until October last year, when building activity on her block of flats suddenly stopped. At first, she said, the developer of the Meiling International House was evasive on when construction might resume. Then its representatives started spouting reams of unlikely excuses. In July Wang's hope died. The local housing bureau told her and other buyers that their money had been "misused". "I have lost faith in the developer," she said. "This has ruined my life."

Wang is a victim of China's gathering economic gloom. A property market that has contributed about one quarter of gross domestic product has over the past decade turned sour, triggering a series of secondary effects that are smothering growth in the world's second-largest economy. Logan Wright, a Hong Kong-based partner at the consultancy Rhodium Group, calls the situation a "slow-motion financial crisis".

Contagion is spreading into the deep tissue of China's political economy. What began as a property crisis — characterised by slumping apartment sales and a rash of debt defaults by developers — is now morphing into a financial crunch at the local government level.

A new world of difficult choices looms before Chinese policymakers as a crucial congress of the ruling Communist party this month looks set to award another term in office to Xi Jinping, China's authoritarian ruler.

With the market slump, thousands of local government financing vehicles (LGFVs), which since the financial crisis have provided the main impetus behind China's investment-driven growth, are either running short of funds or teetering on the brink of unprecedented defaults, analysts say.

Taken together, the slumping property market, the sputtering investment engines of local governments and a hefty burden of national debt signals the end for a model of growth that has not only transformed China but also been the biggest generator of global economic expansion for well over a decade.

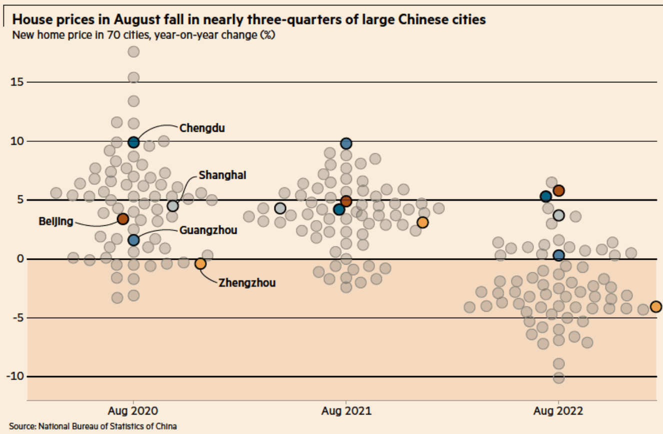
Dan Wang, chief economist at Hang Seng Bank, a Hong Kong-headquartered bank with significant operations in mainland China, says the economy has arrived at an inflection point. "The old model of relying on infrastructure and housing has essentially finished," she says.

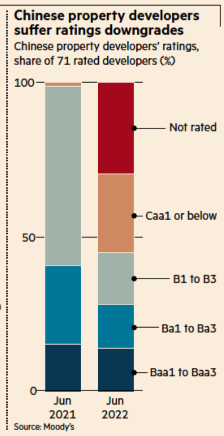
One of the next twists, according to Wright, is likely to be unprecedented defaults by LGFVs on the domestic bonds they issue. If LGFVs do default, it will signal the crossing of a "Rubicon", he says.

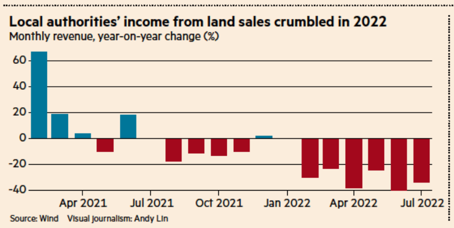
This is partly because these bonds — which have financed the construction of roads, railways, power plants, airports, theme parks and hundreds of other pieces of infrastructure — have been assumed to enjoy an implicit government guarantee. More materially, such defaults could also destabilise a $7.8tn mountain of debts built up by such LGFVs, sending chills through an already cooling economy.

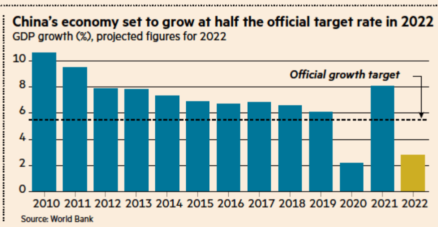
To put it in context, that figure for LGFV debt is the equivalent of nearly half of China's total GDP in 2021 — or, for example, about twice the size of Germany's economy.

In the free markets of the west, financial crises can erupt suddenly, taking




Authorities have made a series of announcements intended to support the property sector, but analysts say they do not represent a solution to China's structural slowdown

Qilai Shen/Bloomberg

'The next stage of the property

finance at the University of Hong Kong. He adds that in the past few years, Beijing has tried to stretch the booms in property and infrastructure to prolong investment-led growth.

"But now, all these drivers have little space left, if any at all."

## Three red lines

Wang's travails reveal a crucial aspect of what is ailing the property market. She had bought a "presale property", a type of investment that worked satisfactorily when apartment sales were buoyant and real estate prices were almost perpetually on the rise.

Under this model, buyers would hand over a down payment of typically 30 per cent of the value of an apartment. They would then start paying monthly mortgage instalments as the developer built the apartments from the ground up. If everything worked out, the buyer would take delivery of a new apartment on a certain date, happy in the expectation that it would be worth more than when

Wang was one such protester. She says she stopped paying the Rmb3,800 monthly mortgage instalment in June. In any case, it would have been difficult for her to afford the payments because her job as a sales agent for "baijiu", an alcoholic drink, has been hit by China's broader economic slowdown. "I am not optimistic about the project," Wang says. "I heard an executive at the developer has recently been arrested."

## Economic contagion

Personal misfortunes such as Wang's reveal the human cost from a contagion that is starting to course through the main arteries of the Chinese economy.

"The next stage of the property crisis is the transmission of losses from property developers to China's financial system," says Wright, tracing a clear line of cause and effect from the stalled real estate projects to local government debt distress, lower investment levels and finally to the possibility of emergency state bailouts.

nues, according to Moody's, a rating agency. This, in turn, rendered local governments much less able either to drive growth through infrastructure investments or to repay debt.

The potential size of this problem is brought home by the numbers. The decline in local government land sales revenues in the eight months to August was 28.5 per cent year on year or, in monetary terms, down Rmb1.4tn from the same period last year, according to official figures. If that trend is annualised, it will produce a full-year decline of Rmb2.5tn, notes Wright.

Such a shortfall represents more than half of the Rmb4.5tn in LGFV debt that is set to come due before the end of June 2023, according to Wind, a database provider. The upshot is that — absent a big bailout from Beijing — local governments will struggle to honour the debts of at least some of the thousands of LGFVs that they own.

If defaults do occur, analysts say, they risk destabilising the whole stack of

'Most of the LGFVs rely on subsidies from local authorities. But now that local government revenue from land sales are down, a lot of the subsidies are just stopping'

around 6 per cent and get returns on equity of maybe 1 per cent," says Stevenson-Yang. "Most of them rely on subsidies from local governments. But now that local government revenue from land sales are down, a lot of the subsidies are just stopping."

The big question, she says, is "how are the LGFVs going to pay?"

A fateful irony in China's LGFV narrative is that it was these funding platforms that were seen as the country's saviour just over a decade ago. In the aftermath of the 2008 global financial crisis, Beijing looked to local governments to reverse a precipitous slump in GDP growth. The LGFVs responded by launching an investment boom funded by the issuance of bonds that floated China's economy off the rocks.

Now, by contrast, it is the excesses of LGFVs — which are estimated to number around 10,000 across the whole country — that threaten to damage the economy.

Although the origins of China's LGFV meltdown lie within the opaque recesses of China's political economy, the fallout is likely to be of global significance. Local government frailties are combining with other structural headwinds to hobble the country's dynamism. This year the country's economic output will lag behind the rest of Asia for the first time since 1990, according to World Bank forecasts last month.

The World Bank revised down its forecast for China's GDP growth to 2.8 per cent, compared with 8.1 per cent last year. By contrast, the outlook for the rest of east Asia and the Pacific is to grow at 5.3 per cent this year, up from 2.6 per cent last year.

The new reality for China represents a seismic shift in the contours of the global economy. In the decade from 2000 to 2009, China's GDP growth averaged

As he prepares to begin a third term as China's leader, Xi faces an economy that is slowing sharply

10.4 per cent a year. This extraordinary performance abated during the decade from 2010 to 2019, but annual GDP still grew by an average of 7.7 per cent.

If the anaemic performance forecast for China this year persists, the world will miss its most powerful locomotive for prosperity. In the years between 2013 and 2018, according to a study by the IMF, China contributed some 28 per cent of GDP growth worldwide — more than twice the share of the US. The biggest fall in Chinese cement production in at least two decades has dragged global output of the construction material into decline, demonstrating how a crisis in the country's vast property sector is hitting other industries that rely on it for growth. According to data provided by the World Cement Association, global cement output fell 8 per cent year on year to 1.9bn tonnes in the first six months of 2022.

Several structural impediments beyond the debt crisis are conspiring to reduce the country's potential. A peaking population, twinned with a rapidly ageing society, are two among several other trends that look set to sap economic vigour over the medium term.

A sense of how deeply such concerns are being felt within China is evident from the pessimism that is starting to infect multinational companies. The European Chamber of Commerce in China this month put out its "most dark [position] paper ever", according to Jörg Wuttke, chamber president. The chamber warned that "European firms' engagement [in China] can no longer be taken for granted".

Overall though, analysts say that Beijing retains considerable potential for policy responses to its economic problems. In recent days, authorities governments and investors by surprise. But in China's state-driven economy, infirmities metastasise more slowly as Beijing deploys political capital to battle against the turning tide. This gives proceedings a more stately aura, but it does not mean that underlying problems are any less severe, analysts say.

The global implications of a Chinese economic slowdown are stark. The country's contribution to the world's economy, already hit by a sharply slowing GDP growth rate this year, would be further enfeebled. Multinationals that derive much of their revenue growth from China may be forced to trim earnings projections.

"China's growth model has run its course," says Chen Zhiwu, professor of

crisis is the transmission of losses from property developers to China's financial system'

construction began.

But several factors have conspired to undermine this cosy arrangement.

In August 2020, the Chinese government — spooked over the spectre of a debt-fuelled property bubble — imposed "three red lines" on developers to restrict their capacity to add to already giddy levels of debt. This, in turn, left some overleveraged developers without the means to finish apartment blocks they had already pre-sold.

As developer funds dried up, building activity on some apartment blocks petered out. In protest, hundreds of thousands of would-be apartment owners this year boycotted the mortgages they had pledged to pay on more than 300 developments in nearly 100 cities.

Such transmission mechanisms are already in play. The "three red lines" policy that mothballed the Meiling International House project has clobbered the finances of real estate developers, which together missed payments on a record $31.4bn in offshore dollar bonds by August. Developers are also being hit by collapsing business revenues: official figures show home sales in China fell nearly 30 per cent in the first half of the year to about Rmb6.6tn.

But it is the next link in the chain that is really crucial. As developers ran short of income, they had to slash their land purchases for new projects. Such land sales have long been a lifeline to local governments, accounting for roughly 40 per cent of their recent annual reve-

LGFV debt, which stood at about Rmb54tn ($7.8tn) at the end of 2021, according to Wind, a database provider. Following defaults, a flight to safety would probably take hold, driving Chinese financial institutions to shun the bonds of LGFVs from those provinces with weaker financial performances, according to experts.

Moody's estimates regional and local governments will this year suffer a total funding gap — the shortfall between revenues and expenditures from all sources — of Rmb7.5tn.

Anne Stevenson-Yang, co-founder of US-based activist investor J Capital, sees the woes afflicting LGFVs as a product of the inefficiency of Chinese state-owned actors. "The LGFVs took on debt at

**Tomorrow**
As the property market slumps, can China rebuild its growth model?

have unveiled a series of announcements intended to support the property sector, sparking a mini-rally for the shares of Hong Kong-listed Chinese real estate companies.

But while such stimulus measures are helping to manage the property shock, says Thomas Gatley of Gavekal Dragonomics, they do not represent a solution to China's structural slowdown.

As Diana Choyleva, chief economist at Enodo Economics, a consultancy, puts it: "Both the Chinese Communist party and the wider world need to come to terms with all the profound changes that flow from a Chinese economy growing at best at half the level of 5 per cent."

*Additional reporting by Nian Liu and Maiqi Ding*



# The FT View

FINANCIAL TIMES
'Without fear and without favour'
ft.com/opinion

## Germany's divisive 'double ka-boom' on energy

*Scale and timing of Berlin's support package risks undermining EU unity*

When Germany's government announced a bazooka-sized €200bn energy support package for households and businesses last week — a "double ka-boom", said chancellor Olaf Scholz — it did not intend to start a volley of intra-EU friendly fire. But that is what ensued. Italy's outgoing premier Mario Draghi warned that "we cannot divide ourselves according to the space in our national budgets". An adviser to his imminent successor Giorgia Meloni said Berlin's move "undermine the reasons for the union". Slovakia's energy minister accused Germany of "destroying our common market" and Hungary's leader Viktor Orbán called it "cannibalism".

The reactions show that the policy move upset a delicate political balance in Europe ahead of a difficult winter, even if German leaders protest that the backlash is unjustified. To a degree, those protestations are valid. Berlin can fairly claim that it is only following the lead of France and Spain in capping energy costs with the help of public subsidies. If anything, it seems to want to keep in place some price incentives for energy savings. The country has already reduced energy demand more than many, at a steep cost; Germany's industrial production is plummeting. That is not surprising given the country's outsized — though self-inflicted — reliance on Russian gas.

But this is not enough to permit Berlin to shrug off objections. Its "double ka-boom" is a challenge to the EU unity that Vladimir Putin seeks to undermine. The scale of Germany's package and its unfortunate timing — a day before energy ministers were set to discuss a co-ordinated approach — make it much harder to achieve just that.

Not all countries, especially poorer ones, can subsidise their businesses on such a scale. Even fewer can risk funding it all through borrowing. Germany has rekindled memories from early in the pandemic, when its bigger financial muscle seemed to protect its companies better than other countries from the impact of lockdowns, distorting competition in the single market.

The €200bn is an inflated number: it reflects the accounting trick needed for Germany to reactivate its own strict fiscal rules next year, rather than the likely needs of its economy. But that does not necessarily help the political fallout in a union where many still remember feeling hectored by Berlin to stick to fiscal rules now overripe for reform.

Domestic politics are as difficult in Germany as elsewhere and clearly required a big response to support households and businesses. A legislative deadline necessitated the timing. This was more clumsy than malicious; better communication could have lessened the row. Still, Europe cannot afford clumsiness at a time of war, particularly from its most powerful country. It is in the interests of both Germany and Europe for Berlin to mend fences swiftly and throw its weight behind a more harmonised approach at EU level. Many good ideas are circulating. Draghi has proposed to repurpose SURE, the pandemic-era refinancing vehicle for national unemployment insurance, to help countries fund protections against high energy prices. Claude Turmes, Luxembourg's energy minister, had a point when insisting state aid rules must be able to halt an "insane" subsidy race.

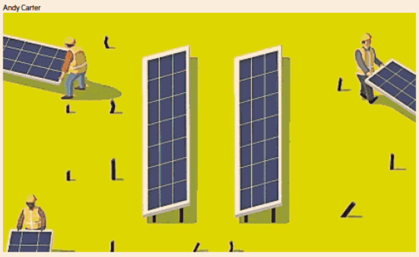
Europe cannot afford clumsiness at a time of war, particularly from its most powerful country

If Germany does not lend such ideas strong support now, it should expect greater demands less to its liking. Back in 2020 there was fear of single market fragmentation due to differences in fiscal capacity. Within months, the EU had agreed path-breaking common borrowing to fund recovery spending. This demonstrated that the longer unity is left undermined, the larger the response needed to restore it — and disunity is not an option for a Europe at war.

Opinion Environment

## The Tories have led on climate — until now

Andy Carter



Pilita Clark

Who do you think said this at a climate change event in Oxford the other week? "I hope nobody ever buys any ExxonMobil products. No environmentalist should ever do that. They have done more damage to the world than any other company."

Someone from Greenpeace? Extinction Rebellion? The Green party? No. Those words came from Lord Deben, or John Gummer as he is better known, a former Tory cabinet minister and one-time Conservative party chair.

For the past decade, Gummer has chaired the Climate Change Committee, an independent body that marks the government's climate homework. As his term nears an end, he thinks it is time to be more "disruptive", as he recently told a forum held by Oxford university's Smith School of Enterprise and the Environment (where I am a fellow).

Truss's net zero review will have consequences for the very sectors it is supposed to benefit

Gummer had just written to the UK head of ExxonMobil, plus the chair of Shell, to question parts of their plans

review of how the UK's net zero commitments are delivered. The move has been billed as an effort to ensure this delivery is "pro-business and pro-growth" as the war in Ukraine spurs soaring energy prices and inflation. But other countries facing the same pressures are not formally reviewing the delivery of such a fundamental climate goal. And while the inquiry is being led by a staunch net zero advocate, MP Chris Skidmore, who says it "100 per cent" won't lead to the goal being delayed or ditched, it will still have consequences for the very sectors it is supposed to benefit.

"Waiting several months for the review's conclusion will push back the publication of the UK's green finance strategy into 2023," says Kate Levick, co-head of a secretariat to the UK's Transition Plan Taskforce.

That strategy is an important plank in the government's plan to make Britain a net zero financial centre. No wonder the very existence of the review is unsettling, not least since candidate Truss promised to "double down" on the drive for net zero and build on her party's "proud history of leadership on the environment".

It is worth remembering some of that history to grasp the scale of her more recent moves, which British voters have had virtually no say on.

Under David Cameron, Tory MPs backed Tony Blair's groundbreaking 2008 Climate Change Act setting emission targets in law. In government, Cameron approved a phaseout of coal-fired power plants and oversaw policies that made the UK an offshore wind giant.

In 2019, the UK became the first major economy to put a 2050 net zero target in law under Theresa May. Her

# Letters

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## Apathy of educated class allows conspiracy theorists to thrive

We might, as your columnist Gideon Rachman does, label those delusional (if not deranged) world leaders such as Vladimir Putin and Donald Trump as conspiracy theorists ("When world leaders believe in conspiracies", Opinion, October 4).

One would be correct in doing so — irrefutably — as Trump has yet to provide even a fragment of concrete evidence of the "birther" lie that Barack Obama was not born in this country, and Putin has yet to explain how Ukraine can be a Nazi state led by a Jewish president. The issue, however, is not that our times are producing more conspiracy theorists, but rather that our societies' professional, educated and hyper-productive populations have been sidelined, demonised and inevitably have become disengaged from politics.

Voter bases across the globe have vilified what is called "the establishment", often because of the rhetoric deployed by politicians around what Rachman would call conspiracy theories.

The said "establishment" is mistakenly thought to be comprised of the 0.1 per cent of income earners. But what about the next 9.9 per cent of top income earners — the doctors, lawyers, professors, bankers, many of whom would be readers of this publication?

The most economically productive and highly educated segments of our populations have largely become uninterested in active political participation, beyond voting.

Our societies have turned their backs on the "establishment" in favour of political outsiders: the billionaires, the military strongmen or the bartenders (as is the case with the Democratic congresswoman Alexandria Ocasio-Cortez).

As long as this 9.9 per cent of top income earners, with their distinguished professional backgrounds, remain uninvolved in the political process, we can expect rhetoric and conspiracy theories to triumph.

**Jorge Alberto Chico**
*New York, NY, US*

## Angola has opportunity to reshape its politics

There are very few instances of revolutionary movements that once in power are able to share that power with others. The recent elections in Angola have provided just such an opportunity, but are the rival parties willing to take it ("Angola president set for re-election with reduced majority", Report, August 27)?

The election, which gave the National Union for the Total Independence of Angola (Unita) 45 per cent of the votes, with President João Lourenço's Popular Movement for the Liberation of Angola (MPLA) receiving little over 51 per cent, down from 61 per cent in 2017, suggest that the MPLA no longer has the legitimacy to govern the country as a one-party state. But it is not clear that the MPLA accepts this.

Speeches to date have avoided as much as possible mentioning the opposition. The inauguration itself was an ode to military might, rather than a gathering of the different components of civil society.

Lourenço's recent efforts at addressing poverty in the country have been thwarted by declining oil prices and the need to respond to the Covid pandemic.

His reform programme included attempting to recover the estimated $100bn of funds stolen by the elite during the period 2002-2017, but this led to tensions with those within the MPLA still aligned with the former president, José Eduardo dos Santos.

Such internal tensions could be forcing Lourenço to consolidate his support within the military, rather than reaching out to Unita.

More dispiriting to outside observers was the low turnout in the elections. Less than 45 per cent of the electorate


"WE'RE SHORTING THE TORY PARTY"

Radek Sikorski, a former Polish foreign minister, suggested the leaks were the result of US sabotage, posting a picture of one of the leaks with the words: "Thank you, USA."

Does it not make more sense that Putin was behind it because he worried about the loyalty of those in the oil and gas sector. Some top executives recently died in unexplained circumstances. Putin must have been concerned that leaders in this sector could become the nucleus of an opposition regime ready to compromise and resume gas flows to the west. What he did was to "burn the boats", as ancient generals did on reaching an enemy shore, to make clear to their side there was no return.

**Victor Gilinsky**
*Santa Monica, CA, US*

## A tide in the affairs of British emissions policy

## Renewables are just one piece of a complex puzzle

John Burn-Murdoch's Data Points column "Economics may take us to net zero all on its own" (Opinion, September 23) rather misses the forest for the trees.

The renewable revolution is a success story to be sure, and yet global emissions continue to rise.

Energy generation contributes about 35 per cent of global emissions. Even if energy-related emissions fall to zero, emissions from major sectors such as construction and agriculture are likely to increase sharply due to population growth and development.

In the period between 2011-2013 China poured more concrete than the US in the entire 20th century.

Macroeconomics cuts both ways and a more developed, populous world is likely to generate greater emissions.

Scientists tell us we have about a decade to dramatically curb fossil fuel emissions.

Incremental progress on climate and energy should not be measured against the status quo, but rather our ability to curb emissions in line with prevailing science to avoid surpassing a 1.5C increase in temperature.

Assessed in this framework, a laissez-faire faith in the energy transition is clearly not enough.

The economics of renewable energy should give us hope, but they are one piece of a complicated puzzle.

Advances in technology, reallocation of capital, changes in consumer behaviour and, most importantly, our collective will for action will determine if we can escape the worst impact of climate change.

**John Ambler**
*Associate Director, Pollination*
*London W1, UK*

## Cool-headed commentary on why this is not a crisis

The Bank of England and most commentators are grossly misleading the general public. Contrary to the FT Alphaville column (FT.com, September 27) there is no sterling crisis. The UK has a freely floating exchange rate. It is not an emerging market with an unserviceable foreign currency debt schedule. It's not Brazil in the 80s or South Korea in the 90s.

You don't defend free floats. Or intervene. Exchange rates are not sources of national pride. Exchange rates are simply clearing prices which reflect the relative demand for, and supply of, national currencies.

Clearing prices don't have crises.

**Mark McFarland**
*Hong Kong*

## Try Schumpeter's view of pessimism to lift the gloom

After the outpouring of grief at the death of Queen Elizabeth II, there has now been an outpouring of gloom about the government's new economic policy, even though its likely features were no secret.

Admittedly the Bank of England's sluggishness in raising interest rates has been unhelpful. But I am reminded of Joseph Schumpeter's observation: "Pessimistic views about a thing always seem to the public to be more 'profound' than optimistic ones."

**DR Myddelton**
*London W9, UK*

## Bearing all the hallmarks

It's good to read about the new Charles III coins (Report, September 29).

But what about the special hallmark the UK's four Assay Offices would

Shell, to question parts of their plans for new fossil fuel developments. Business executives bear personal responsibility for decisions that affect the climate, he said, and in the worst cases, "we have to shame them".

His words are a crisp reminder of how seriously prominent members of Britain's Conservative party take the climate threat — and what this means for their new prime minister.

In her first chaotic weeks in office, Liz Truss has taken steps that have rattled those Tories who have been rightly pleased that their party has been a climate leader among the global centre-right.

Some of these decisions — lifting the ban on fracking and accelerating North Sea oil and gas production — had been telegraphed during the leadership race. Likewise, it was not a total surprise to see her put her ally Jacob Rees-Mogg, an MP who has previously questioned how much rising $CO_2$ levels affect the climate, in charge of the department responsible for climate strategy.

What almost no one saw coming though was the decision to order a target in law under Theresa May. Her successor Boris Johnson won the 2019 election with a party manifesto that promised to deliver on the net zero goal and "lead the global fight against climate change".

His government brought forward a ban on new petrol car sales to 2030, five years earlier than planned, and committed to cutting the UK's emissions by 78 per cent by 2035, years ahead of the previous target. It also published a 135-page Treasury net zero review that found an orderly green transition could produce more benefits, such as lower household costs, than a fossil-fuelled economy.

And it drew up a 368-page net zero strategy which, as Gummer's climate committee said this year, had much to recommend it, though it still needed a lot of work on the thing that matters most: implementation.

Truss's review is due to report by the end of December. Let's hope it is worth the cost of waiting even longer for action on a threat that grows more evident every year.

*pilita.clark@ft.com*

Less than 45 per cent of the electorate voted, compared with 76 per cent in 2017. The population's apparent disavowal of politics combined with its greater impoverishment has the potential, if not addressed, to create an explosive mix.

**Sir Charles Petrie**
*Former UN Assistant Secretary General Political Analyst, Luanda, Angola*

## Why Putin had reason to sabotage the gas pipelines

Most analysts believe the Russians were responsible for the sabotage of the Nord Stream pipeline ("Damaged Baltic Sea gas pipelines put western powers on alert for sabotage", Report, September 29), but their speculation over motive — that it was to intimidate the west — seems to me singularly unconvincing.

The pipeline, linking Russia with Germany, was already shut down. Blowing it up only consolidates western opposition to Vladimir Putin, as is made clear by the suspicion in some quarters that the US may have been behind the operation.

Your leader on energy (FT View, August 27) rightly emphasises the UK's current dependence on traditional fossil fuels and the consequent need for continuing investment in more exploration and LNG infrastructure. But the discussion on shifting away from fossil fuels continues the conventional, rather limited, perspective of variable wind and solar and the long-term nature of nuclear developments to provide essential base supply.

The big omission is the potential of the tides. These run continuously and are abundant around our coasts. While several small developments are under way, especially in Scotland, what is needed is the sort of serious R&D that has been poured into nuclear over the decades. This will reduce costs, as has occurred for wind.

Why has the government so shortsightedly failed to support this renewable energy source that is not dependent on unreliable external suppliers?

**Brian Scott**
*Belfast, UK*

*London W1, UK*

## King's pen pique is both trivial and meaningful

The highly visible irritation of King Charles about fountain pens is perhaps both trivial and meaningful.

In the psychotherapy room, just as in the transparent media world John Gapper describes, everything is noticed and potentially significant ("The King's problems with pens break the royal spell", Opinion, FT Weekend, September 17).

Not wishing to be unsympathetic about a flash of ill-temper at a time of exhaustion and grief, it is at least worth wondering — given what is at stake for us all — whether there is more to it when someone finds he "can't bear this bloody thing", just as he is signing his name as the new monarch.

If the "Firm" chooses the option of encouraging King Charles to "stop snapping at things", it could help him to ask whether it is the pen or the role that is the focus of his despair.

**Dominic McLoughlin**
*London N8, UK*

the UK's four Assay Offices would normally issue for such important events as the accession of a new king? Can the platinum jubilee hallmark be produced with the rapid introduction of the Charles III hallmark? Coins have set the precedent.

It will be a rare opportunity for craftsmen and collectors and should not be missed. Perhaps this is the next announcement? I hope so.

**Jenny Cotton**
*Sheffield, South Yorkshire, UK*

## Correction

• The new funding round for Improbable, the UK virtual world technology company, is priced in dollars, not sterling as wrongly stated in an article on October 1.

OPINION ON FT.COM
**The UK's global excuses for its homegrown problems**
Pointing at the febrile nature of bond markets is not a substitute for fessing up to bad decisions on tax, writes **Alan Beattie**
**www.ft.com/opinion**

The advantage of democracies is not that they necessarily choose wise and well-intentioned leaders. Too often they choose the opposite. But these can be opposed without danger and dismissed without bloodshed. In personal despotisms, neither is possible. In institution-

economy as “unstable, unbalanced, uncoordinated and unsustainable”. The fundamental macroeconomic problems are excess savings, its concomitant, excess investment, and its corollary, growing mountains of unproductive debt. These three things go

> The risks of his unchallengeable power are ossification at home and increasing friction abroad

business and waste in the public sector. In addition, environmental policy, not least the country's huge emissions of carbon dioxide, remains an enormous challenge. To his credit, Xi has recognised this issue.

More recently, Xi has adopted the pol-

was the inevitable result. But the price of trying to suppress it is risk aversion and ossification. It is hard to believe that a top-down organisation under one man's absolute control can rule an ever more sophisticated society of 1.4bn people sanely, let alone effectively.

highly complex China must be a dead end at best. At worst, as Xi stays indefinitely in office, it could prove something even more dangerous than that, for China itself and the rest of the world.

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# *Scrutiny is critical if Kwarteng is to win back public trust*

Gemma Tetlow

The UK's new prime minister and chancellor have had a dire start. The rapidly announced “mini” Budget — which, given the lack of consultation with cabinet, bypassed normal policymaking processes — comprehensively undermined their party's economic and fiscal credibility. But there might be some hope of redemption if they can demonstrate a new commitment to sound decision-making and strong institutions.

As someone who spends their working hours advocating the principles of good government (dry, often unexciting prescriptions such as looking at evidence, transparency and being open to scrutiny), I sometimes wonder how much these matter in the real world.

It might be better if governments did these things, but why would they want to? Do voters reward those that do? Or do they instead admire the politicians who can spin a good yarn and deflect attempts to pick holes in their plans? How much do investors worry about the government's fiscal credibility when it comes to a large economy like the UK?

If nothing else, the past two weeks seem to have demonstrated that, in fact, these principles really do matter.

One factor that seemed to galvanise critics of Kwasi Kwarteng's plans was his failure to publish an updated economic and fiscal forecast from the independent Office for Budget Responsibility alongside them. This was despite substantial changes to the economic outlook since the last forecast in March. This meant that public and international investors had no detail on how the chancellor's package — the biggest set of tax cuts for 50 years — was compatible with fiscal sustainability. Only a strong suspicion that it might not be.

Kwarteng has belatedly understood

> Events of the past two weeks have shown that evidence and transparency do matter

the importance of being open to this kind of scrutiny. It is welcome that he emphasised the need for a “strong institutional framework” in his party conference speech and has now committed to publishing an OBR forecast alongside his wider fiscal plans. Accepting this kind of independent oversight may help to reassure the public and investors that there is substance beneath the rhetoric of a commitment to “growth” and “debt falling” — though it is also likely to force him to spell out difficult spending cuts to achieve the latter.

The chancellor and his fellow ministers tried to dismiss concerns about the affordability of their tax cuts by insisting they would boost growth and so push up tax revenues, avoiding the need for too many painful choices elsewhere. But the public and investors were not convinced. This may have been because ministers were unable to present any compelling evidence to back up their claims, preferring to trust in ideology.

No one inside or outside government has been able to provide evidence that the tax cuts chosen are the most effective means of boosting growth. If the chancellor was serious about reducing economic disincentives from the tax system, and had £45bn to give away, he would have done better to address the more distortionary elements of the tax regime rather than cutting headline rates. For example, rather than abolishing changes to off-payroll working rules, known as IR35, why not tackle the inequities that encourage people to waste time and money structuring their work as self-employed contractors rather than employees in the first place? Stamp duty is a bad tax that hampers the effective operation of the housing market. But rather than making the kind of marginal change announced last month, why not consider more fundamental reform of property taxation?

Kwarteng is certainly not the first chancellor to cut corners in the policymaking process on tax. While the Treasury requires that other departments put forward well-evidenced business cases for new programmes that demand funding, it does not apply the same rigour to itself. But the chancellor may yet be able to restore public confidence in his plans if he does go through these basic steps: looking at what works, considering the full gamut of policy options and using that evidence to convince the public and his colleagues that it will.

It will take years for supply-side reforms — whether they be tax changes or the announcements expected on planning and immigration — to have much impact on growth. The OBR will want to see evidence that new policies move the dial before they upgrade their forecasts. If Kwarteng and Liz Truss want to get any credit for setting the UK on a path to stronger growth, they will have to convince people that their plans have a chance of success. So far voters and investors are not persuaded. Setting out the evidence and being open to independent scrutiny would be a good way to start rebuilding their trust.

*The writer is chief economist at the Institute for Government*



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## Twitter/Musk: no more faking it

Less than two weeks from now, Elon Musk was due to face off against Twitter in a Delaware Chancery Court. Suddenly, the $44bn takeover that neither side particularly wants is back on the table. What must the eclectic cast of investors who offered to support Musk be feeling about the latest volte-face? If Twitter accepts Musk's offer to buy the website for the original $54.20 per share price, they will avoid being dragged further into the legal battle.

This threatened to compound discomfort triggered by the release of humiliatingly solicitous text messages to Musk. Jason Calacanis, for example, wrote: “You have my sword . . . Twitter CEO is my dream job.”

Musk's apparent inability to prove that more than 5 per cent of Twitter's users are fake meant he had only a slim chance of winning. Now his plan to fix Twitter will come back into focus.

Can he turn it into a profit machine where co-founder Jack Dorsey failed? He can hardly make it worse. Twitter is awash with spam and relies on poorly targeted ads for income. Its monetisable daily user tally is less than a tenth of Meta's. Regardless, it remains popular with influential people. Musk continued posting on Twitter even as he was trying to back out of the deal.

Messages released by the court suggest no profitability master plan. Investors such as Oracle co-founder Larry Ellison proffered billions of dollars without asking to see one.

Saving “free speech” and getting involved in a deal with Elon Musk were sufficient incentives.

Twitter shares rose 13 per cent on the news before trading was halted. They remain below their level in April when Musk first bid and more than a tenth below his offer price. Further gains are likely. This has been a needless distraction for a man who runs multiple groups, including $769bn electric car maker Tesla and $127bn private rocket company SpaceX.

Users may be unhappy if Musk levies subscriptions. Opponents of hate speech and conspiracy theories will complain if he lifts permanent bans on maverick users. Twitter's management, including boss Parag Agrawal, are unlikely to establish a working relationship with the new owner.

But a deal at the original price would not only benefit jaded Twitter investors. It would show US capitalism is robust enough to ensure tycoons keep their side of a bargain, no matter how powerful or wayward they may be.

## Indian bond index: plumb lines

JPMorgan will not add India's $1tn government bond market to its benchmark index yet. Apparently there were doubts about the ability of local plumbing to handle inflows.

That chimes with perceptions of an Indian paradox: a country where clumsy bureaucracy and creaky infrastructure go hand in hand with tech-savvy enterprise. There is another interpretation of the continuing exclusion of the second-largest nation from the GBI-EM Global Diversified benchmark. A market can be open to foreign capital without rejigging rules to suit US fund managers.

JPMorgan has had India on “positive index watch” since October 2021. A green light was expected this month. Instead, India will stay on “index watch”. Talks with regulators continue.

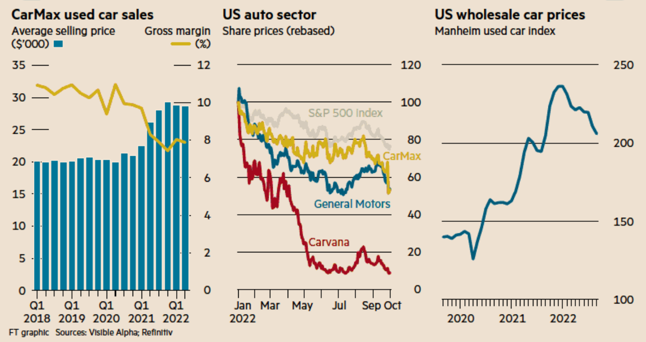
Foreign investors complained about the time taken to register local accounts. They doubted the ability of local entities to handle clearing, settlement and custody. This is surprising in a country with sophisticated tech and pharma industries. Investors say the bond market is transparent and efficient. The issue is structural as much as technological. Trades must be settled the day they are opened. This can be tricky from distant time zones. Foreign investors would like trades to be handled by a familiar system such as Euroclear, which would smooth over difficulties. India sees no reason to change its rules. It wants investment in its bond market on its terms.

For the moment, it is largely academic. Money has been flooding out of emerging markets. It is no surprise that investors are disinclined to jump through Indian hoops just now. But when the dollar surge ends, they may think again. Capability to invest in India bonds, notably sovereign ones, might bring competitive advantage as well as headaches.

India is right to hold its ground.

## US inflation: skimp your ride

After a surge in demand during the pandemic, US car prices are now falling, according to the Manheim index. Average selling prices and gross margins for retailer CarMax also reflect this reversal in trend. Share prices across the car sector have dropped this year.




FT graphic Sources: Visible Alpha; Refinitiv

There will be no soft landing in the US used auto market. Prices for new and used vehicles have been a crucial driver of inflation. Demand has been heavy while supplies have been curbed by pandemic shutdowns.

Used car prices are now falling. The closely watched Manheim Used Vehicle Value index, which measures the wholesale market, slipped 2.3 per cent in September. The used car component of the US consumer price index has also declined recently.

Sharper signals emerged last week. In the second quarter, retail unit sales fell a steep 8.3 per cent versus 2021 on a like-for-like basis at CarMax.

The big used car dealer blamed the shortfall on the higher day-to-day expenses that consumers are facing. It said sales results deteriorated markedly as the quarter progressed.

Within its wholesale segment, CarMax noted a depreciation per vehicle of $2,500. That drop was so fast that it resembled falls in 2008-2009.

The results were shocking enough that the company's shares crashed by nearly a quarter, a loss of $3bn in market capitalisation.

The trends that benefited CarMax and its sector for two and half years are not just unwinding — they are doing so at alarming speed.

Still, used vehicles are hardly cheap. The Manheim index is nearly 50 per cent above its level three years ago.

CarMax noted that, even if whole depreciation per vehicle hit $2,500, appreciation in 2021 was $7,500.

The company is exposed to losses from buying cars in the market sold later at a markdown.

Car dealers play the role of banks via consumer finance arms that lend to buyers. CarMax said its average loan bore an interest rate above 9 per cent. Borrower delinquencies hit record lows in 2021. They have now started to return to historical levels.

There is a real chance that Federal Reserve tightening will push the economy into recession. This would put a big strain on the affordability of cars and the creditworthiness of customers, even after sticker prices fall. Lower inflation has become a global imperative. Anyone seeking to sell a used car — dealers included — are feeling the consequences.

There is no doubting dollar supremacy. But international trade requires adaptation on both sides of a deal.

## Tesla/Mobileye: driverless car chase

Driverless cars are appearing on US city roads. A technological fantasy is becoming a reality and rational optimism is replacing hype. Expectations for Intel's Mobileye spin-off have accordingly cooled.

The autonomous driving business once had a mooted worth of $50bn. It is now expected to seek a valuation of about $30bn. Tesla has meanwhile acknowledged that its “Full Self-Driving” software rollout will be slowed by the need for regulatory approval.

Advanced driver assistance systems (ADAS) take control of driving functions such as emergency braking. They are stepping stones on the way to fully autonomous vehicles.

Mobileye has developed cutting-edge chips and software for driverless cars. The bulk of 100mn vehicles with camera-based ADAS use Mobileye software, according to Guidehouse Insights. The company says another 266mn vehicles will deploy its systems by 2030.

Intel bought the Israel-based company in 2017 for $15.3bn. Mobileye's growth has outpaced that of its parent company. But Mobileye accounted for only 3 per cent of group revenue in the past quarter and has done little to support Intel's falling valuation.

A listing will provide Intel with capital for expansion. It is shrewdly keeping majority ownership via shares with 10 times the voting rights of those it sells. At $30bn, lossmaking Mobileye would be valued at 22 times trailing revenue. On the same metric, Tesla is valued at 14 times.

Tesla's valuation dipped slightly on disappointing delivery numbers in the past quarter. A total of 343,830 vehicles delivered was some 200,000 more than in the same quarter two years ago.

Long-term plans for fleets of autonomous vehicles underpin valuations. These remain too nebulous to price precisely. But growing proof that driverless cars are viable brings broad robotaxi deployment closer, too.

## Vodafone/Three: stringing 'em along

Vodafone's knotty structure already bamboozles investors. Some of them want the UK mobile operator to simplify its sprawling empire. Vodafone's proposed tie-up with rival Three UK runs counter to that aim.

The deal would create the country's largest mobile operator. As 51 per cent shareholder, Vodafone would own less of combined assets than when the units were separate. But that controlling stake means it could eventually absorb the whole unit.

Ofcom has noted that neither group makes a decent living in the UK. In February, the watchdog estimated that neither business generated returns on capital above a cost of 9 per cent.

Some financial balancing would be required. Vodafone UK generates about twice the annual ebitda of Three UK and would contribute around the same ratio of merged assets. A nearly half-and-half share split necessitates a payment from CK Hutchison. If Vodafone injects €10bn (£8.7bn) of assets it could then receive a top-up of €5bn of cash from the newco, raised with debt, thinks New Street Research.

Final details must wait until the two sides agree on a combined valuation. What might Three UK be worth? Assume a six times enterprise value to ebitda multiple for Three UK and that puts it on £4.4bn. Vodafone UK would represent another £9.8bn.

Cost benefits from adding Three's network might lift Vodafone's share price another 4-5 pence.

Vodafone wants to fix important sub-par markets such as the UK. But shareholders expecting cash from divestments will see assets expand instead and any debt from the newco consolidated on to the balance sheet. The hope is that Three's additional ebitda keeps the leverage ratio down.

But what of the long-promised Vantage Tower asset sale? Vodafone says it is “in process”. The group is exiting Hungary while acquiring in Portugal. Unknotting Vodafone requires deft sword strokes, not fiddling with loose ends.

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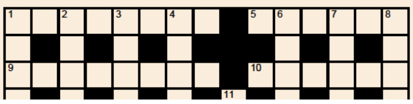
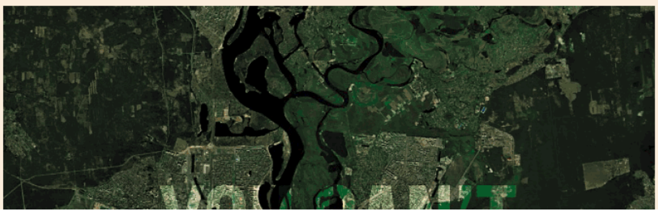
## CROSSWORD

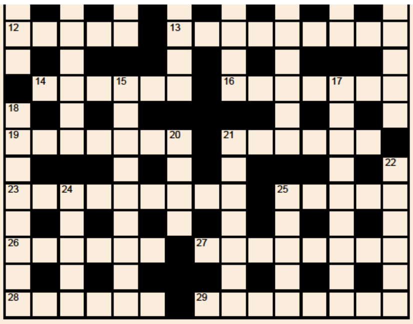
No 17,217 Set by GOZO



An anagram crossword

ACROSS
1 Wing and tail feathers missing one short month (8)
5 Book from Surtees – *The Rainbow* (6)






9 Templates from 1 across (8)
10 Leading scientist before French wise man (6)
12 Sure to change small plans (5)
13 A couple of little ducks in line on a rugby pitch (6-3)
14 Talks foolishly about 1 down (6)
16 Frank getting Charlie into crime previously (7)
19 Sign by section of defence (7)
21 Fashionable performers from 22 (6)
23 Graceless, though fashionable English stage worker (9)
25 Kind offer negotiator backed in part (5)
26 Top architect's single shot in a film of a simple house structure (1-5)
27 Not subject to dispute in Dundee, maybe (8)
28 Gas from eastern Scottish lord (6)
29 German city where Niamh gets involved with men (8)

**DOWN**

1 Elaborate repast comes to a fine end (6)
2 Doctor ruminates on immunisation (9)
3 Prosecutors from 12 (5)
4 Writers about Greek goddess and Roman gods (7)
6 Spruced up 15, maybe (9)
7 One in a suit showing spirit (5)
8 An editor fiddled when on a budget? (8)
11 Anglers' practice areas? (4)
15 Dilapidated marts need retailers (9)
17 Sweet briar from 23 (9)
18 Graph's y value could be 8 (8)
20 Wood not even in the park (4)
21 Things to be changed when joiner has a small tummy upset first (7)
22 Not very often do the French turn up first on Malta (6)
24 Planet from 7 (5)
25 Go from 25 across (5)

JOTTER PAD

Solution 17,216