FINANCIAL TIMES

WEDNESDAY 28 FEBRUARY 2018

WORLD BUSINESS NEWSPAPER

EUROPE

A leap backwards
Xi's strength is dangerous for China and the west — MARTIN WOLF, PAGE 9

Thumbs down
Discontent provides fertile ground for Italy's populists — BIG READ, PAGE 7

Pay attention
Teachers push back over Trump's gun plans — COURTNEY WEAVER, PAGE 8

Comcast's tilt at Sky upsets Murdoch's disposal plans

- Fox and Disney caught off-guard
- Investors position for bidding war

ARASH MASSOUDI, MATTHEW GARRAHAN AND ADAM SAMSON — LONDON

Rupert Murdoch's plans to offload his entertainment empire to Walt Disney have been disrupted by Comcast, the US cable operator and owner of NBC Universal, which made an eleventh-hour approach for Sky that values the pan-European media company at £22.1bn.

Comcast's offer could thwart Mr Murdoch's long-held desire to acquire the 61 per cent of Sky his 21st Century Fox does not already own. It also disrupts his plans to sell Sky and the rest of Fox — except his Fox News Channel and primary sports network — to Disney in a $66bn deal designed to help it challenge tech heavyweights such as Amazon and Netflix and give it more leverage with cable groups such as Comcast.

Comcast is already the largest US cable and broadband provider, with 29m customers. Buying Sky would give it a big footprint in the UK, Germany and Italy, where Sky has 23m subscribers.

Brian Roberts, Comcast chief executive, told the Financial Times that Sky would give Comcast scale and international heft. "With Facebook, Google and Apple, scale has been redefined," he said.

Comcast unveiled the proposed all-cash offer yesterday morning, valuing Sky at £12.50 per share, a 16 per cent premium to Mr Murdoch's £10.75 offer. Shares in Sky soared 20.4 per cent to close at £13.30, well above Comcast's offer price — an indication that investors are anticipating a bidding war.

The prospect of a fight sent Comcast's New York-listed shares down 5.6 per cent to $37.53 in afternoon trading. The bid appeared to catch both Fox and Disney off-guard. Bob Iger, Disney's chief executive, was in Paris meeting President Emmanuel Macron to unveil a $2.5bn expansion of Disneyland Paris. Disney declined to comment. Fox said it noted that no firm offer had been made by Comcast and it remained committed to its offer for Sky.

Mr Roberts said he began sizing up Sky weeks ago after his offer to acquire Mr Murdoch's Fox assets was spurned in favour of Disney late last year. His Sky offer is not dependent on Fox selling its 39 per cent stake, he added. "We would like to own the whole of Sky and we will be looking to acquire over 50 per cent of the Sky shares."

He said Comcast had come forward with its offer so that it could begin the regulatory approval process and present a deal to Sky shareholders at the same time as Fox, in June or July.

Sky had not been aware of Comcast's plans to make a bid. Mr Roberts contacted Jeremy Darroch, Sky chief executive, and Martin Gilbert, the asset management executive and deputy chairman of Sky, only a few moments before Comcast unveiled its offer.

In a short statement, Sky's independent directors said they were "mindful of their fiduciary duties" and advised shareholders to take no action yet.

Additional reporting by Naomi Rovnick in London

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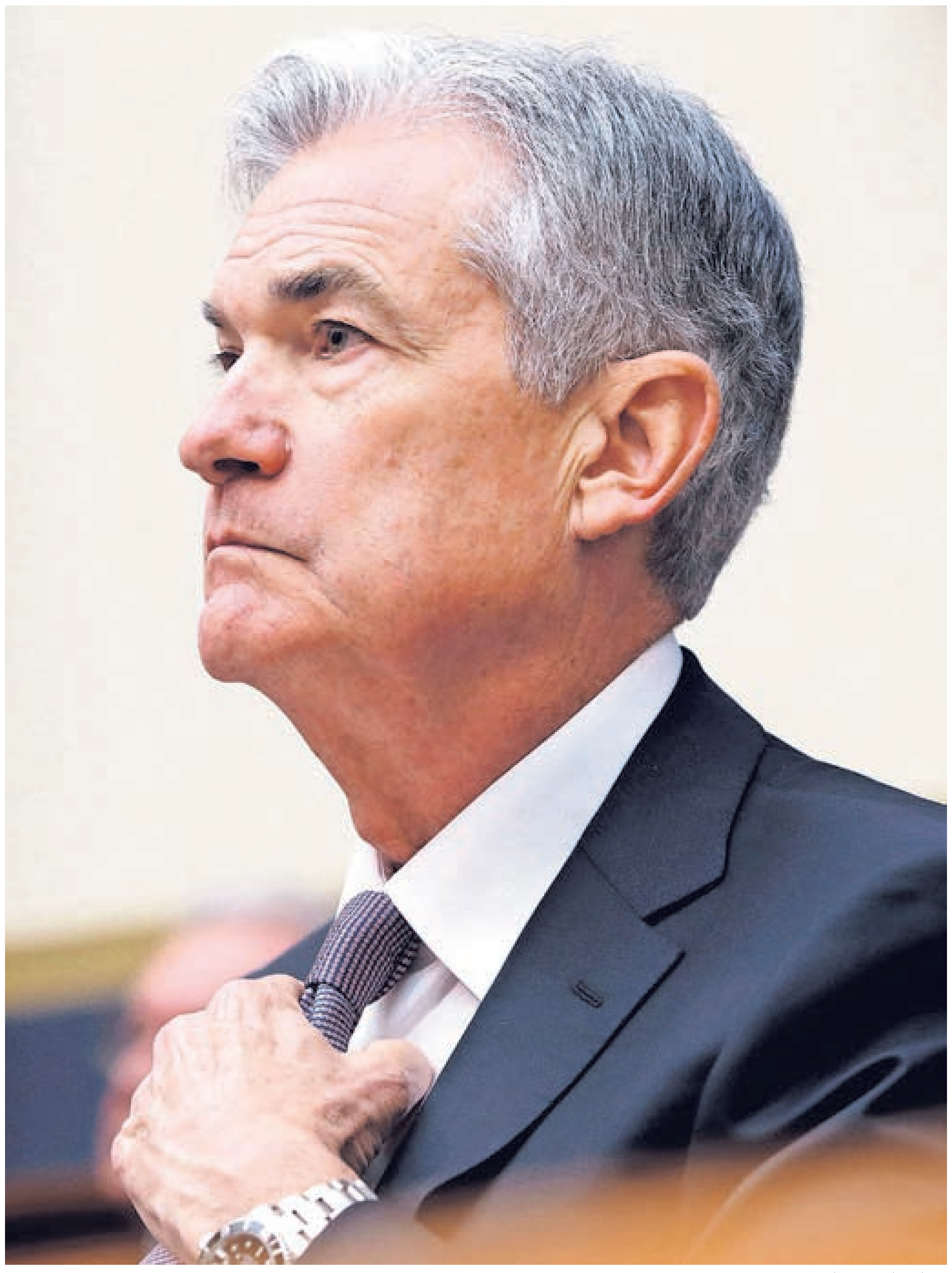
Analysis page 13

Powell premiere Fed chief hints at faster rate rises in confident debut



Jacquelyn Martin/AP Photo

New Federal Reserve chairman Jay Powell prepares to give his first congressional testimony yesterday, in which he gave a markedly bullish assessment of the US economic outlook.

His upbeat comments triggered speculation that he could preside over a quicker pace of interest rate increases as the economy accelerates.

Addressing the House financial services committee, Mr Powell said the economy had been stronger than he expected in December. He vowed to press ahead with gradual rises in interest rates to avoid an "overheated economy".

Mr Powell said he and his colleagues would take the firmer data into account when they draw up their rate forecasts in March, prompting some analysts to predict higher chances that the Federal Open Market Committee will push through four increases in 2018.

Mr Powell's confident tone sent the dollar higher and US Treasuries lower, lifting the 10-year Treasury yield above the 2.9 per cent mark.

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Markets pages 19 & 20

Briefing

▸ Brussels steps up court demands on UK
The EU is set to demand the UK stays subject to the ECJ's rulings indefinitely under its Brexit divorce deal, forcing premier Theresa May into a new battle over the writ of the Luxembourg judges.— PAGE 4

▸ GKN set to split in fight for independence
The UK engineering group has pledged to demerge its aerospace and automotive businesses by the middle of next year in an effort to fend off a hostile £7bn approach from Melrose Industries.— PAGE 11

▸ Push to block US-Russia refinery tangle
Commodity trader Mercuria is seeking to buy out a $1.5bn loan between Rosneft and Venezuela's state oil company that had raised the prospect of Moscow taking control of refineries on US soil.— PAGE 4

▸ Delta targeted after cutting NRA ties
The US airline has suffered a backlash from conservative politicians after it cut ties with the National Rifle Association following the Florida shooting that killed 17 people.— PAGE 4

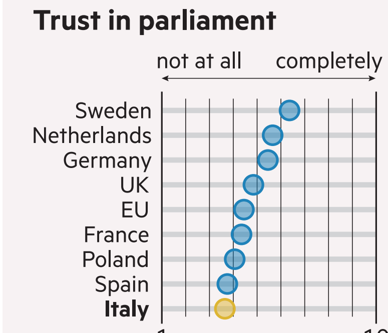
▸ Abu Dhabi to accelerate listings timetable
The oil-rich emirate has unveiled a plan to speed up privatisations and overhaul its national energy company as it seeks to kick-start moribund growth. Its aluminium smelter is set to list this year.— PAGE 3

▸ Fresh Riyadh push to revitalise military
Saudi Arabia has replaced top military officers and senior officials in several ministries in the latest shake-up intended to inject fresh blood into the armed forces and government.— PAGE 3

▸ Minimum wage rise backfires on Moon
The South Korean president's raising of minimum wage levels has sparked a backlash among the smaller businesses he has pledged to back as the salary burden forces them to lay off staff.— PAGE 2

Datawatch

Trust in parliament



Source: European Quality of Life Survey, 2016

Italy goes to the polls on Sunday with the weakest trust in parliament among the big EU economies. Italians expressed a level of trust of less than four out of 10, well below the EU average. Scandinavians tend to trust their parliaments more

Gupta empire dissolves in wake of Zuma's departure

Analysis ▸ PAGE 3

Australia	A$7.00(inc GST)
China	RMB28
Hong Kong	HK$33
India	Rup210
Indonesia	Rp42,000
Japan	¥630(inc JCT)
Korea	W4,500
Malaysia	RM11.50
Pakistan	Rupee 320
Philippines	Peso 140
Singapore	S$5.80(inc GST)
Taiwan	NT$140
Thailand	Bht140
Vietnam	US$4.50

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Blow to car industry as German court gives cities green light to ban diesels

TOBIAS BUCK AND GUY CHAZAN — BERLIN
PATRICK MCGEE — FRANKFURT

Germany's top administrative court has ruled that cities have the right to ban diesel cars, in a move that could have far-reaching consequences for the owners of 12m vehicles in Europe's largest market.

The ruling is a significant victory for environmental groups that say diesel bans are the only effective way to tackle the persistent problem of air pollution in German cities.

It comes as a fresh blow to the country's automotive industry, which is bracing itself for a new drop in demand. Diesel cars accounted for 45 per cent of new registrations in January last year. That share has since fallen to 33 per cent.

At issue are the high emissions of nitrogen dioxide (NO2) — a leading cause of respiratory disease — from diesel cars. Some 70 German cities have NO2 levels that exceed EU limits.

Yesterday's verdict will not lead to automatic bans on diesels but it puts intense pressure on politicians and the car industry to come up with a response to the pollution crisis.

Officials and analysts said one option would be to force carmakers to spend billions of euros to retrofit diesel vehicles with expensive hardware solutions, an option they have so far rejected.

"My goal was, and still is, to ensure that there won't be any driving bans," Barbara Hendricks, the environment minister, said. Instead, she urged carmakers to pay for hardware upgrades.

Matthias Wissmann, president of Germany's VDA car industry lobby, said driving bans were not necessary despite the ruling. Ugo Taddei, lawyer for ClientEarth, a pro-ban group, called the ruling "a tremendous result for people's health in Germany", adding that it would also have an impact abroad.

The case before the federal administrative court in Leipzig originated in a suit by DUH, an environmental group, which took the cities of Stuttgart and Düsseldorf to court to force them to implement driving bans.

DUH won and courts in both cities cleared the way for bans. But the states of Baden-Württemberg and North Rhine-Westphalia appealed, leading to the case being referred to Leipzig.

Pressure on authorities to act on NO2 emissions has been growing since the Volkswagen diesel scandal of 2015, when the German carmaker admitted to installing cheat software to trick laboratory emissions tests.

World Markets

STOCK MARKETS

	Feb 27	prev	%chg
S&P 500	2763.80	2779.60	-0.57
Nasdaq Composite	7367.14	7421.46	-0.73
Dow Jones Ind	25631.43	25709.27	-0.30
FTSEurofirst 300	1498.06	1500.00	-0.13
Euro Stoxx 50	3454.51	3463.18	-0.25
FTSE 100	7282.45	7289.58	-0.10
FTSE All-Share	4011.52	4012.75	-0.03
CAC 40	5343.93	5344.25	-0.01
Xetra Dax	12490.73	12527.04	-0.29
Nikkei	22389.86	22153.63	1.07
Hang Seng	31268.66	31498.60	-0.73
MSCI World $	2159.67	2140.91	0.88
MSCI EM $	1221.08	1216.43	0.38
MSCI ACWI $	528.40	524.12	0.82

CURRENCIES

	Feb 27	prev		Feb 27	prev
$ per €	1.224	1.229	€ per $	0.817	0.814
$ per £	1.388	1.394	£ per $	0.720	0.718
£ per €	0.882	0.882	€ per £	1.134	1.134
¥ per $	107.550	106.945	¥ per €	131.631	131.408
¥ per £	149.290	149.044	£ index	79.114	79.280
€ index	95.563	95.488	$ index	96.699	96.522
SFr per €	1.151	1.153	SFr per £	1.305	1.308

COMMODITIES

	Feb 27	prev	%chg
Oil WTI $	62.97	63.91	-1.47
Oil Brent $	66.51	67.29	-1.16
Gold $	1325.75	1333.50	-0.58

INTEREST RATES

	price	yield	chg
US Gov 10 yr	94.68	2.88	-0.01
UK Gov 10 yr	97.55	1.53	-0.01
Ger Gov 10 yr	99.13	0.60	-0.01
Jpn Gov 10 yr	100.57	0.04	-0.01
US Gov 30 yr	92.14	3.16	0.00
Ger Gov 2 yr	101.40	-0.61	0.00

	price	prev	chg
Fed Funds Eff	1.42	1.34	0.08
US 3m Bills	1.66	1.64	0.02
Euro Libor 3m	-0.38	-0.38	0.00
UK 3m	0.58	0.57	0.01

Prices are latest for edition

Data provided by Morningstar

A Nikkei Company

Monetary policy

Powell hints at faster pace of rate rises

New Fed chair's upbeat economic assessment pushes dollar higher

SAM FLEMING — WASHINGTON

Jay Powell gave a markedly bullish assessment of the US economic outlook in his first congressional testimony as Federal Reserve chair, triggering speculation that he could preside over a quicker pace of interest rate increases as the economy accelerates.

Addressing the House financial services committee yesterday, Mr Powell said the economy had been stronger this year than he expected in December as he vowed to forge ahead with gradual increases in interest rates to avoid an "overheated economy".

Mr Powell said he and his colleagues would take firmer than expected data into account when they drew up their interest rate forecasts next month, prompting a rise in the dollar as some analysts increased their expectations that the Federal Open Market Committee would push through four rate rises in 2018.

"My personal outlook for the economy has strengthened since December," Mr Powell said. "In gauging the appropriate path for monetary policy over the next few years, the FOMC will continue to strike a balance between avoiding an overheated economy and bringing PCE [personal consumption expenditures] price inflation to 2 per cent on a sustained basis."

Mr Powell's upbeat tone pushed the dollar up, while US Treasuries fell, lifting the 10-year Treasury yield above the 2.9 per cent mark. The S&P 500 stock market index dipped 0.4 per cent by midday in New York, with investors ratcheting up the market-implied odds of four interest rate increases this year to 30 per cent from 10 per cent.

Consumer confidence figures published separately showed optimism about the labour market and wider economy pushing sentiment to its highest level since 2000.

The economy grew at a 3 per cent annual pace over the second half of last year, and it is about to receive additional stimulus from tax cuts and higher federal spending approved by Congress in recent months.

This presents a delicate balancing act for the new Fed chair, as he tries to prevent an economy with unemployment at its lowest rate since the early 2000s from overheating even as inflation hovers below the Fed's target.

The Fed is widely expected to lift rates next month, having held them in January, at the final meeting presided over by Janet Yellen, Mr Powell's predecessor. In December, the Fed predicted three rises in short-term interest rates in 2018 alongside continued reductions in the size of the central bank's multi-trillion dollar balance sheet.

Asked by Carolyn Maloney, a Democratic Congresswoman from New York, about the likely number of rate increases this year, Mr Powell said his confidence about inflation had risen since the Fed's December forecasts. But he declined to prejudge the Fed's March meeting.

Among the new economic drivers were stimulative fiscal policy and firm demand for US exports, said Mr Powell. "While many factors shape the economic outlook, some of the headwinds the US economy faced in previous years have turned into tailwinds."

> 'Some of the headwinds the US economy faced in previous years have turned into tailwinds'
> Jay Powell

James Knightley, chief international economist at ING, said: "His hints at the upside potential for inflation and the increasing positives for growth suggest the risks are skewed towards a more aggressive monetary policy response."

Fed officials remain divided over how quickly to move rates given inflation's stubborn refusal to return to the central bank's 2 per cent target. Inflation was 1.5 per cent in December, according to the Fed's preferred measurement. But Mr Powell said he expected it to move higher this year and stabilise around the target over the medium term.

Mr Powell also said that with executives in high spirits and sales growth strong, business investment was likely to continue to grow and should lift productivity growth over time.

Additional reporting by Jessica Dye

Markets pages 19-20

GLOBAL INSIGHT

BEIJING

Tom Mitchell

Xi's ploy to extend his presidency is more of a gamble than it seems

It is arguably the biggest gamble Xi Jinping has taken so far, which is saying something for a man who has spent the past five years demonstrating a very high tolerance for risk.

Whether launching an unprecedented anti-corruption drive or an aggressive foreign policy position, China's president has broken taboo after taboo. Mr Xi has demonstrated that no one is safe from the graft purge and risked military confrontations with the US and Japan in asserting territorial claims in the South and East China seas.

But on Sunday Mr Xi took a leap that surprised even those accustomed to his bold manoeuvres. By signalling his intention to remove the two-term limit on China's presidency, he is not just discarding more than three decades of hard-won precedent aimed at institutionalising peaceful transitions of power. Mr Xi has also exposed a rift in Chinese society between those who fear the return of strongman rule and those who welcome it. Essentially, China's president and Communist party general secretary is betting that the latter outnumber the former.

Those most worried about Mr Xi's gambit are educated urban elites, many of whom dared to voice their concern on social media. This group includes the biggest economic winners from one-party rule — urban property owners whose personal wealth has soared since the government privatised the housing market at the turn of the century.

But many of them also have searing memories of the chaos of the Cultural Revolution, when Mao Zedong ruled without any checks on his power. They appreciate Deng Xiaoping's efforts to ensure China would never again have to endure such a trauma by adding term limits to the constitution. In private conversations they argue that while Mr Xi may be a master of the brutal world of internal party politics, he fails to appreciate that China's increasingly wealthy and complex society requires a deft political touch. The unusual manner in which the amendment was announced on Sunday afternoon has invited speculation that the Party is facing internal resistance from Mr Xi's detractors, who may have flagged up the measure in an effort to subvert it.

> There is a very real risk Xi will be embarrassed by a sizeable number of No votes

It was first revealed in a terse dispatch by the official Xinhua news agency, sparking a fevered reaction both domestically and internationally. But China Central Television's Sunday evening news suggested that the party had never intended to highlight what it knew would be a controversial decision. The amendment was mentioned only in passing in the context of a much longer report about the many other routine constitutional changes recommended by the party's Central Committee.

In other social circles, the term-limit amendment has been met with approval. As one working-class Beijing native put it, comparing Mr Xi favourably to his post-Mao predecessors: "The masses support Xi. He cares about them and is strong. Deng and Jiang Zemin only cared about the rich and Hu Jintao was weak."

Such sentiments appear to be even more strongly held by migrant workers and farmers who tend to speak appreciatively of Mr Xi's anti-corruption campaign and more assertive approach to foreign policy, especially when it comes to dealing with Japan. Mr Xi's focus on these areas was a risky but ultimately successful exercise in accumulating political capital during his first term. He may now choose to spend it on difficult economic and financial reforms during his second term.

He is also betting he has enough popular support to write this controversial amendment into China's constitution — and secure a third presidential term in 2023. Chances are the amendment will be passed with a comfortable majority next month at the annual session of China's parliament. But there is a very real risk Mr Xi will be embarrassed by a sizeable number of No votes and abstentions.

We may soon discover that China's president, gambler that he is, is not quite as powerful as he appears.

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Growth strategy. Pay drive

Minimum wage increase sparks S Korea backlash

Small businesses warn of job losses and higher prices to offset burgeoning staff costs

SONG JUNG-A — SEOUL

South Korea's liberal government is facing a backlash over its experiment with a higher minimum wage, part of an income-led growth strategy that critics fear will do more economic harm than good.

President Moon Jae-in, elected last year on a populist platform of improving the lives of South Koreans, raised the minimum hourly wage by 16 per cent to Won7,530 ($6.92) this year, the largest jump since 2000. The move is expected to benefit an estimated 4.6m South Koreans — nearly a quarter of the workforce. Mr Moon plans to raise the level by another third to Won10,000 by 2020.

The decision, along with a push to create more jobs, cut working hours and put more contract workers on the permanent payroll, has been the centrepiece of the president's redistributive economic policy aimed at lifting household income and smoothing inequality.

The move has been welcomed by most low-wage workers and unions. "I am so glad that I get paid more from this year although I work 30 minutes less a day," says Yoon Areum, a 21-year-old university student who works part-time at a Seoul coffee shop.

But the plan, designed to shore up the president's support base, has come under fire from corner shop owners and small and medium-sized enterprises — the very groups Mr Moon has pledged to support — as the higher wage burden forces them to lay off staff. The backlash highlights the challenges facing Mr Moon as he addresses concerns about the quality of life in the world's 11th-largest economy, and as he looks to cut reliance on a few conglomerates driving export-led growth.

"The big jump in wages is hitting small merchants hard, raising their cost burden," says Taeyoon Sung, professor of economics at Yonsei University. "The measure is likely to bring more harm than benefits as they reduce new hires and raise prices."

South Korea is not alone in ratcheting up minimum wages but it is rare for a manufacturing-driven economy to raise the level so rapidly, economists say.

Although the minimum wage lags behind those of its OECD peers, an increase to Won10,000 per hour by 2020 would push it up to 70 per cent of the median wage — higher than that in many other big economies.

"We had high expectations for Mr Moon's policy of creating a fair economy and income-led growth," says Choi Seung-jae, chairman of the Korea Federation of Micro Enterprise. "But our expenditures keep growing while our incomes remain the same. The gap is becoming unbearable."

A survey last July, conducted after the rise was announced, found more than 90 per cent of the federation's members said they saw a need to cut headcount.

The Bank of Korea estimates the higher minimum wage will cut the number of new jobs by up to 20,000 this year, while it will support private consumption and raise growth by 0.05 percentage points. The number of new applicants for jobless benefits jumped 32.2 per cent year-on-year to 152,000 in January, the highest since 2013, when the labour ministry started compiling the data. Kim Kyung-hee, a 49-year-old convenience store owner, sacked her part-time worker after the wage came into effect. She now runs the shop alone, with the help of family at busy times. "Not much was left for me after paying the part-timer and all kinds of taxes," she says. "I don't understand why the government doesn't care about the difficulties of small shop owners like me."

Choi Hee-joo, of the Korea Federation of SMEs, says many small manufacturers are considering moving plants abroad or automating production. The website of the presidential Blue House has been swamped with petitions against the increase. A policy designed to be popular among the working class is turning into a liability for Mr Moon.

"Just an hour before my two-year work contract was supposed to be renewed, the company said it was not possible because of a higher wage burden," wrote a 26-year-old petitioner on the website. "Higher minimum wages are making it more difficult for young people like me to get a new job."

Despite the misgivings, Mr Moon says a higher minimum wage is "essential" to protect the economically vulnerable and to sustain growth. The government has set up a Won3tn fund for affected employers but few have applied for subsidies because of onerous restrictions.

Kwon Young-sun, economist at Nomura, warns against the government wasting too much political capital on the issue. He says US trade protectionism and China's slowing demand for South Korean consumer products are more critical, while export momentum is more important for growth.

Change is served: the minimum wage rise is part of President Moon Jae-in's redistributive economic policy
Kim Hong-Ji/Reuters

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Asia-Pacific

HK and Taiwan fear hardline stance after Beijing power play

BEN BLAND — HONG KONG

While Beijing was outlining the path for Xi Jinping to rule as China's president for life, Tsai Ing-wen, his democratically elected counterpart in Taiwan, was speaking about the importance of universal human rights at a Holocaust memorial ceremony in Taipei.

But Mr Xi's concentration of power — unparalleled since the era of Mao Zedong — represents a growing threat to Taiwan's efforts to maintain de facto independence, in the face of Beijing's insistence that the island is part of its territory, and to the embattled democracy movement in neighbouring, semi-autonomous Hong Kong.

"Xi Jinping has largely been the author of fairly hardline policies toward [Hong Kong and Taiwan]," said William Stanton, a former US diplomat and professor of international relations at National Taiwan University.

"The problem with all dictators is that no one can put a break on anything they want to do."

Mr Xi has intensified diplomatic, economic and military pressure on Taiwan. He has also presided over a crackdown on the democratic opposition in Hong Kong and increased interventions in the city's affairs despite promises to respect its semi-autonomous status and human rights.

Analysts believe the proposal to scrap the two-term limit for China's president will further embolden Mr Xi and weaken the will of officials, domestic critics and outside countries to challenge his power.

"For the foreseeable future, Taiwan will face a more difficult, more inflexible and more determined policy from Beijing," said Alexander Huang, a former Taiwanese official who handled cross-strait relations.

During the five-yearly congress of the Communist party in October, Mr Xi said his vision for a "great rejuvenation of the Chinese nation" was reliant on "our compatriots in Hong Kong, Macau and Taiwan" following the "tide of history" and working together "for the greater national interests".

Those "national interests" include eventual unification with Taiwan and the stifling of the opposition to Beijing's rule in Hong Kong.

"It is doubtful whether the promise of universal suffrage in Hong Kong will ever be realised," said Tanya Chan, a pro-democracy member of the city's Legislative Council and one of a growing number of activists facing prosecution for supporting civil disobedience. "Beijing will increasingly and overtly manage and direct Hong Kong affairs by pointing to the powers defined under the constitution."

Even some defenders of Beijing's rule in Hong Kong are uncomfortable with the heightened pressure to be seen to be displaying their loyalty to Mr Xi.

"Our bosses keep pressing us to learn and repeat key phrases about president Xi's main policies like the Belt and Road Initiative," said one lawmaker from a pro-Beijing political party.

Ma Ngok, a professor of politics at the Chinese University of Hong Kong, said it was natural that some Hong Kongers felt helpless. Rather than agitating for reform, democracy campaigners are locked in a rearguard action to "hold the turf and defend whatever autonomy or freedom we still have", he said.

Activists in Hong Kong and Taiwan fear Mr Xi's consolidation of power will have a second negative impact, by making other countries even less willing to risk his wrath — and lose access to lucrative Chinese markets — by supporting their push for democracy and freedom.

Mr Huang, a professor of international relations at Taiwan's Tamkang University, hopes that, on the contrary, the treatment of Taiwan and Hong Kong will alert other democracies in Asia and beyond to their struggles.

"We have a new, nearly totalitarian form of government in the making and one-man rule will make all regional countries keep their eyes open," he said.

Martin Wolf page 9

Xi Jinping has intensified diplomatic and economic pressure on Taiwan

INTERNATIONAL

South Africa

Ramaphosa seeks balance in cabinet overhaul

Business leaders welcome changes but opponents retain some ministries

JOSEPH COTTERILL — JOHANNESBURG

Business leaders have welcomed South African president Cyril Ramaphosa's cabinet overhaul in which he imposed his control over vital economic ministries and sacked 10 allies of Jacob Zuma, his scandal-prone predecessor.

But the composition of his new government also revealed the balancing act Mr Ramaphosa has to perform as he attempts to manage deep divisions in the ruling African National Congress ahead of elections next year.

"It's an alliance of compromise — Ramaphosa did not have the latitude to do exactly what he wanted to do," said analyst Khaya Sithole. "He clearly does not control the ANC's inner workings."

Mr Ramaphosa became ANC leader in December after securing a narrow victory over Mr Zuma's preferred successor, the former president's ex-wife Nkosazana Dlamini-Zuma.

He was sworn in as state president this month after the ANC forced Mr Zuma to resign over allegations of corruption and mismanagement.

In his cabinet announcement, Mr Ramaphosa appointed Nhlanhla Nene as finance minister and named Pravin Gordhan, another former Treasury chief, to lead the public enterprises ministry. The pair are technocrats who are held in high regard at home and abroad.

Both had been sacked from the Treasury by Mr Zuma after they spoke out against corruption and resisted his plans to move ahead with a controversial nuclear power project that analysts said the country could not afford.

Mr Ramaphosa, who has pledged to turn round Africa's most industrialised economy and crack down on corruption, also appointed Gwede Mantashe, the ANC's national chairman and a close ally, to take over the mining industry.

South Africa's CEO Initiative, a business group, said the changes "will bring stability to the national executive, boost confidence in our economy and set up the country for an improved growth trajectory".

The Chamber of Mines said: "The

Nhlanhla Nene: new finance minister is a technocrat held in high regard

swift and decisive action taken by the president in a number of critical areas, especially in the economic cluster, is a clear demonstration of his commitment to ethical leadership and governance in state institutions."

But allies of Mr Zuma remain in the cabinet, including Ms Dlamini-Zuma, an ANC veteran, and Bathabile Dlamini, who presided over a scandal related to benefit payments and actively campaigned against Mr Ramaphosa in the ANC leadership contest. Both are ministers, with their portfolios covering planning and women respectively.

Mr Ramaphosa's choice for deputy president, David Mabuza, also rewards a faction that switched sides to him in the ANC power struggle but is still associated with Mr Zuma's brand of patronage politics. Critics accuse Mr Mabuza of running Mpumalanga province as a personal fiefdom when he was an ANC provincial leader. He was part of the so-called "premier league", a powerful clique of provincial leaders who were staunch backers of Mr Zuma.

Mr Mabuza's rise demonstrates "that the problem does not only lie with individuals within the party, but it is the ANC itself that is a problem", said the opposition Democratic Alliance.

Mr Ramaphosa, a former union leader and one of the country's richest black businessmen, rebuffed suggestions that he was forced into making compromises. He said yesterday he had picked a "transitional cabinet that is going to take us to the next election".

But his comments cast doubt on whether a planned review to cut down on the number and size of ministries — the cabinet has more than 30 members — will take effect before the polls.

"A lot of people depend on the party having so many ministries," Mr Sithole said. "Ramaphosa is going to find a lot of resistance in the ANC."

Corruption scandal. Power shift

Gupta empire crumbles after Zuma departure

Indian-born brothers said to have fled country as companies go into administration

JOSEPH COTTERILL — JOHANNESBURG
SIMEON KERR — DUBAI

The corporate logo on the deserted plot in a grim industrial park near Johannesburg is broken. A "To Let" sign hints at a business in decay. A solitary security guard orders a visitor to leave the premises of Sahara Computers.

The company was once at the heart of the mining-to-media empire of the Gupta family that has been embroiled in South Africa's biggest political scandal of the democratic era. Its abandonment epitomises the three Indian-born brothers' dramatic fall since Jacob Zuma lost a power struggle in the ruling African National Congress and was forced to step down as president this month.

A coal mine that the family acquired from Glencore two years ago went into administration last week. According to company records, seven other Gupta-affiliated businesses have filed for administration — including the company owning Sahara's building, says the Organisation for Undoing Tax Abuse (Outa), a non-governmental organisation that fights corruption.

Even the family's private plane has been caught up in the saga after Canada's export development bank — which funded the Bombardier jet's purchase — went to court to take it back, according to legal documents. ANN7, a television station set up by the family but now owned by a Gupta associate, will not have its broadcasting contract renewed. And India's state-owned Bank of Baroda, the only institution in South Africa that still banked the Guptas, is leaving the country soon.

"The political power of the Guptas has been eliminated. They are totally exposed at the moment," says Ben Theron, chief operating officer of Outa. "This empire is imploding at a very rapid rate."

The Guptas rubbed shoulders with the political elite for years after moving from India to South Africa in the early 1990s. But after Mr Zuma took office in 2009, they became associated with a string of scandals as allegations swirled that they used their friendship with him to influence political appointments and win state business. Duduzane Zuma, the former president's son, had holdings in, and was a director of, several Gupta companies. Police raided the Guptas' mansion in Johannesburg on Valentine's Day — which stunned South Africans almost as much as Mr Zuma's own dramatic resignation later that day.

Workers protest last week outside the Gupta-owned Optimum coal mine, which has gone into administration. Below, 'fugitive' Ajay Gupta
Marco Longari/AFP/Getty

Several family associates were arrested, but the Guptas were nowhere to be seen. They are believed to have headed to Dubai, where they own a mansion, according to leaked emails from a Gupta-linked company.

Police have said Ajay Gupta, eldest of the three brothers, is a "fugitive from justice". On Friday, police said the Guptas' lawyers had challenged the arrest warrant issued for Ajay. But they declined to confirm whether Duduzane Zuma was also a suspect in corruption investigations.

The Zumas and the Guptas have repeatedly denied wrongdoing. For years the Indian brothers were considered untouchable as they flaunted their wealth and political connections even as the allegations mounted.

The outcome of the investigations into the family will be an important marker of the anti-corruption battle launched by Mr Zuma's successor, Cyril Ramaphosa. His election as ANC leader in December is considered the moment the tide turned against the Guptas. Within weeks, prosecutors made their first move — seizing R200m ($17m) from a Gupta-linked dairy that allegedly diverted government funds meant for a development project.

However, there are doubts that South Africa will claw back more than a small fraction of the state funds allegedly stolen by the family and their associates. Financial officials warn most have been moved abroad or frittered on luxuries.

"My guess is they have very little cash left in South Africa," says one official.

Mr Theron believes the seizure of the dairy's assets and Bank of Baroda's decision to close in South Africa has led to cash drying up inside the Gupta empire, forcing the business closures.

If South African authorities mount an international search for Gupta-tied money, one area of focus is likely to be Dubai. When Atul Gupta filed legal papers to challenge a court order freezing R10m in his bank account this month, his affidavit was signed at the South African consulate in Dubai. The Guptas allegedly own a large Indian-style mansion in the plush gated community of Emirates Hills, one of the city's most exclusive estates.

> 'The political power of the Guptas has been eliminated. They are totally exposed'

Julius Malema, leader of the opposition Economic Freedom Fighters, alleged two years ago that Mr Zuma and certain ministers personally delivered bags of cash to the Guptas in Dubai. Mr Zuma and the ministers denied this.

The UAE's lack of extradition treaties and political protection offered by some senior Emiratis means the well-connected and wealthy use the country to evade justice. But South African officials and civil society activists believe that protection will not last for ever.

"It will be very important that our criminal justice system does whatever it can to bring the Guptas back to South Africa," says Gareth Newham, analyst at South Africa's Institute for Security Studies. "In order to rebuild the public trust in [the system] that was so damaged under the Zuma presidency, this is priority number one."

Defence

Saudi Arabia shakes up military as Yemen war drags on

AHMED AL OMRAN — RIYADH

Saudi Arabia has replaced top military officers and senior officials in several ministries in the latest shake-up intended to inject fresh blood into the armed forces and government.

King Salman appointed First Lieutenant General Fayyad bin Hamed al-Ruwayli as chief of staff and named new commanders for the land and air forces as part of a plan to revamp the defence ministry.

The changes, announced in decrees on Monday, come as Saudi Arabia has become bogged down in Yemen's three-year civil war in which it backs an exiled government against Houthi rebels allied to Iran.

No other details were given about the overhaul, but Crown Prince Mohammed bin Salman, defence minister since January 2015, has openly talked about the need to improve the performance of the armed forces to match the expensive hardware bought by the kingdom.

"It is unacceptable that we are the world's third or fourth biggest country in military spending but our army is ranked in the twenties [ability]. There is a problem," the heir-apparent said in a television interview two years ago.

Saudi Arabia is the Middle East's biggest spender on defence and is taking an increasingly assertive foreign policy stance in its efforts to counter Iran's role in the region.

Riyadh launched a coalition in March 2015 to intervene in the Yemeni conflict but has been heavily criticised for large numbers of civilian deaths while making little headway against the Houthi, who control northern parts of Yemen.

Gen Ruwayli, a US-trained fighter pilot and former commander of the Royal Saudi Air Force, replaced General Abdulrahman bin Saleh al-Bunyan, who was forced into retirement.

Michael Stephens, a research fellow at the Royal United Services Institute, said the shake-up would enable Prince Mohammed to convince western allies that he is trying to improve conditions in Yemen as he prepares to visit London, Paris and Washington next month. The changes can also seen as part of his efforts to consolidate power.

"Reform in this instance, I believe, is more targeted," Mr Stephens said. "It's removing a layer of officialdom that does not have the trust of Prince Mohammed, and replacing them with officials, and bureaucrats who exhibit more loyalty to him."

Theodore Karasik, a senior adviser at the Gulf State Analytics consultancy, said the revamp was also driven by a need to enhance military efficiency.

"This change is not so much about how the war is being run, but how these officials were running their departments. The Yemen campaign may be a secondary issue to the restructuring," he said.

"There is clearly a need for better and sharper lessons learned from operations in Yemen."

In another decree, King Salman named Tamader al-Rammah as deputy labour minister for social affairs, making her the highest-ranking female official in the country. The appointment will be interpreted as another sign that Prince Mohammed is pushing ahead with his pledge to modernise the conservative kingdom.

Several new deputy ministers were also appointed at the economy and interior ministries.

Historical controversy

Tokyo and Seoul reignite comfort women feud

ROBIN HARDING — TOKYO
BRYAN HARRIS — SEOUL

A dispute has re-erupted between Tokyo and Seoul after a South Korean minister used the term "sex slaves" to describe women forced to work in military brothels in the second world war.

Japan said that use of the phrase by Chung Hyun-back, equalities minister, was "totally unacceptable" and lashed out again yesterday after Seoul's foreign minister raised the so-called comfort women issue in a speech at the UN.

The dispute highlights that Japan and South Korea — the US's two most important allies in Asia — remain as far apart as ever on the historical facts of what happened to the women despite agreeing a "final and irreversible" settlement of the issue in December 2015.

Tokyo's complaints imply the settlement requires not just an end to South Korean criticism of Japan but also acceptance of its presentation of history.

Ms Chung told the UN on Friday it was "important to preserve and commemorate the memories and experiences of the Japanese army's sex slaves".

Japan's foreign ministry said the expression "contradicts the facts and should not be used".

The 2015 agreement calls on the two countries to refrain from accusing or criticising each other about the issue, including at the UN. However, the lack of agreement on underlying facts means that almost any comment is taken as a criticism by the other side.

Japan's government stands by its 1993 statement that many of the women "were recruited against their own will" and "lived in misery at comfort stations under a coercive atmosphere".

However, it also insists there is no evidence that women were "forcefully taken away" and tries to police discussion, making a formal complaint whenever the Financial Times uses the term "sex slaves".

Shinsuke Sugiyama, Japan's new ambassador to the US, has said one of his top priorities would be to travel the country persuading municipalities to remove statues that commemorate the comfort women.

South Korea is also intolerant of those who question its version of systematic sexual slavery organised by the Japanese military. In October 2017, a professor was convicted of defaming victims after questioning whether all the women were forced into servitude in a case that raised questions about freedom of speech.

In a 2013 book, Park Yu-ha of Sejong University suggested that some of the women volunteered to work for the Japanese without knowing the exact conditions of their work.

Prof Park is appealing against the verdict in the Supreme Court.

Gulf states

Abu Dhabi eyes privatisations to boost growth

SIMEON KERR — ABU DHABI

Abu Dhabi plans to accelerate the privatisation of several state companies and overhaul its national energy company as the oil-rich emirate attempts to kick-start sluggish growth.

Mubadala, one of Abu Dhabi's sovereign wealth funds, will sell a stake in Emirates Global Aluminium, one of the United Arab Emirates' largest companies, through an initial public offering this year.

"We believe any time now is the right time," Khaldoon al-Mubarak, chief executive of Mubadala, told a conference in Abu Dhabi, the UAE's capital. "This company is an engine, the UAE's largest exporter outside of oil and gas, and one of our largest employers."

He later told Bloomberg TV that Mubadala, which has about $130bn in assets, could launch IPOs of one or two more of its companies in 2018.

Emirates Global Aluminium, created after the merger of Abu Dhabi's and Dubai's government-owned smelters, recorded net income of $900m in 2017 and produced 2.6m tonnes of cast metal. It is jointly owned by Mubadala and Dubai's state holding company.

> '[Emirates Global Aluminium] is an engine, the UAE's largest exporter outside of oil and gas'

As oil-dependent Gulf states grapple with fiscal deficits, many are turning to privatisations, private-sector partnerships and debt issuance to boost flagging state coffers.

Saudi Arabia said it was on schedule to sell 5 per cent of Saudi Aramco, the state oil company, this year in what would be one of the world's largest IPOs.

Abu Dhabi has responded to a prolonged period of subdued oil prices and subsequent economic downturn by slashing spending, cutting staff numbers at state entities and merging companies.

Mubadala last year merged with the government-owned International Petroleum Investment Company, while First Gulf Bank joined with the National Bank of Abu Dhabi.

But the only state-related IPO was the sale of the distribution arm of the Abu Dhabi National Oil Company last year.

Abu Dhabi, the wealthiest of the seven states that make up the UAE, has said it is not considering selling a stake in the main oil company, but plans to float shares in some of its service units.

The International Monetary Fund forecasts that Abu Dhabi's economy will expand 3.2 per cent this year, after growing 0.3 per cent in 2017.

Germany's economic might fails to lift gloom in declining towns

Boom bypasses rural areas hit by cuts to services and shrinking populations

Struggling: closed businesses in Genthin, where health provision has been hit after the local hospital shut last year
Gordon Welters

GUY CHAZAN — GRIEBEN

Afternoons when kids come home from school are always the trickiest times for German businessman Thomas Krone.

"They all start playing computer games or watching videos on their mobiles," he says. "From then on you basically can't download or send anything."

Mr Krone runs a small company in the village of Grieben, a two-hour drive west of Berlin, that makes protective grilles for industrial robots. His firm exports to Brazil, Turkey and the US, and he needs to be able to send 3D drawings and data sets to clients at all times of day and night.

But sometimes the WiFi connection in his office is so bad he has to take a USB stick and drive to his home in nearby Tangermünde to send emails.

"We're in a complete dead zone here. It's really annoying for businesses because you waste so much time."

Germany is the economic powerhouse of Europe, synonymous with export strength and industrial prowess. Its companies are admired the world over. Yet not everywhere in the country is sharing this success. Some rural areas, particularly in the east, have been bypassed by the economic boom of the past few years. Dogged by decaying infrastructure, shrinking populations and savaged public services, they are islands of decline in a sea of prosperity.

There are places so unappealing that even refugees do not want to stay. Tangerhütte, near Grieben, took 50 at the height of the migrant crisis in 2015 but most could not wait to get out and only about 15 remain. "There was a carpet merchant from Damascus who felt it was just the back of beyond," says Andreas Brohm, Tangerhütte's mayor.

The problems in rural Germany are so acute that the government has been galvanised into action. The 177-page coalition deal struck between Angela Merkel's conservatives and the Social Democrats this month notes the "rising inequality" between Germany's flourishing cities and moribund villages and sets a goal of "creating equal living conditions" throughout the country.

The parties pledged to ensure that everyone, including in the "structurally weak" provinces, has good access to public services, from healthcare and public transport to education and broadband. The government will spend up to €12bn to bring fibreoptic cables to every community and pour more funds into regional aid projects.

Local officials are sceptical. "I don't need more development funds, I need an extra €2m in my budget," says Mr Brohm.

Towns such as Tangerhütte are the silent victims of Germany's success in balancing its books. Under ex-finance minister Wolfgang Schäuble, the country became a paragon of fiscal prudence, delivering four straight years of budget surpluses. But the austerity put huge strain on local councils. Tangerhütte is one example. When Mr Brohm became mayor in 2014, he was ordered to reduce

the town's €12m debt by €10m over 10 years. He has been spending €600,000 a year on debt repayments ever since.

Making the savings has been a struggle. Tangerhütte does not have much of a tax base — the old iron-smelting operation that used to employ 1,000 workers in the communist era closed long ago.

The town's population, 14,000-strong before reunification, is forecast to drop to 9,000 by 2025. "We have three deaths for every birth," Mr Brohm says.

"It's difficult to maintain infrastructure in places where you're only reaching a few people."

'We're in a WiFi dead zone here. It's really annoying for businesses because you waste so much time'
Thomas Krone, businessman

'They throw money at saving the wolf and the great bustard — why not our hospital?'
Thomas Barz, Genthin mayor

In the town of Genthin, a short drive from Tangerhütte, the hospital was closed last year because it did not make enough money. The nearest accident and emergency centre is now more than 30km away. "They throw money at saving the wolf and the great bustard — why not our hospital?" says Thomas Barz, Genthin's mayor.

Even before the hospital shut, health provision and outcomes were below par. Twice as many people die after a heart attack in Saxony-Anhalt — the state where Genthin and Tangerhütte are located — than in Berlin or Hamburg, according to official figures.

Authorities in places such as Genthin find it hard to attract doctors and teachers. The German state had a €36.6bn budget surplus last year — yet "town councils are having to close things down and cut [services]", says Mr Barz. That mismatch partly explains why "people are so disenchanted with politics," he adds. There has been one big beneficiary from the dissatisfaction — the far-right Alternative for Germany party, which won 20 per cent in Saxony-Anhalt in September's national elections.

"The government has been saying for years to people here 'there is no money for you', and then they spend billions on refugees," says Ulrich Siegmund, a regional lawmaker representing the area. "We're the only ones who are talking openly about that contradiction."

Officials are confident they can reverse their towns' decline, largely by making them attractive for young families seeking cheap housing. They have done their best to ensure schools and kindergartens stay open and have invested heavily in marketing.

But Mr Krone is unsure the campaign will be a success. "It's hard to get skilled workers to move here when the nearest city's an hour's drive away and there's no internet," he says. "It just won't work."

Divorce battle

Brussels seeks indefinite ECJ oversight after Brexit

ALEX BARKER — BRUSSELS
LAURA HUGHES — LONDON

The EU will demand this week that the UK remains subject to European court rulings indefinitely under its Brexit divorce deal, forcing Theresa May, Britain's prime minister, into another fraught battle over the writ of Luxembourg judges.

Brussels will propose a draft Brexit withdrawal agreement today that requires the UK to accept the European Court of Justice as the ultimate arbiter of treaty-related disputes, according to three officials who have seen the text.

The "governance mechanism", backed by sanctions that cut off market access if Britain ignores court rulings, is among a host of potentially explosive political issues in the document.

A prolonged role for the Luxembourg court is expected to be rejected outright by Mrs May, who has struggled to convince sovereignty-minded Brexiters to accept ECJ jurisdiction even for a time-limited transition after Brexit.

Jacob Rees-Mogg, a Conservative MP who chairs the party's pro-Leave faction, said the commission plan would turn Britain into a "convict state".

"I think the EU is going to suggest some things that the British government will reject this week, and this sounds like one of them," he said. "It would turn us from a vassal state into a convict state, sentenced to hard labour for our love of democracy."

Should the ECJ become the dispute settlement body for the withdrawal deal it would require Britain to accept its rulings well beyond the end of a transition, which the UK wants to last for about two years after Brexit in 2019.

Indefinite oversight is required because parts of the withdrawal deal, such as the financial settlement of at least €40-€45bn, will be potentially discharged over a decade or more.

Michel Barnier, EU chief negotiator, proposed last year establishing a joint committee to oversee implementation of the exit treaty, with unresolved disagreements and questions of EU law referred to judges in Luxembourg.

"Our dispute settlement is through the ECJ," said a senior EU official, who saw the draft withdrawal text. "It covers the whole thing, the whole agreement. The Brits know our position and they've not put out their own position, so what can we do?"

Britain issued a "future partnership paper" last year exploring several governance models from past EU trade agreements. However, it did not suggest a preferred option.

In the UK paper, it made clear that a dominant role for the ECJ would be "incompatible with the principle of having a fair and neutral means of resolving disputes, as well as with the principle of mutual respect for the sovereignty and legal autonomy of the parties to the agreement".

Last December Mrs May won a battle to time-limit the role of the ECJ in implementing an agreement protective of the citizens' rights of about 4m EU and UK nationals. The EU saw this as separate, however, from the overall governance arrangements of the treaty.

Diplomats in the talks expect that Britain will be able to secure a different dispute resolution. However, in areas such as interpreting EU law or discharging the budget, the EU negotiators have limited legal room for manoeuvre.

Some parts of the draft withdrawal text have been softened by Brussels in recent weeks.

Mr Barnier's team privately acknowledged mishandling their original proposal for transition, which included a clause to summarily sanction UK non-compliance.

In a concession to the UK, the revised version requires a ruling by the ECJ in any dispute. But it still allows the EU to respond to non-compliance with a court ruling by imposing a financial penalty or suspending market access.

The EU side is also considering opening a fast-track process for infringement cases against the UK in Luxembourg, so that injunctions or rulings are timely enough to be useful during the two-year transition.

A prolonged role for the ECJ is likely to be rejected by Theresa May

Gun laws

Republicans threaten Delta as airline cuts ties with NRA

BARNEY JOPSON — WASHINGTON
PATTI WALDMEIR — CHICAGO

Republican politicians are threatening to penalise Delta Air Lines in its home state of Georgia after it cut its ties with the National Rifle Association following the Florida mass shooting.

Over the weekend Delta said it would no longer offer discounts to NRA members travelling to the organisation's annual meeting. In Georgia, Lieutenant-Governor Casey Cagle this week vowed to block a tax bill that would benefit the airline "unless the company changes its position and fully reinstates its relationship with the NRA".

With Congress unlikely to agree on any change to federal gun laws, the school shooting that left 17 dead has sparked a round of policy action at state level — but some proposed measures look set to exacerbate rather than reduce a stark divergence in gun laws.

While elected officials in left-leaning states seek to avert more mass shootings by tightening access to guns, their counterparts in conservative strongholds such as Georgia are seeking to loosen gun laws in the belief that safety comes from more people carrying arms.

"Especially when Congress fails to act you often find states jump in — and this seems to be one of those moments," said Robert Spitzer, author of five books on gun policy and chair of the political science department at the State University of New York in Cortland.

He noted that the massacre that killed 26 at Sandy Hook elementary school in Connecticut in 2012 inspired a wave of state-level policy measures. "We're not quite at that stage yet, but there's clearly been a lot of movement," he said.

Gina Raimondo, the Democratic governor of Rhode Island, on Monday signed an order for a "red flag" policy to keep guns away from people deemed a threat to themselves or others — the first state to take such a step since the Florida case. Ms Raimondo and the governors of New York, New Jersey and Connecticut last week announced plans to share information about people prohibited from owning a firearm in each state and to trace guns brought across state borders.

But in right-leaning Indiana last week a state Senate committee passed a bill to abolish a $125 lifetime fee for a handgun permit while a House committee advanced a bill that would allow some people to carry firearms on school property.

In Kansas, the state Senate is considering a bill that would lower the age at which people can carry concealed weapons to 18 from 21, legislation that passed the House before the Florida shooting.

Mr Spitzer said the shift towards more lenient gun laws in parts of the US was driven by a combination of NRA lobbying clout and Republican lawmakers' fear of being challenged from the right in primary elections this year.

But he added that the changes tended to be "fairly incremental", citing moves

'The gun lobby is working hard, but I'm seeing a shift where common sense prevails in states'

to let judges carry guns or to broaden the range of places where people are permitted to have concealed weapons.

Others challenged the idea that gun policies were becoming more polarised. Billy Rosen, deputy legal director at Everytown for Gun Safety, a group campaigning to curb gun violence, said "from our perspective, the good is outweighing the bad".

He noted that since the Sandy Hook massacre some bipartisan consensus had emerged on the need to keep guns away from domestic abusers, with 25 states including several led by Republicans enacting laws to restrict access.

"The gun lobby is working hard," Mr Rosen said. "But I'm seeing more and more a shift where common sense prevails in blue states and even red states."

Companies have also taken note of polls showing a growing majority of Americans support tighter gun laws.

Additional reporting by Andrew Edgecliffe-Johnson in New York

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Venezuela loan

Mercuria moves to halt Russia controlling US-based refineries

DAVID SHEPPARD — LONDON

Commodity trader Mercuria has asked the US Treasury for permission to buy out a $1.5bn loan between Russia's Rosneft and Venezuela's state oil company, which had raised the prospect of Moscow taking control of refineries on US soil.

The cash-strapped Venezuela state oil company PDVSA, which has borrowed more than $6bn from Kremlin-controlled Rosneft, caused consternation in Washington last year after putting up a stake in its US-based refining subsidiary, Citgo, as collateral against a portion of the loan.

The move by Mercuria would see the trader put up the money to buy out the $1.5bn loan tied to Citgo, before syndicating it to other investors, according to people familiar with the proposal.

If approved by the US Office of Foreign Assets Control (Ofac), the deal could avoid a potential diplomatic tangle in the event that PDVSA defaults on its loans, with the US seen as unlikely to approve Rosneft taking over the 49.9 per cent stake in Citgo's plants.

Both Russia and Venezuela are subject to US sanctions, with Rosneft and PDVSA executives singled out for attention from the Treasury.

Mercuria, which has a deal to supply Citgo's three US-based refineries with non-Venezuelan crude oil, is attempting to structure the deal so as not to breach US restrictions on providing new finance to Rosneft.

Spokespeople for Rosneft and Mercuria did not comment.

Richard Mallinson, a geopolitical analyst at Energy Aspects, said that if the deal went ahead it could avoid creating additional tension between Washington and Moscow, but also raised questions for PDVSA on future financing.

Venezuela is in the throes of one of the worst economic crises in Latin American history, with its economy contracting by a third in the past half-decade. A further 15 per cent contraction is expected this year, according to the International Monetary Fund, while inflation is set to hit 13,000 per cent.

"Rosneft would have faced an uphill struggle to get approval to exercise a stake in Citgo so this avoids a potential diplomatic strain between the US and Russia if this deal goes ahead," said Mr Mallinson.

"If this signals that Russia is looking to reduce its loans to Venezuela rather than offering more support that leaves Caracas with nowhere obvious to turn."

Rosneft has said it is unwilling to extend further loans to PDVSA, many of which have been secured against crude supplies, as the economic crisis starts to hit oil output from the country.

The Russian company is seen as keen to reduce its exposure to Venezuela as

Venezuelan oil group PDVSA has borrowed $6bn from Rosneft

oil output falls, with the Latin American country seemingly close to defaulting on its debts.

A spokesperson for the US Treasury Department said they do not discuss Ofac licensing requests, including confirming whether one had been received.

Russia has been a financial lifeline for Venezuela, and last year agreed to restructure $3.15bn of loans provided to the country.

Not included in that package was the $6bn that PDVSA owes Rosneft in loans and debt interest, which has become a big worry for investors in the Russian oil company. Rosneft holds large stakes in Venezuela's oilfields and in December struck a deal to take control of two offshore gasfields.

Igor Sechin, Rosneft's chief executive and a close ally of Vladimir Putin, Russian president, said in October that the company had no intention of using the Citgo stake for anything other than collateral, and that the company was negotiating with PDVSA over swapping the stake for other assets.

Additional reporting by Henry Foy in Moscow and Katrina Manson in Washington

Dior, still marching to the same tune

Maria Grazia Chiuri is sticking to her empowerment narrative at Dior. But is it starting to look a little old?

FASHION

Jo Ellison

Getty Images, Catwalking

Maria Grazia Chiuri showed her AW18 collection yesterday, her first under the house's new chief executive Pietro Baccari, an Italian who joined the group from the LVMH-owned Fendi. He has big shoes to fill.

Baccari now assumes the role held by Sidney Toledano, who was appointed in 1998 and has lead the culture of Dior for nearly 20 years. Toledano launched the bestselling Lady Dior handbag, and steered the house through the crisis of John Galliano's nervous breakdown. He oversaw the short tenure of Raf Simons and the arrival of Chiuri, "the first female creative director of womenswear" at the house. Now, he has gone to oversee the group's "other labels" — including Givenchy, Loewe and the Hedi Slimane-designed Céline. Baccari arrives with the aura of a new dawn at Dior.

No pressure there then. Christian Dior is not allowed to fail. The crown jewel of the LVMH portfolio, Bernard Arnault, the group's chairman and chief executive, purchased it for one franc in 1984 and has since transformed it into a near €5bn brand. Last summer, Groupe Arnault paid €12.1bn for the minority stake in Christian Dior it does not already own. The deal increased the family stake in LVMH to about 46 per cent, and helped contribute to the group's "record" year (in January it reported sales of €42.6bn).

Dior's divisions — which include, among other things, beauty, leather goods and ready-to-wear — obscure the specifics of its revenues. Hence any thorough analysis of Chiuri's success with the womenswear is hard to ascertain. Certainly, the designer has succeeded in driving the category growth. She's launched sticky new "It" accessories. She's introduced wearable clothes with a real-life purpose and designs with a diverse range of clients in mind. She's also pushed a feminist agenda in keeping with the times: her position should be unassailable. But her collections have often failed to ignite critical ardour. Some say her Dior is a bore.

For AW18 the women's agenda was placed once again at the fore. A montage of empowering slogans, magazine covers and power women decorated the show space of the Rodin museum, and the models marched in the familiar threads of 1960s libertarianism. The first one out wore a sweater emblazoned with the words *"c'est non, non, non et non"*, with a black kilt and heavy black boots. The show had been inspired by a quote of Diana Vreeland's: "The Sixties were about personalities. It was the first time when mannequins became personalities. It was a time of great goals, an inventive time . . . And these girls invented themselves." Hence, there were denims and CND knits; tailored jackets in a theme of tartan; multiple "ethnic" embroideries and velvety, patchouli-infused patchworks.

The accessories were especially strong: many of the models wore suede hooded caps (part of a "balaclava" trend that has been emerging all season), and following her success with the kitten heel and sneaker, Chiuri had alighted on a new hit shoe — this time a patchworked hybrid cowboy boot, and a hippie-style studded clog. Could we feel Baccari's influence already? Fendi's recent success has been driven by its focus on customisation and accessory extras, and some of those hallmarks could be found here: the bold, embroidered straps in particular looked like they might become part of an interchangeable offering. And there was a new belt buckle — an oversized "D".

Otherwise it was a show for the everywoman — with wide-legged suits, archive prints, biker leathers and sheer organza dresses worn with branded lingerie. That the first woman designer at Dior has alighted on an all-encompassing feminist narrative to underpin her tenure is no wonder. It's smart, it's relevant and it sidesteps too much scrutiny. This show's cheerful palette and right-on motivation recalled the kind of Woodstock-era optimism for which there will always be a hearty nostalgia. But do I really want to wear the hippie uniform once worn by my mother — even when it's immaculately made? On the Dior catwalk, the patchworks, the tailoring and the embroideries were impeccable, the clothes were arresting, and the range nice and broad. But with so much 1960s-wear on view there were times when the collection smacked of fancy dress — or a film set.

> Chiuri's collections have often failed to ignite critical ardour. Some say her Dior is a bore

Vreeland's point was that the most inspiring aspect of the 1960s was in its invention. How women used clothes to express their true selves. There was little invention here. Chiuri's fidelity, while charming, felt a little bit too literal. In 2018, she could have moved it more along.

Sole woman: Nike embraces female footwear

Nike is rethinking how it sells trainers to women — and that means unisex sizing and curated spaces. By *Carola Long*

Many sneaker-loving women will know the frustration of spotting the perfect pair of trainers only to find out that, yet again, they only come in men's sizes. The women's sections of sports shops are often dominated by overtly girly details, from pink or gold trims to snakeskin inserts. Not everyone wants to do the tennis court or commute in sugary sneakers.

Now, Nike has taken this realisation and made it a central part of its new female-centric retail concept, Nike Unlaced. It will take the form of an online destination on the Nike website, launching March 27, as well as a physical, curated area in key Nike Stores from the summer. Amy Montagne, global vice-president and general manager of Nike Women, says: "One of the most important things we will be doing is giving women access to and choice of product like never before. We are removing barriers with unisex sizing throughout the lines — and that includes high-heat [the most covetable] products like the new Virgil Abloh x [Air] Jordan I — which is really important for women."

Capitalising on women's increasing appetite for cutting-edge sportswear makes sense for the brand. Although at the end of the last financial year the women's sportswear business at Nike was worth less than the men's, at $6.6bn compared with $16bn, sales of women's shoes and apparel at Nike have been growing faster than men's for several years, and they expect that trend to continue. The Unlaced concept was initially trialled in Nike retail stores in London and the brand saw strong double-digit sales increases compared with the same period the previous year.

Julie Igarashi, vice-president and creative director of Nike Women, picks up on the appetite for unisex sizing: "People are multidimensional today, especially the millennial generation; we want to express our style in a variety of different ways." And she believes that a passion for sneakers isn't restricted to men, as is often the stereotype. She reports that when Nike hosted a prelaunch of the 1 Reimagined collection, footwear created by a 14-strong female design collective, at New York Fashion Week, "we had women queueing up to buy it — there is definitely a rise in female sneakerheads." As part of Unlaced, consumers will have access to personal stylists, and Nike has also enlisted global fashion experts and influencers to curate their women's products and inject a fashion sensibility that reflects their particular city.

Nike Women's Amy Montagne

The rise of athleisure-wearing sportswear-inspired garments as everyday clothing — and the boom in gym-going — has fuelled this growth. Montagne says: "One of the things we have seen over the last few years is that women truly are the leaders of the sport and fitness lifestyle. We see a big shift in how women are living their lives, and fuelling the overall industry, and this has pushed us into some new zones." Recent high-profile launches for women at Nike have included the campaign for their new "Pro Hijab" modest headwear and a plus-size sportswear collection.

There will be a continued crossover between fashion and function. Montagne says: "We have been listening to female consumers and athletes for 40 years and we have always been rooted in performance and innovation. We have also learned that it's really important to deliver on the fact that for women in particular there is no performance without style."

And which styles are seeing the most demand? Igarashi cites the Cortez, which was Nike's first shoe for women, introduced in 1972 and recently reinvented. The Monarch is one of the top-selling styles ever at Nike, but it's not everyone's idea of a hip shoe. It's a clumpy white normcore running trainer of the kind American dads who wouldn't know their Balenciaga from their Balmain might wear to the mall, but over the past six months Igarashi reports that it has had a major revival as part of an ironic dad-fashion movement Nike is dubbing "Mr Nike". In a true rejection of preconceived ideas about what women like in their shoes, the stylist Julia Sarr-Jamois will be curating a whole Mr Nike selection for Nike Unlaced, available online. Igarashi says: "This launch is really going to put some gas under sneaker culture."

Flórez blazes his way to paradise

OPERA

Orphée et Eurydice
La Scala, Milan
★★★☆☆

James Imam

In La Scala's production of *Orphée et Eurydice*, it is the orchestra that makes the journey into the underworld. Placing the musicians centre-stage, on a platform that rises and falls, hints at what the directors see as the essence of Gluck's opera. The Orpheus myth is not simply a story about a Thracian poet who saves his wife from Hades. It is an ode to music itself.

La Scala is presenting the work in its 1774 Paris version for the first time. If the opening performance never quite got into its stride, it is difficult to blame the production. Certainly, this joint effort from director John Fulljames and choreographer Hofesh Shechter, on loan from the Royal Opera House, invests Conor Murphy's beautifully ethereal sets with few ideas apart from the rising platform. But straightforward storytelling was central to Gluck's reformist agenda, and, by funnelling the characters' emotions through a score of striking simplicity, the composer put the dramatic emphasis on the music.

The weak point of this performance was the playing. Conductor Michele Mariotti can work magic when given sparkling bel canto or yearning Romantic melodies to craft. But here he sounded straitjacketed by the music's classical proportion, providing pristine surface layers while never making the passion burn beneath.

One musician who did get it right was Juan Diego Flórez. The tenor does not possess the light haute-contre voice for which the title role was re-scored, but his blazing tone streamed majestically through Gluck's lines, and the fearsome bravura aria was thrilling. Flórez combined authentic vehemence with a sense of steadfast self-possession; he cut the archetypal, if sometimes broodingly Romantic, Gluckian Orpheus, mastering his emotions with music in a personalised journey to paradise.

Fatma Said was a puckish Amour, and Christiane Karg's Eurydice steered clear of irascibility to lure Orphée with singing of utmost grace. La Scala's superlative chorus sculpted its contributions idiomatically and with sensitivity. But limp playing from the orchestra meant this performance remained firmly earthbound.

To March 17, teatroallascala.org

Majestic: Juan Diego Flórez and Christiane Karg in 'Orphée et Eurydice'. Right: Bill Milner and Sheila Hancock in 'Harold and Maude'
Brescia/Amisano; Darren Bell

THEATRE

Harold and Maude
Charing Cross Theatre, London
★★★★☆

Ian Shuttleworth

It has grown from obscurity to cult respect, but Hal Ashby's 1971 film is still well at the obscure end of cultishness. It is one of the most whimsical movies of its period, telling of a discontented 18-year-old rich boy falling in love with a relentlessly rebellious yet charming 79-year-old woman. Director of this stage version Thom Southerland has pulled a few of the story's teeth and frankly copped out once or twice, but it is impressive how much of Colin Higgins' unsettlingly chucklesome screenplay remains.

This is, I suspect, largely because the stage adaptation (from 1974) is by Higgins himself. It is adroit at folding the variety of film locations on to a single stage, at not assigning too much extra dialogue to fill in the visual gaps (in particular, I heaved a huge sigh of relief when the reason for Maude's indefatigable joie de vivre was conveyed with an elliptical phrase or two rather than spelt crashingly out) and at allowing the tale to take its own shape.

Bill Milner keeps a tight rein on Harold, which is sometimes unhelpful in his scenes with Maude but always pays off when interacting with his controlling mother (an excellent Rebecca Caine) and engaging in his hobby of painstakingly staged mock suicides. Sheila Hancock — now 85 herself — could not be bettered as Maude: at once impassioned and mischievous, she makes every one of her "misdeeds" credible.

Higgins and/or Southerland do well to recognise the importance of music: the film resonates with the songs of Cat Stevens. Here, the supporting actors play Michael Bruce's score on whatever instruments they can handle: Joanna Hickman, as well as portraying a clutch of excruciating computer dates for Harold, even provides a cello rendition of the other end of telephone conversations. One of the two serious mis-steps is the dippy song that brings Harold and Maude together; the production would have done much better simply to acquire the rights to perform Stevens' "If You Want to Sing Out, Sing Out". This further weakens a stage ending which is already tipping into sentiment. Nevertheless, it succeeds overall both in itself and as a nudge to seek out the film.

To March 31, charingcrosstheatre.co.uk

THEATRE

Trust
Gate Theatre, London
★★★☆☆

Sarah Hemming

"Let's just leave things the way they are," is a refrain that runs through Falk Richter's caustic, playful 2009 piece (translated from the German here by Maja Zade). "It's taken us so long to get here / It was so so / Exhausting." It's the recurring conclusion of a warring couple, whose tottering relationship repeatedly breaks down and reassembles before us. It's also the reasoning of an anonymous monologue, voiced here by director Jude Christian, that queries whether the advanced capitalist system as we know it faces imminent collapse. "What would we do with this information?" she asks. "Let's just leave things the way they are."

Richter's text links these two scenarios — the personal and the socio-economic — to examine a deep-rooted apathy: faced with the unknown, it suggests, we tend to stick with what we know and try to prop it up even if we don't trust it. His script is a collage of monologues and dialogues with no identified characters or speakers.

Christian stages it as something between an art installation, a cabaret and a social media website, endlessly refreshed with unrelated and distracting information. Each change of scene is prefaced with a caption; screens drop from the ceiling and play soothing films of a beach or of animals being cute; a woman tips a packet of breakfast cereal over her partner. Meanwhile there are invitations to the audience to participate — have a drink, bark like a dog, pop on this flight blanket and eye-mask.

Christian's production is inventive and delivered with a nice, tongue-in-cheek sense of humour. Pia Laborde Noguez and Zephryn Taitte as the bewildered couple squabble and make up and roll about like puppies, while Christian herself steps in to deliver props or speeches. But as time rolls on, the piece starts to feel laboured and gratingly repetitive. The final section, in which the three performers conduct a lengthy yoga session to a voiceover on a loop about the perpetuation of the system, may demonstrate our insulated self-absorption, but it feels interminable.

To March 17, gatetheatre.co.uk

Intense drama of pride and prejudice

THEATRE

An Ordinary Muslim
New York Theatre Workshop
★★★★☆

Max McGuinness

The titular "ordinary Muslim" of Hammaad Chaudry's new play is Azeem Bhatti, a thirtysomething Londoner and son of Pakistani immigrants. Azeem works in a bank, where he's all set to be appointed manager, and seems more or less happily married. Like his father Akeel, he has contempt for the "Jamaat", a cultish movement that controls the local mosque. He also disparages his wife Saima for wearing a headscarf to work lest it cost her a promotion. And though officially teetotal, he struggles to avoid the temptation of a pint of Guinness.

But Azeem is no tradition-bashing secularist. He attends Friday prayers and feels ill at ease in Britain, where, as he sarcastically remarks, "a good Muslim is an invisible Muslim". And his country's colonial history and present-day racism rankle so bitterly that he tells a white friend: "When I see a Muslim go after you fuckers . . . I get it." As Azeem's life falls apart, there's even a faint suggestion that he might be the kind of angry, dislocated young man who would go to fight in Syria.

Those contradictions make Azeem an unusually rich and complex protagonist. And Sanjit De Silva plays the role with a sympathetic blend of pride and intelligence overlain with mounting frustration. Purva Bedi similarly evokes the swirl of competing desires and loyalties inhabiting Saima (even if the motivations behind her increasing religiosity are never fully explored). And Ranjit Chowdhry's Akeel is an abusive patriarch who nonetheless cuts a dignified figure, while Rita Wolf adds a dash of grit to the part of his subservient wife Malika.

Under Jo Bonney's fluid direction, their domestic and professional conflicts unfold in an intense-yet-understated naturalistic style reminiscent of Arthur Miller. Underlying that formal achievement is Chaudry's dialogue, which has a spontaneous, improvised feel that sounds consistently authentic.

We might have heard more from Azeem's sister Javeria (a self-possessed Angel Desai), who seems to balance the demands of faith and modernity with more success than the other Bhattis. But this debut play nonetheless skilfully dramatises one family's unhappy struggle to be ordinary while preserving their distinctness.

To March 11, nytw.org

From left, Purva Bedi, Rita Wolf, Ranjit Chowdhry and Sanjit De Silva in 'An Ordinary Muslim'
Suzi Sadler

CLASSICAL MUSIC

Leipzig Gewandhausorchester/ Nelsons
Leipzig Gewandhaus
★★★★☆

Shirley Apthorp

After two long years without a musical chief, Leipzig's Gewandhausorchester has appointed its 21st Gewandhauskapellmeister. Andris Nelsons follows such distinguished antecedents as Felix Mendelssohn Bartholdy, Wilhelm Furtwängler, Bruno Walter and Kurt Masur — and took up his post last week with both modesty and an eye to the future.

In a programme that combined Mendelssohn with a brand new work and a 20th-century classic, Nelsons made a declaration of intent to move his orchestra beyond the more conservative focus of his predecessor, Riccardo Chailly. But the evening was also striking for its understatement.

Leipzig composer Steffen Schleiermacher's *Relief für Orchester* is written for the same orchestration as Alban Berg's violin concerto. It manages to be both unassuming and impressive, describing the altitude profile of a mountain hike, or the raised ridges on a work of art, in the course of an engaging trot through most of the orchestral sections. After gently showing the orchestra's many strengths, *Relief* plunges us down to the depths of a double bass abyss, the perfect launching pad for the delicacy with which Berg reaches for the heavens in the first notes of his concerto.

And Latvian violinist Baiba Skride takes a celestial approach to Berg's work, opting for ethereal purity rather than gritty humanity. Manon Gropius, daughter of Alma Mahler and Walter Gropius, died of polio at the age of 18; the work is dedicated to her. But Berg wrote it while he was working on his opera *Lulu*, and plenty of that sinuous, ambivalent figure can be heard in the concerto. Skride left the anguish to Nelsons and his orchestra, floating above it all with glassy detachment.

In the final movement's Bach chorale, given flawless intonation by the woodwind, the link to Leipzig became suddenly, movingly evident. Nelsons took the final phrases upwards with a physical gesture to the heavens which he held for tense seconds of silence, emphasising the work's sense of the transcendent.

Mendelssohn's *Scottish* Third Symphony formed the concert's second half, a solid piece of Leipzig tradition to which Nelsons brought a lush romanticism sometimes heavier than the fleetness of which the orchestra is capable. Perhaps the most intriguing aspect of this fledgling relationship is the lack of arrogance on either side. Sometimes the orchestra does not play exactly as Nelsons directs; on the other hand, sometimes the players give him more details and refinement than he has commanded. There is room to grow here, and a sense of give and take; the new partnership brims with artistic promise.

gewandhausorchester.de

FT BIG READ. ITALY'S ELECTION

As Italians go to the polls on Sunday, many are in an anti-establishment mood. While big business wants to continue the reforms of the centre-left government, some voters feel left out of the economic rebound.

By James Politi

Weak recovery fuels discord

Top, from left: Matteo Renzi of the Democratic party; Forza Italia's Silvio Berlusconi; Five Star's Beppe Grillo; and the Northern League's Matteo Salvini — FT montage

As Italy prepares to go to the polls on Sunday for an election that is the latest test of Europe's populist insurgency, two businesses on either side of Turin in the north-west of the country are experiencing vastly different fortunes.

To the west of the Italian city that is the home to Fiat cars, Gianfranco Carbonato's company, Prima Industrie — a maker of laser metal-cutting machinery with plants in four countries — is doing well, with sales rising 15 per cent last year and early figures for 2018 looking encouraging. The 72-year-old owner worries that the looming general election could jeopardise the country's painstaking and fragile economic progress over the past few years.

"The hope is that politics doesn't damage things too much," says Mr Carbonato, who also sits on the board of Intesa Sanpaolo, Italy's largest bank. "Politics needs to keep working to make this country more normal, not invent God-knows-what-kind of solutions. That's the danger."

Yet such satisfaction with the current outlook is not felt by many of the country's smaller businesses — or indeed, according to polls, by a lot of voters. The stronger headline numbers and improving exports have yet to feed through to sentiment further down the economic chain, which is encouraging support for more radical change. To the east of Turin in Chieri, on the edge of a town where Whirlpool, the US appliance maker, recently announced plans to lay off 500 workers, patience has run thin and the mood is bitter.

> 'Whether you have a centre-right coalition or a grand coalition, the government looks set to blow through the budget deficit'

"The government says there's a recovery? It's all baloney — no more, no less. Only misery is recovering," says Piero Sciarretta, the 49-year old owner of La Bottega del Colore, a paint and varnish store near the local railway station which he runs with his wife. "There's no money, there's truly no money."

Mr Carbonato's fear of a looming shake-up in the eurozone's third-largest economy — at a time when the currency bloc is gearing up to pursue deeper integration — is common among business leaders. Globally competitive companies like Prima Industrie that survived the country's sovereign debt crisis, triple-dip recession and banking woes have helped pull the economy out of the morass through a surge in exports and investment. Many of them look favourably on the status quo in Rome, led by prime minister Paolo Gentiloni of the centre-left Democratic party.

Though well below the eurozone average of 2.4 per cent, the country's gross domestic product grew at a rate of 1.5 per cent in 2017, its fastest pace since 2010, and is expected to maintain that momentum this year, according to the European Commission. Italian shares have been among the best performers in Europe; and the country's 10-year bond yield, a key measure of its borrowing costs and investor confidence in its fiscal sustainability, has remained low, hovering around 2 per cent.

Weak link in Europe

Among big businesses in Italy, there are growing jitters that all this could be lost in the event that populist parties — the anti-establishment Five Star Movement and the far-right Eurosceptic Northern League, in particular — gain ground in Sunday's vote.

"There's no doubt that the elections could deliver a confused picture, and with a few wrong steps our country would quickly become the weak link in the world, with systemic consequences given the dimension of our public debt and Italy's weight in the eurozone," was the stark warning delivered by Confindustria, Italy's largest business lobby, in a report released this month.

The latest polls, published on February 16 before a 15-day blackout, suggest a wide range of outcomes. The pro-EU ruling Democrats are likely to lose many seats — and almost certainly its ability to govern the country on its own with a few reliable allies. One result could be a grand coalition, or national unity government, of centrist political forces including both the Democratic party and Silvio Berlusconi, the 81-year-old former prime minister and leader of the Forza Italia party. He cannot be premier himself due to a ban from public office related to a tax fraud conviction.

Another possibility could be an outright victory for a centre-right coalition that not only includes Mr Berlusconi's party but also the Northern League and Brothers of Italy, another far-right Eurosceptic party, with the strongest of the three choosing the next prime minister. The anti-establishment Five Star Movement could also still emerge as the biggest party. And even if it cannot find enough allies to form a government, it will probably hold greater sway over Italian political life than it has so far.

What is certain is that the Democratic party has struggled to persuade many Italians that they are benefiting from a broadening recovery. In fact big chunks of the electorate believe business leaders and politicians who speak of a rebound are operating in a parallel universe. While unemployment fell to 10.8 per cent in December 2017 from a post-crisis peak of 13 per cent in late 2014, it remains well above its pre-crisis rate which was below 7 per cent.

Household purchasing power has also regained some ground, but has still not filled the hole created by the financial crisis. Poverty — which is most prevalent in southern regions suffering from few job opportunities, poor infrastructure and demographic flight — has been flat in recent years.

In such an environment of widespread popular discontent, opposition parties have found it easy to persuade voters that this is the time for a change — and even radical change.

While the Democrats are campaigning on a message of competence and stability, promoting incremental changes to existing policies, both the centre-right and Five Star say it is time for a major fiscal expansion, even at the cost of spooking the markets about Italy's fiscal stance. While Five Star and the Northern League have toned down their rhetoric on an Italian exit from the euro, Mr Berlusconi wants to introduce a costly flat tax and increase pensions and Five Star is promoting a guaranteed minimum income for the poorest Italians.

Each of these proposals, if implemented, would substantially increase Italy's budget deficit, possibly leading to clashes with Brussels and a sell-off in debt. "In the medium term, whether you have a centre-right coalition or a grand coalition, the government looks set to blow out the budget deficit," says Megan Greene, chief economist at Manulife in Boston.

Indeed, in a speech in early February, Ignazio Visco, the Bank of Italy governor, tried to encourage politicians of all stripes to rein in their fiscal promises. "This is about balanced development," he warned. "An increase in the deficit cannot replace reforms and risks being counterproductive. The problem of debt cannot be avoided."

To some economists, these concerns are exaggerated. "I actually think that the best way to ensure fiscal sustainability is to make sure people want to live in a country, want to pay taxes in a country, want to have babies in a country," says Raffaella Tenconi, the founder of Ada Economics in London. "Further austerity is counterproductive, and a certain ambition in the magnitude of fiscal adjustment is highly desirable."

To others, however, the post-crisis window for fiscal stimulus has passed because the risks of further indebtedness would outweigh the benefits. "When our growth was zero, there was a serious lack of demand and you needed to increase deficits," says Francesco Giavazzi, at Bocconi University in Milan. "But we are now at a different point. The issue is how to raise potential output, it's a very different environment."

Trying to compete

The potential disruption to Italian economic policy is not confined to the fiscal realm, however. Since 2011, after Mr Berlusconi left office, the country embarked on a round of economic reforms which could now be stalled or overturned, including a 2012 increase in the the age of retirement and a labour market overhaul launched in 2015 that made it easier to fire workers — and to hire them — by establishing a less rigid form of permanent contract.

Both policies were unpopular with voters and have been lambasted almost incessantly by both Five Star and the Northern League as misguided efforts that were imposed by Brussels.

The planned lay-off of hundreds of Whirlpool factory workers has angered voters in the Turin area

Populist gains in the election could also affect Rome's position on trade, which in the past few years has been remarkably willing to embrace EU trade deals with Canada and Japan, specifically, and open trade more generally.

The Northern League and Five Star have opposed the deals and, along with Mr Berlusconi, have generally been more resistant to foreign takeovers or investment in the country.

Matteo Salvini, the leader of the Northern League, has openly embraced US president Donald Trump's push for more tariffs. "If Italians will choose me as prime minister I will [impose tariffs] like Trump. I will defend Italian workers and entrepreneurs even if it means putting up tariffs to protect the 'made in Italy' brand," he says.

Carlo Calenda, Italy's economic development minister, says the idea is "dumb and unfeasible" because only the EU could set tariffs, but the broader lesson was that Italy's trade surplus meant that its own economy would suffer most from an escalation in protectionism.

One area in which the centre-left government struggled badly in 2015 and 2016 was its handling of a banking crisis driven by high non-performing loan rates at a number of large and regional institutions including Monte dei Paschi di Siena, the world's oldest bank, two regional banks in Veneto and several others in central Italy. NPL rates have however come down substantially since then, and a series of multibillion-dollar rescues managed to stabilise the Italian banking system, for the time being at least.

"I would argue that the big problems in the Italian system are solved by now, and the rest of the system is stable and we have seen positive development on the NPL side," says Silvia Merler, an analyst at Bruegel, the Brussels-based think-tank. "One interesting question is whether there may be issues in the pool of smaller banks, which are not under the ECB's oversight, but even if that were the case we would be talking of small numbers."

But for many in Italy, there always seems to be another crisis around the corner — and doubts about whether the economy is resilient enough to cope with a new disruption, such as the impact of automation. "We are at a major watershed. The traditional crisis is finished, maybe. But now the big challenge is technology," says Dario Gallina, of Turin's industrialists association, who warns that the next government will be forced to address the issue. "It could kick many companies out of the market — and in a country like Italy where manufacturing is very strong we have to be careful," he says.

A few miles away in Chieri, however, all Mr Sciarretta sees around him is a desire for a radical rethink at the election. "I feel what people say in here, 30 per cent won't vote, and that's a fact. And then the majority is either Five Star or Lega [Northern League], maybe some Berlusconi, that's the game," he says. "For me, it's hard to say. What we need is a dictatorship for 10 years."

2.1%
European Commission forecast for Italy's budget deficit in 2017. It is predicted to be 1.8% in 2018

1.5%
Growth in Italy's gross domestic product in 2017 — below the eurozone average of 2.4 per cent

10.8%
Official unemployment rate in December 2017. Joblessness peaked at 13 per cent in late 2014

Speed read

Populist surge According to the polls, populist parties could help form the next Italian government

What recovery? Many voters believe business leaders and politicians are operating in a parallel universe

Fiscal blowout Economists believe the new government will try to boost growth by raising the budget deficit

Whirlpool relocation
Factory closure fuels discontent with EU

On a grey late winter morning on the outskirts of Chieri, east of Turin, Monica Brizzolesi, who works in logistics at a Whirlpool plant that makes compressors for fridges, is lamenting her fate.

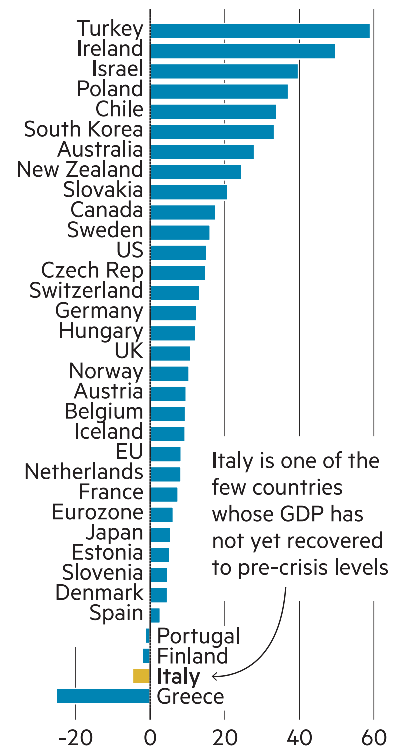
Next month, she and 496 other colleagues are set to lose their jobs, after Embraco, the Brazilian unit of the US appliance maker, announced that it would shift production to Slovakia. "I have an economics degree but it's hard to find another job in this area, globalisation has destroyed everything," she says. "Maybe one could dream of working at an Amazon warehouse for €900 a month, or doing pizza delivery on a bicycle, but if that's the future of Italy, we are in bad shape."

Ms Brizzolesi calls the EU "useless" yet still plans to vote for the pro-European centre-left in the election, because "populism is the worst thing". But many of her fellow protesters at the factory will be backing the anti-establishment Five Star Movement. "Mine is not a vote of protest, I am voting for their platform," says Gianni Trudu. "Five Star has detached themselves from the party system of right and left — and if you cut ties to the caste you can do a lot more."

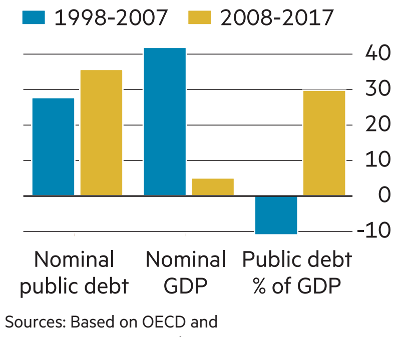
The Whirlpool crisis was the last thing the centre-left government needed on the eve of the election. Economic development minister Carlo Calenda took the workers' side, even describing the executives as "riff-raff". He visited Brussels to discuss whether state aid rules could be waived to help the company, and to debate what he described as the "social dumping" based on lower wages and lower taxes that drove the relocation.

But he rejects the idea of protectionism: "Multinationals give work to 1.25m people in Italy. Whoever wants them out of Italy is crazy. What we need is to seriously tackle the problem of relocations."

GDP growth in OECD countries
% change Q4 2007 to Q4 2017 or latest



Italy's public debt problem
% change and % points (for public debt as % of GDP)



Sources: Based on OECD and European Commission data

FINANCIAL TIMES
'Without fear and without favour'
WEDNESDAY 28 FEBRUARY 2018

Macron's trial of strength with the railway unions

The reform of SNCF is important; its symbolic significance more so

Emmanuel Macron pulled off the first major reform of his presidency — a loosening of France's overly rigid jobs market — without having to weather a sustained confrontation with the country's still powerful unions. Now he has deliberately set himself on a collision course with the most militant of them.

That is the effect, if not the intention, of plans for the overhaul of SNCF, the state-owned train operator, outlined on Monday by Edouard Philippe, the prime minister. He aims to shake up the governance of SNCF, forcing it to become more efficient and prepare for an opening to competition. Crucially, he will also end the sacrosanct status of rail workers: new recruits will no longer enjoy the job security, automatic pay rises, early retirement and generous pension entitlements that have been fixed in law for more than a century. If necessary, he will drive the reform through with a minimum of consultation using "ordinances", an expedited parliamentary procedure.

This reform is important in its own right. France's high speed rail links are a matter of national pride but crowded commuter routes are suffering from chronic under-investment, even though public subsidies to the network amount to some €10.5bn a year and SNCF's debt is of dizzying proportions.

Poor governance is part of the problem: a report by Jean-Cyril Spinetta, former head of Air France, makes it clear that managers have no real incentive to control costs. But the protected status of employees also makes it all but impossible for them to do so.

However, the symbolic significance of the initiative is far greater. An attempt to reform SNCF was one of the triggers for the wave of strikes that paralysed France in 1995, the first year of Jacques Chirac's presidency, with railway workers joined by teachers, postal workers and others until prime minister Alain Juppé abandoned his plans for welfare cutbacks. Rail workers also played a leading role in the strikes and protests that diluted Nicolas Sarkozy's early drive for pension reform.

Mr Macron has laid down the gauntlet and the unions are accepting the challenge — with the largest in SNCF, the CGT-Cheminots, already threatening a month of strike action.

This is a risky move, when Mr Macron is already fighting on so many fronts to execute his iconoclastic agenda — promising a revolution in farming and an overhaul of the treasured baccalaureate. His approval ratings fell below 50 per cent this month, reflecting discontent over tax increases for pensioners and smokers, public service cuts and pro-business measures viewed as plugs for the rich.

There are some signs of caution on the part of the government. It has not adopted the Spinetta report's recommendation to close down little-used rail lines, a move that would have provoked fury in rural communities. It has also delayed announcing a separate reform of vocational training that will be seen as an existential issue by the unions, which have traditionally organised training in partnership with employers and see this function as a cornerstone of France's welfare state.

A measure of caution is justified. But Mr Macron must keep up the momentum of reform as he reaches the end of his first year in office. And if he is to meet his promise to transform France, he must tackle the toughest challenge: trimming the size of the state.

In this context, the reform of SNCF — in itself necessary and overdue — is a calculated gamble. Mr Macron is betting that public opinion has changed since the last trial of strength with the railway unions. So far, his political instincts have proved pitch perfect. If anyone can pull it off, he can.

Taxing revenues is a poor fix for tech's avoidance

Greater harmonisation and energetic enforcement are a better bet

One cannot blame the UK Treasury for considering radical measures. A handful of large technology companies, which make a lot of money in the UK, pay little tax there. This may or may not be completely legal, depending on the case. But it is certainly unjust.

A fix is needed, and the temptation is to reach for one that is simple and bold. Taxing the tech companies on the basis of their local revenues would be both. UK sales are harder to shift to Luxembourg or Ireland. So Mel Stride, financial secretary to the Treasury, says a revenue tax is "potentially the preferred option". Other countries, such as France and Italy, have similar ideas.

The qualifications in Mr Stride's statement indicate that the Treasury may change its mind. Good. A revenue tax would create more problems than it would solve. Better to focus on more fundamental changes to the tax code, greater international harmonisation and tougher enforcement.

The figures are outrageous enough to be worth restating. In 2016 eBay had $1.3bn in UK revenue as stated in its annual report. Yet reported profits, on its UK tax filings, were £8m, and its tax liability was £2m. Netflix has 6.5m subscribers in the UK, implying roughly £400m in revenue. Profits made and tax paid in the UK? Almost nothing.

Such companies displace older businesses — pay television, store-based retail — that have a harder time deploying wheezes such as sending fees to the entities, parked in tax havens, that hold server computers or intellectual property. The UK does not just lose tax revenue; it is forced into the position of subsidising one form of economic activity (the software-based one) over others. No government should tolerate this.

The challenge with a revenue tax is seeing that it hits only its intended target. It may be fine to hit eBay, Netflix, Facebook or Amazon on the basis of local sales. But then what happens to early-stage, unprofitable tech start-ups? They pay no corporate tax now, and that is exactly as it should be.

Society wants to encourage their risk taking — as opposed to the rent seeking of tech oligopolies. And then there is the problem of profitable businesses that, because they do not derive earnings from intangibles, currently pay normal taxes on profits. A principled way of excluding them from a revenue tax, if one could be found, could be vulnerable to gaming, too.

A better solution will be less elegant and take longer to reach, but would distribute the burden of taxation more fairly. It would involve coming to a consensus about where and when tech platforms create value. The current regime, by default, holds that most of the value is created by the intellectual property or at the nominal location of an electronic transaction, and that little or none is created where the service is delivered. A more balanced formula is needed.

A rebalanced system, to be effective, would require a significant amount of international agreement, not about tax rates, but about the tax base — what constitutes a taxable event. This will take time. Both the EU and the OECD are working on it. In the meantime, individual countries have to enforce existing laws vigorously, and install smaller measures to plug tax leaks. The UK's "Google tax" on diverted profits, and the plan of Philip Hammond, the chancellor, to make royalties paid to low-tax jurisdictions subject to UK tax, are worthy efforts in this direction.

Global technology businesses are complex, protean and vast. No policy change is going to close every loophole they can exploit, simple solutions such a revenue tax least of all. There is no doubt, however, that the current system can be made much better.

Letters

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China is not making the world order safer

Sir, In "The US risks making a strategic blunder over China" (February 26), Zhou Bo is highly critical of America's new prickly approach to China. Most of us can agree that the US and its allies need urgently to work out a coherent and strategic approach to an authoritarian China that we currently don't have. Yet Mr Zhou also makes other assertions that need to be held up to greater scrutiny.

He argues that China is not responsible for the current difficulties in Sino-US relations, but it takes two to tango. Supposedly, it has not used "predatory economics" in its emergence as the world's biggest export nation, but while trade is mutually beneficial, it can also be gamed. China's indigenous innovation and other policies favouring domestic companies, along with those regarding technology transfer and intellectual property, have been the bane of foreign companies doing business with and in China for a long time.

Allegedly, China is not militarising the South China Sea or displacing US military influence in the Indo-Pacific region, and yet the evidence suggests quite the contrary. While there is room for argument about maritime rights and obligations, there is no denying the ubiquitous satellite images testifying to the unilateral construction of military facilities on reclaimed land on islands and atolls.

Further, the Belt and Road Initiative, which bears President Xi Jinping's imprimatur, is simultaneously an economic outcrop of China and a strong statement of its geopolitical intent. Mr Zhou refers to the Chinese naval base in Djibouti, but not to the "string of pearls" ports and naval facilities encircling India. The political scientist Edward Luttwak's phrase "the logic of conflict in the grammar of commerce" is an apt description for what is playing out here.

We can agree the world order is riskier because of the flawed Trump administration, but China is not making it safer. This week's news that Mr Xi may remain in power, potentially for life, fits that judgment. China's own truculent role in international relations is set to become still more marked. Without institutions of constraint and consensus at home, it is more vulnerable to mis-steps and mistakes. There is no monopoly on blunders.

George Magnus
London N6, UK

Underestimating the US was never a wise policy

Sir, Zhou Bo alludes to the possibility of "America's irreversible decline" in "The US risks making a strategic blunder over China" (February 26). Admittedly, America has recently been scoring a rather large number of own goals. A Mexican observer, however, once noted that while America makes more mistakes than any other nation, it also corrects its mistakes faster than any other country. As someone who admires China and wishes it well, I hope its policymakers will not get carried away with the idea of American decline. Underestimating the US has not proved a wise policy for any power over the past two centuries.

Paul Drexler
Seattle, WA, US

Mr Micawber's tip on cash flow saves misery

Sir, I refer to the rather sad account of MPs turning their fire on KPMG and Deloitte partners over Carillion (FT.com, February 22).

On the whiteboard of my company's group treasury department I wrote a simple reminder: "Revenue one pound and 99 pence in outgoings = happiness" and "Revenue one pound and outgoings one pound and one penny = misery".

Why not spread a little happiness and concentrate on cash flows in company reporting and their audits and save all this misery?

Roger Bartlett
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PT Pesona Sentra Utama,
Jakarta, Indonesia

Internal audit has failed to look at the bigger picture

Sir, Last week's evidence to MPs on the Carillion collapse has raised some fundamental questions about the role of internal audit in our corporate entities ("MPs call auditors to account over Carillion work", February 23). These questions are not new and were raised following the financial crisis in relation to the banking sector, but it seems we have not learnt the lessons.

According to the Chartered Institute of Internal Auditors, the primary role of internal audit in financial services should be "to help the board and executive management to protect the assets, reputation and sustainability of the organisation". But too often internal audit has been preoccupied with detailed low-level risk and has failed to focus on the bigger picture.

Our response to this problem in financial services has been to produce a Code of Practice that sets out the role, scope and priorities of internal audit. These priorities include such critical items as internal governance, the processes and controls supporting strategic and operational decision making, the setting of and adherence to risk appetite, and the risk and control culture of the organisation. Importantly, it also includes the modelling and management of capital and liquidity risks.

It seems clear that the time has now come to apply such a code to the rest of the corporate sector to ensure that internal audit focuses on the risks that matter most. This will require the support and engagement of boards and audit committees if we are to establish internal audit functions that really can help protect assets, sustainability and reputation.

Dr Ian Peters
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'I'm pretty sure the Irish border is around here somewhere'

What directors can do to prevent identity theft

Sir, I read with interest your report "Directors to be given greater protection from ID fraud" (February 22), on the announcement by the UK's Department for Business, Energy and Industrial Strategy of new laws enabling company directors to remove their personal addresses from documents filed at Companies House.

As the chairman of Cifas, the UK's fraud prevention service, I highlighted last year the results of research Cifas commissioned which clearly found that one-fifth of all victims of identity fraud are now company directors (as covered in your front-page report "Directors suffer higher risk of identity theft as hackers tap Companies House" on June 15 2017). I am delighted that the government has now taken the findings of this research, and the threat of identity fraud, seriously by introducing this long overdue change in legislation.

This is a big step in the fight against the identity fraudsters. However, identity fraud hit record levels last year, and with vast amounts of information about those who run businesses easily accessible via the internet, company directors need to do all they can to separate their personal and company personas.

Limit the personal information you share on social media and professional networking sites; shred all your financial documents; redirect your mail if you move home and actively check your credit file and your accounts. The quicker you spot that your details have been used fraudulently, the easier it will be to limit the damage caused.

Lady Barbara Judge
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Too little friction in pregnancies data

Sir, What conceivable practical use is the finding that conceptions and economic contractions move together? ("Decline in pregnancies signals economic contractions", February 26.)

With only a six-month lead, conceptions cannot be used to forecast economic contractions even if aggregated birth data were available instantaneously. The reported gyrations are just too high frequency — or, as many in the database no doubt yell out, "if only there were more frictions to slow it down". Perhaps sales of contraceptive products would be a better leading indicator.

Paul Hallwood
Professor of Economics,
University of Connecticut, US

No simple solution to pensions risk-sharing

Sir, Professor Nicholas Barr (Letters, February 23) answers his own essay question on how risk should be shared in a defined benefit pension scheme to avoid replacing it with a defined contribution scheme. His answer gets a low mark from this pension adviser.

The theory of rules-based risk sharing between the sponsor, current employees and deferred and current pensioners is that the rules provide the necessary flexibility missing from another set of rules: accounting for the effects of variance in market asset prices on the valuation of both assets and liabilities. The only point of trying to counteract the effect of the valuation rules is if it allows continuing exposure to the risky assets that used to dominate defined benefit scheme portfolios: equity and property. These are the assets whose systematic risk premiums reflect the performance of the economy underpinning all pension promises, including those funded using notionally risk-free assets such as government debt. The entire structure depends on businesses in general adapting and surviving.

Prof Barr's short answer overlooks the failed historical attempts to modify or cushion the effects of the variance associated with that long-term risk premium, and therefore does not address the crucial implication that this may be theoretically impossible given the uncertain path that the assets involved take on their way to long-term outcomes. The most notable rules-based solution was with-profits insurance contracts. Others have included the use of options and guarantees. None has survived contact with the path of market prices. The conclusion to draw is that any hybrid constructs, more defined ambition than defined benefit, will also work only on paper, or only for a time.

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Over-reserving reduced Fannie/Freddie profits

Sir, In "Fannie Mae/Freddie Mac: hostages of Mnuchin" (February 23), Lex states that Fannie and Freddie did not generate enough profit every quarter to meet the 10 per cent dividend on the preferred stock the Treasury issued to them during the financial crisis. In fact, Fannie and Freddie were generating more than sufficient cash to meet their dividend payments. Accounting profits were reduced by massive over-reserving — a non-cash charge. These excess reserves, which were mandated by Fannie and Freddie's regulator based on government projections of loan losses in a multi-decade depression, were subsequently released when it became clear that there would be no such end-of-world event.

In reality, the Treasury changed the terms of the financing provided to Fannie and Freddie when it realised the two companies would more than just survive the original onerous terms, which included taxpayer ownership of 80 per cent of each, to allow unlimited taxpayer upside. Follow the cash and you will see the truth.

Bruce Berkowitz
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America's teachers give voice to demands for gun control

Florida Notebook

by Courtney Weaver

They had come wielding slips of paper with the words, "We Call BS", written on them and orange ribbons affixed to their lapels.

It was exactly one week after 17 people were gunned down at Stoneman Douglas High School in Parkland. I was 240 miles west of the town, on Florida's San Marco Island for a previously scheduled town hall event with the district's Republican congressman, Francis Rooney, and about 100 of his constituents. It was not going to plan.

The congressman's office had prepared a slideshow detailing a rosy forecast for the Republican tax cuts, and the economy, but the predominately liberal audience was unimpressed. They booed when the congressman refused to endorse a ban on semi-automatic weapons, and waved their slips of paper bearing the slogan taken from Stoneman Douglas student Emma González, which has become the new rallying cry of the gun control movement.

Half an hour into the town hall, a woman in a black flowered dress stood up. "I really don't need the mic," she bellowed. "I was a teacher for over 30 years." The congressman's mention of the 1999 shooting at Columbine high school had brought tears to her eyes.

"It's been 20 years since then," she added. "Not one of the issues that have come up on the federal level deal with gun safety from what you showed us. And that is a major concern . . . There's nothing at this point in time that is dividing us more than gun safety." A few minutes after she sat down, another woman stood to take her place.

"I'm also a retired teacher so I don't need a mic either," she boomed. Her husband, she said, was a former law enforcement officer who ran a private security company.

"In our house, we own a gun," she said, but added: "We do not have automatic weapons. We do not have bump stocks. Because, as we and most of our friends believe, these are not part of the second amendment."

Between January 1 and February 27, there were 35 mass shootings inside the US, according to the Gun Violence Archive, leading to 65 fatalities. Of the 2,292 people who have died from gun violence during that month-and-a-half long period, 525 of them were aged 17 or younger.

Donald Trump has vowed to tackle the issue head-on, although perhaps not in the way those two retired teachers and others might hope. While the president has suggested he will ban so-called bump stocks — the devices that enable semi-automatic rifles to be fired faster — and indicated that he is open to raising the age limit for buying semi-automatic weapons in the US from 18 to 21, his other proposals have caused alarm.

Last week, the president raised the possibility of arming teachers, placing concealed weapons in the classrooms. Five days later, he clarified that he did not want all teachers to have guns, only those "who have a natural talent, like hitting a baseball or a golf ball".

For many, that clarification is not enough. In Calcasieu Parish, Louisiana, located in the heel of the state's boot, Teri Johnson, president of the local federation of teachers, says one local high school in her district has confiscated four guns on campus this school year — a statistic she says reflects the problems facing so many public schools across the country.

While arming teachers, even well-trained ones, may seem like a good idea to outsiders like Mr Trump, it does not seem appropriate to people like her who know the school environment: she notes the story of one teacher at a Utah elementary school who accidentally shot herself in the leg with her concealed weapon while trying to use the restroom.

"Our teachers have so many responsibilities on their plate right now . . . Our teachers are meant to mould the next generation," Ms Johnson says. "We have lots of former military who are teachers now. But that doesn't mean they have to be carrying a gun."

Mr Trump may have his proposals to the problems facing the country's schools, but Ms Johnson says so does she. In the coming months, she hopes to run for a seat in Louisiana's state legislature, with a platform focused on education and schools.

Like the rest of the country's teachers and students, now is the moment, she believes, to be speaking up. No mic necessary.

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Comment

Centre-left parties are paying dearly for a lack of courage

EUROPE
Tony Barber

The torments of Europe's centre left know no end. In Italy's March 4 elections, the Democratic party, despite a respectable record in power, will probably finish behind Silvio Berlusconi's rightwing coalition and the maverick Five Star Movement. To reform the labour market, stabilise banks and return a stagnant economy to growth is praiseworthy but evidently no formula for victory.

On the same day, we will find out if rank-and-file members of Germany's Social Democratic party have backed the leadership's proposal to enter another "grand coalition" government with Chancellor Angela Merkel's Christian Democrats. The choice that faces the SPD, divided and trapped in a spiral of decline, is agonising. The party is damned if it joins hands with the CDU, and damned if it doesn't.

Rejection of a grand coalition may trigger snap elections. In one recent poll, the SPD's support was at a record low of 15.5 per cent, behind Alternative for Germany, the most extreme rightwing party ever to sit in the Bundestag. It is not inconceivable that the AfD would outpoll the SPD in an early election. Such a result in Europe's most powerful and hitherto most stable democracy would be an earthquake under the edifice of EU integration.

Yet if the SPD goes into coalition with the CDU, it will risk suffering more damage to its identity and brand. Across Europe, anti-establishment movements — often on the radical right — are eating into the social democratic vote. Their rise is pushing the centre left and centre right into coalitions. Everywhere such coalitions end up hurting centre-left parties as they share responsibility for tight economic, fiscal and welfare policies that alienate their core voters.

By and large, Europe's political establishment in 2017 withstood the assault of insurgent, national populist parties. But this success disguised a different trend: the continuing collapse of the centre left. France's Socialist party, the Dutch Labour party and the Czech Social Democrats suffered devastating electoral defeats. So did the SPD, which won 20.5 per cent of the vote in September's Bundestag poll, its worst performance since the Federal Republic's creation in 1949.

> Social democrats are scorned for taking too little pride in national identity and failing on immigration

The outlook for the next two years is no brighter. In Belgium, which will hold elections in May 2019, corruption scandals are draining support from the once-dominant francophone Socialists of Wallonia. Their Dutch-speaking comrades in Flanders hope to reverse their own slide by ridding their party of its old guard leaders.

Leftist parties will be comprehensively defeated in April's elections in Hungary and in Poland's next polls, due by late 2019. It is too simple to attribute this solely to the erosion of the rule of law and fair political competition under Viktor Orban, Hungary's prime minister, and Jaroslaw Kaczynski, the Polish strongman. The Hungarian left is split and tainted with a record of incompetence in government before 2010. In Poland, where leftist parties won no seats at all in 2015, the conservative nationalist Law and Justice party is popular partly because of its astute embrace of left-leaning social policies, above all a generous child benefit scheme.

As this example indicates, the decline of organised social democracy does not mean social and economic policies normally associated with the left have lost their appeal. On the contrary, millions of voters want a protective welfare state and are angry about precarious jobs, inequality and untamed globalisation.

The trouble is that many voters simply do not trust the centre left. In the first decade of this century, too many social democrats tolerated the worst excesses of financial capitalism and then colluded with the centre-right to make society's less well off pay the rescue bill. Voters also scorn the centre left for taking too little pride in national identity and for lacking the courage to confront the problems that arise from immigration in local communities.

Social democracy's progressive, internationalist outlook is all well and good. But the longer it fails to address voters' concerns about cultural values and pervasive economic insecurity, the faster the old centre left will dig its own grave.

Perhaps the most unusual experiment in centre-left renewal is taking place among Denmark's Social Democrats. Mette Frederiksen, the party's leader since 2015, combines a tough stance on refugees and immigrants with a critique of "sick capitalism" and a defence of the welfare state. On such issues, the Social Democrats are taking the unconventional step of occupying the same turf as the anti-immigrant, populist Danish People's party.

To some degree the centre-left's crisis is part of a general crisis of representative democracy in Europe. This is a small, irrelevant crumb of comfort. Not even the SPD, Europe's most venerable social democratic party, has a divine right to exist. If future historians are not to conclude that social democracy exhausted itself in the early 21st century, now is the time for the centre left to provide answers to questions dodged for too long.

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China is now exposed to one man's whims

Martin Wolf Economics

Strongman rule re-emerges as Xi Jinping scraps two-term presidential limits to stay in power indefinitely

Sometimes an announcement succeeds in being both unsurprising and shocking. It had long been evident that China's Xi Jinping would not — indeed, could not — step down from power. He has made too many enemies, particularly through his anti-corruption campaign, even if he wanted to go, which seems unlikely.

Yet the announcement that the two-term limit on the presidency is to go, is still shocking. What seemed likely is now a fact. Mr Xi has discarded the attempt by Deng Xiaoping to institutionalise checks on the power of China's leaders — itself a reaction to the wild excesses of the era of Mao Zedong. What is re-emerging is strongman rule — a concentration of power in the hands of one man. It now looks a bit like "Putinism with Chinese characteristics".

True, even before this decision, it had been possible for Mr Xi to retain his positions as head of the party and commander-in-chief, indefinitely. The term limits applied only to the intrinsically less powerful office of president. Yet if he had lost the presidency, while retaining his other positions, a scintilla of doubt might have emerged over who was in charge. Mr Xi disliked this or, as likely, thought he could not risk it. He seeks power unbridled and undivided.

How is this momentous step towards placing one man in absolute control of a rising superpower for the indefinite future justified? It is not. The authoritative *People's Daily* states: "The amendment is a vital move, made from the long-term experience of the party and country, to improve the institutions and mechanisms by which the party and country exercise leadership."

So why is this a vital move? Because the "implementation of the structure will be conducive to the authority and centralised leadership of the [Chinese Communist party's] Central Committee, and the guidance to the country and society by the party". Thus, the party controls the country and Mr Xi controls the party — and so everything else, indefinitely. That is good, because, well, it is good.

The shift back from a collective leadership to autocracy negates the hopes of all those who believed a rapidly developing China would move towards democracy as, say, South Korea did in the 1980s.

Yet China's gross domestic product per head at purchasing power parity is already a little higher than was that of South Korea at that time. Today, the only rich autocracies are oil exporters. Singapore may be viewed as a "guided" democracy.

According to the International Monetary Fund, China's GDP per head at PPP is now 84th in the world, nestled between those of Brazil and the Dominican Republic. But, if its economic rise were to continue, it would be a new kind of high-income giant.

Could Mr Xi's growing power threaten that rise? Possibly. Autocracy exposes a country to the unchecked whims of one person. As years turn into decades, such concentrated power has too often turned sour, as the ruler grows increasingly detached from reality.

Mr Putin began as an economic reformer, but has now created a stagnant kleptocracy. Power tends to corrupt and absolute power corrupts absolutely. Chinese people have the experience of the Great Leap Forward and the cultural revolution to remind them of this great truth.

Nevertheless, experience and theory also show that it is possible for wise and far-sighted rulers, subject to minimal constraints on their power, to promote the development of their countries. Autocracy may work. But it is, at the least, a high-risk system, even in a country with a tradition of high quality bureaucracy, such as China. This is known as the "bad emperor" problem. Autocracy may be effective. But it may also lead to gross excesses.

> The shift from collective leadership to autocracy negates any hopes of a move towards democracy

This also ignores the moral qualities of democracy as a political system that recognises the dignity of individuals as citizens with a right to act in the public sphere as well as in a private capacity. Yet many Chinese people must now feel that democracy is in desperately bad shape. It is far harder to argue for the superiority of the democratic system, whatever its theoretical virtues, after the disasters of the past two decades — the Iraq war, the financial crisis, and the election of a man so palpably ill-suited to his position as Donald Trump.

Yet I for one still hold to Winston Churchill's dictum that "no one pretends that democracy is perfect or all-wise. Indeed it has been said that democracy is the worst form of government except for all those other forms that have been tried from time to time." In the end, so long as a democracy remains democratic, with free and reasonably fair elections, the most ill-suited or timeworn leaders may be peacefully removed. That is invaluable.

This shift back towards indefinite one-man rule in China, within the framework of an all-pervading Communist party, means that we are, once again, in an era of competition of systems, between democratic and — strange though it may sound (and indeed is) — communist capitalism. One implication is that the western democracies have to regard China not just as a rising great power, but as a strategic competitor. It is essential for China to be a partner over such challenges as climate change, world trade or global security. Indeed, in many of these areas, the direction of Mr Trump's America First US is more worrying.

Nevertheless, in dealing with such issues as foreign direct investment, technological transfer and the behaviour of Chinese businesses, western leaders must be cautious. In all these areas, the decision of Chinese businesses are subject to strong guidance by the Communist party and the Chinese state. This cannot be ignored. To the democracies, autocratic China is a partner, but not a friend.

Yet the most important implication of China's increasingly clear political direction is what it means for western democracy itself. Universal suffrage representative democracy is still a young system. It is subject to the ills of demagogy, plutocracy and, not least, short-sightedness. Democracy needs to improve its performance if it is to regain the prestige it has lost, not just in the eyes of the wider world, but in those of its own citizens.

This will require a closer look within, at how the core institutions of the state, politics and the media work in today's democratic systems. It will take renewed examination of the web of attitudes and restraints that help make a system of peaceful political competition achieve desired outcomes for the people. This is no easy challenge. But it has, once again, become our great task.

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Bonus caps could do wonders for gender equality

COMPANIES
Brooke Masters

Anyone who has ever watched bankers try to divide up a bonus pool knows the process is laborious, time-consuming and ultimately maddening. Hours of senior management time are spent fighting about relatively small amounts and no one goes home happy.

So HSBC's decision to revamp its bonus process for back-office staff, announced in a memo last week, makes perfect sense. Europe's biggest bank by assets now plans to cap discretionary payments to junior staff in compliance, legal, IT and other non-client focused divisions, at two-and-a-half months' salary.

Starting next year, each bonus will be calculated directly from the employee's performance and behaviour ratings. The best employees — rated "top" for performance and "role model" for behaviour — will get the biggest payment, while those given "good" performance and "developing" behaviour ratings will get half a month's salary, and so on, down to the inconsistent and unacceptable folks, who will get nothing. "This new programme will be simple, fairer and more transparent," the bank stated in the memo.

HSBC officials declined to comment, but people close to the bank insist the shift is not about saving money. Stellar employees who currently take home larger bonuses will see their fixed salaries rise to compensate for the cap on variable pay.

Rather, this revamp is an effort to save management time and make the whole bonus process feel less arbitrary for many HSBC employees, whose work does not directly translate to revenue or profits. Managers are supposed to use the time saved from endless bonus meetings to provide regular feedback to their employees on how to improve their performance ratings and therefore their bonuses.

> HSBC's decision to revamp its process for back-office staff makes perfect sense

In some ways, this is the natural outcome of lessons learnt during the financial crisis. Back then, it became clear that highly variable pay — while helpful for managing costs in a cyclical industry such as banking — had a serious downside.

When bank employees rely on bonus money rather than salaries to pay basic life expenses, including mortgages and school fees, they have an incentive to do everything they can to improve their employer's short-term performance. That may blind them to long-term risks. Back-office employees, especially those in control functions, should be sheltered from those pressures whenever possible.

HSBC's shift to more standardised bonuses comes at a time when banking and other industries are being forced to confront the fact that they have historically paid women and minorities less than the white men who dominate most senior executive ranks.

By April, all UK employers with more than 250 workers must disclose the gaps between what they pay the average man and woman for both salary and bonus. HSBC has not yet made its gender pay gap public, but several of its UK peers did so last week.

The results were as depressing as one might expect. At Barclays' investment banking division, women's bonuses were on average 78.7 per cent lower and at Royal Bank of Scotland the mean gender pay gap on bonuses was 64 per cent. Ross McEwan, chief executive of RBS, insisted that his bank's numbers reflected a lack of women in senior roles, rather than unfairness in the pay process itself.

But studies — including one released in 2016 by academics at the University of Warwick, Cass Business School and the University of Wisconsin — suggest otherwise. They looked at 4,600 workers at 840 employers in Australia and discovered that women were just as likely to ask for a raise as men in similar circumstances, but were a quarter less likely to receive one. If that holds true elsewhere, it suggests that discretion may open the door for unconscious bias — or worse.

The people close to HSBC insist the bank's decision to change its bonus rules has nothing to do with its forthcoming gender pay gap numbers. And that may well be true. Over the short term, capping variable pay for back-office jobs could make the bank's gender pay numbers look worse. That is because front-office bonuses, which are already bigger and disproportionately go to senior — mostly male — money spinners, will then dominate the results further.

The bank should nonetheless be praised for making the right choice. Removing discretion from the bonus process is not just a management time saver but also a blow for greater fairness and equality.

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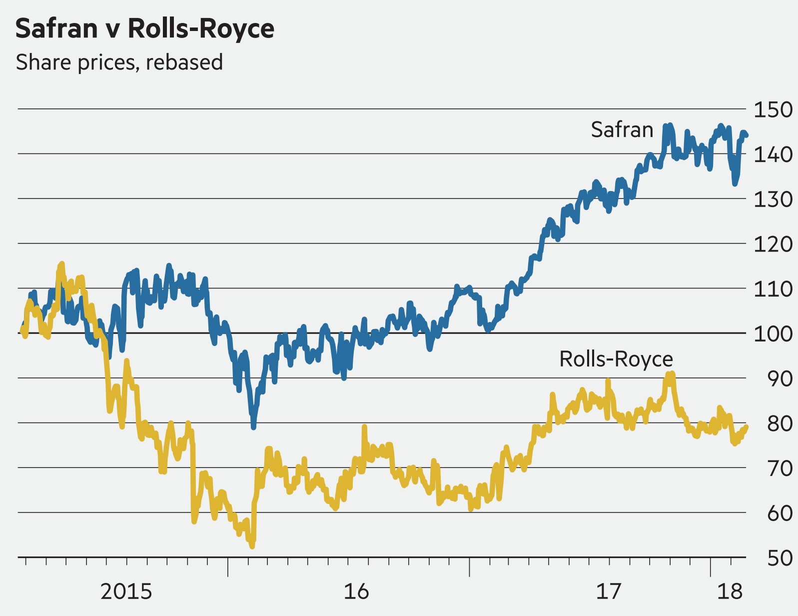
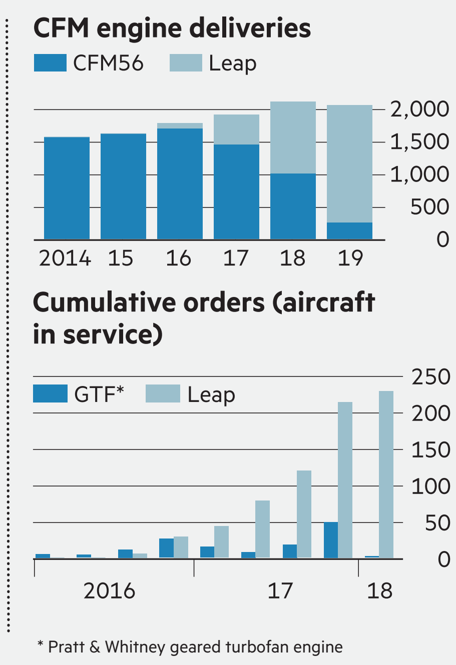
Safran: vaulting ambition

The French aerospace group is locked in a battle with unquoted Pratt & Whitney for dominance in the narrow-body airliner engine sector. Both have faced problems with new power plants and Safran must also integrate Zodiac. Still, investors seem sanguine about the challenges — its shares have performed well





FT graphic Sources: Thomson Reuters Datastream; CFM: UBS/Ascend

Nothing like a shot across the bows from your biggest customer to focus minds. Safran chief executive Philippe Petitcolin was still speaking to reporters yesterday when Airbus insisted it was "important and urgent" that aircraft engines are delivered "on time and on quality".

Safran and General Electric are equal partners in CFM, the world's biggest supplier of engines for narrow-body passenger jets. CFM already has an order backlog of almost 15,000 units. Airbus and Boeing would happily order more if they could, especially given the difficulties that rival Pratt & Whitney is encountering with its geared turbofan engine. But Mr Petitcolin would rather wait a year before committing to ramping up output of CFM's new Leap engine.

Such caution might be frustrating, but it is merited. Aircraft supply chains are complex and delicate. Better to underpromise and overdeliver than to end up like Zodiac Aerospace, whose erratic supply of seats and toilet doors held up production of A350 airliners. Zodiac is now owned by Safran after a takeover saga last year. Mr Petitcolin must supervise integration and rationalisation while managing the switch from the best-selling CFM56 engine to its replacement.

He also needs to reduce costs. CFM makes a profit on CFM56 units even before servicing revenues, whereas Leap units currently sell at a loss. As volume builds — output should rise from 459 in 2017 to 1,100 this year — Leap should turn profitable by 2020. But that will not happen by itself.

Revenues from servicing help to cushion the financial impact of phasing out a profitable product and introducing a lossmaking one. Safran also says it is over the hump in terms of development costs, with capital spending set to fall and free cash flow improving. The board has extended Mr Petitcolin's contract by two years.

The market has touching faith in his ability to deliver; Safran shares are up almost two-fifths in a year. But even without speeding up engine output, his workload looks daunting. If there are further problems with either Leap or Zodiac, he can at least rely on Airbus to point them out.

Comcast/Sky: backseat bidder

One London cabbie has just earned the right to bore passengers as follows: "I had this American geezer in the back of the cab. Took him to the shops to have a look at getting Sky. Told him how good it is for the football. Stone me if he hasn't offered £22bn for the whole company!"

Bullish taxi drivers are a top-of-the-market phenomena. Comcast's attempt to trump 21st Century Fox's bid for the UK media company is on the high side at £12.50 per share in cash. The question is whether Fox — or Disney, which is buying most of that Murdoch-controlled US group — will go higher. A Sky share price of £13 shows the market thinks so.

Happy days. Nothing suits stock market investors better than a testosterone-fuelled bid battle for an asset they are weary of. Sky is a good broadcaster and broadband group but too small to thrive independently. Fox's 2016 bid at a 40 per cent premium for the 61 per cent it does not own looked generous because shares were weak.

Fox surely hoped its long-held two-fifths stake in Sky would forestall competing bids. Brian Roberts, boss of Comcast and an atypically attentive taxi passenger, is calling that bluff. His assumption must be that Fox or Disney would sell the stake if Comcast secures more than 50 per cent of Sky. Shared ownership of Sky would be fraught, particularly if it remained listed.

Comcast and Disney are scrambling for content as media and telecoms consolidate. Disney's agreed $66bn bid for the bulk of Fox is not dependent on inheriting the whole of Sky, though the Mouse would prefer it. Cord-cutting by US consumers makes Comcast, already owner of NBCUniversal, particularly needy. Challenged by structural changes at home, it is weak abroad. Owning Sky would take its foreign revenues from 9 per cent to 25 per cent of the total.

The bid approach for Sky from the US cable giant is 16 per cent higher than the Fox offer. An enterprise value for Sky of almost £30bn, according to S&P Global data, is close to 13 times earnings before standard deductions. But Comcast's net debt should still be below 3 times earnings. The scenario planning required of bidders and target would defeat even a cabbie skilled in plotting routes across gridlocked London. The outlook for Sky's independent shareholders is plain. As a taxi driver might put it, they will all be minted.

Standard Chartered: Winters warmer

Standard Chartered wants investors to believe in its recovery. Yesterday the bank reinstated dividends after two years and reported operating income up 3.5 per cent over the year. The stock rose nearly 2 per cent in Hong Kong. A dividend was the minimum expectation of investors. The most recent quarter was underwhelming. The stock is only cheap if equity returns increase.

During its misery years, the Asia-focused bank liquidated nearly $20bn of risk-weighted assets and was bested repeatedly by rival HSBC. Now, gross loans and advances are rising — up 12 per cent in 2017. The group says its credit quality has improved.

Transaction banking, a steady business linked to the health of global trade, accounts for the largest chunk of operating income, at 23 per cent. That is 3 percentage points more than in the preceding year. Boosting the group's return on equity means growing this capital-efficient fee business. ROE reached 3.5 per cent in the past year, about half of HSBC's. StanChart can raise that by keeping a lid on costs.

True, financial markets still account for 18 per cent of operating income and transaction banking growth can be upended by protectionist hiccups. But two-fifths of operating income arises from Greater China, and north Asia, a region supportive of free trade.

Transaction banking also benefits from the complexity of clients, which may be multinational regardless of size. Tough regulation has raised barriers to entry for lenders, and with it the pricing power of incumbents.

Can the reformed strategy of StanChart lift returns on assets? If not, the bank will face pressure to lever up again and pursue riskier business. The group's ROA is 0.2 per cent, less than half that of HSBC and below some weak European banks. Investors are giving boss Bill Winters modest credit for modest progress. The price-to-book ratio of the shares has risen to 0.7 from 0.4 in early 2016. Be patient, and the gap should widen further.

Provident Financial: a step up

Improvident and impecunious, Provident Financial Group has latterly belied its name. Its share price collapsed as much as 90 per cent last year to levels not seen since the financial crisis.

Two investigations by the Financial Conduct Authority later, and the doorstep lender needed to raise capital to clear higher regulatory hurdles. Those qualms were settled this week which meant that PFG needed to find more cash for its balance sheet. The rights issue settled on yesterday aimed at raising a net £300m and putting a hard floor beneath PFG's share price.

The market clearly approved, as a sharp price rebound followed. The rally was fuelled by hedge funds covering short sale positions second in the UK only to those taken against builder Carillion. PFG's share price soared 70 per cent, the largest in at least two decades.

Another reason for the reaction was that the rights issue lifts PFG's main capital buffer to nearly 29 per cent of risk-weighted assets — 3 percentage points higher than regulators require.

PFG said it preferred to play it safe. Optimists may see an opportunity for a return of capital later — management hinted as much. Any clawback of provisions would eventually boost profits and support shares trading cheaply at less than 8 times 2019 estimated earnings.

Given how quickly a financial stumble can end with a business falling flat on its face (viz Carillion), doubters will remain in the majority. The bungled modernisation of the doorstep lending division plus problems at the credit card and car loans units will take time to fix. Customers for doorstep loans have fallen nearly a 10th. This mess wiped off billions of pounds in market value and has required large fees — £31m from the rights alone — for lawyers, accountants and banks.

PFG has found a stiff brush to clean up its mess. Expect stability to return to the shares, which look good value.

Rothschild: son king

In recent years, critics of capitalism complained Goldman Sachs alumni ran too many governments and central banks. Now they can return to an older target. Emmanuel Macron's rise to become president of France is a reminder that Rothschild is still going strong after 200 years.

The dynasty no longer wields the power it did in the 19th century. But among boutique investment banks, its shares have performed almost as well as US rivals Moelis and Evercore since 2012, the year Rothschild brought together its French and British holding companies under one roof. Maintaining that momentum will be the job of Alexandre de Rothschild. He takes over from his father David as chairman of Rothschild this year.

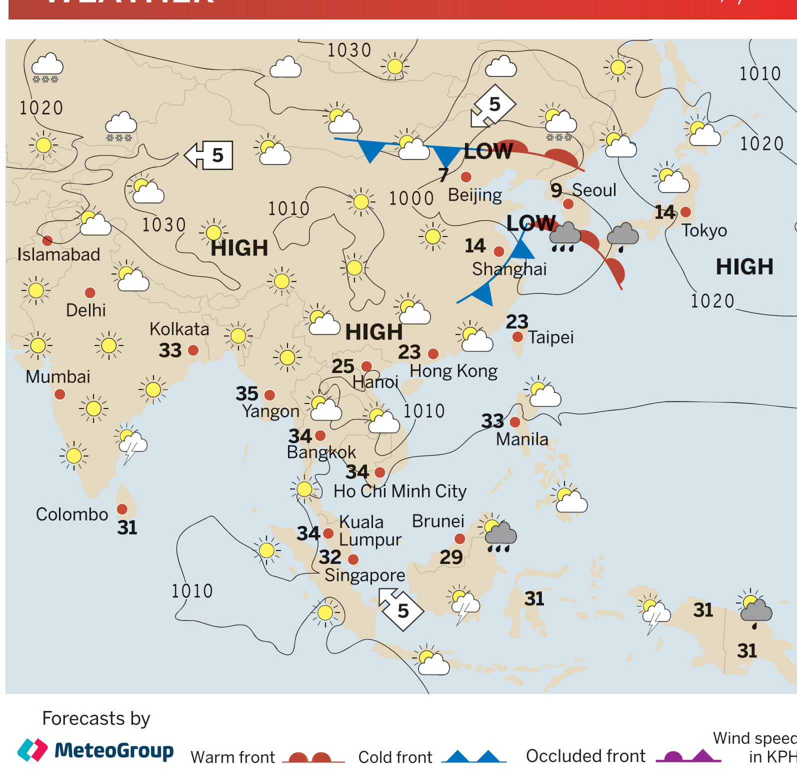
Three-fifths of profit comes from the global advisory franchise, where Mr Macron once plied his trade. It is the sixth-biggest adviser by number of deals, but is underweight in the US. Expanding there means competing with bulge-bracket rivals and boutiques on their turf — challenging for a group that tends to hire individuals rather than poaching whole teams.

Rothschild also wants to reduce its dependence on profitable but cyclical advisory work. It has two other divisions. Merchant banking is growing but small, with revenues just over a tenth of the advisory business. Wealth and asset management is potentially lucrative; the group is targeting a 20 per cent operating margin by 2020, compared with under 7 per cent now. But it is on the small side too, with assets of just €67bn. Franco-German Oddo BHF and the mid-sized Swiss private banks have over €100bn each.

So too does Edmond de Rothschild, the Swiss-listed company chaired by Mr de Rothschild's cousin. The two groups own small stakes in each other. But past disputes suggest the obvious course of action — combining the two — could take ages. Family control can foster inertia as well as longevity. No wonder the impatient Mr Macron went into politics.

FT Lex on the web
For notes on today's breaking stories go to www.ft.com/lex

WEATHER

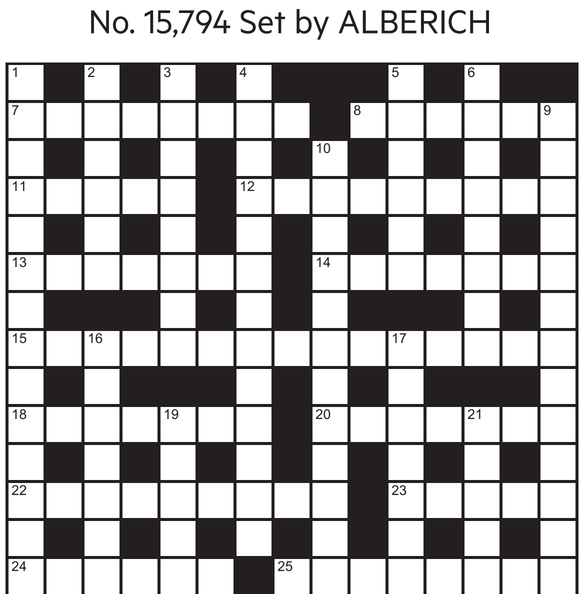


Forecasts by MeteoGroup   Warm front   Cold front   Occluded front   Wind speed in KPH

Today's temperatures Maximum for day °C

Amsterdam	Sun	-3	Malta	Fair	16
Athens	Sun	15	Manila	Fair	33
Bangkok	Fair	34	Melbourne	Cloudy	29
Barcelona	Rain	9	Mexico City	Sun	26
Beijing	Sun	7	Montreal	Sleet	6
Berlin	Sun	-5	Moscow	Fair	-13
Brussels	Sun	-2	Mumbai	Sun	35
Budapest	Cloudy	-3	Munich	Sun	-7
Buenos Aires	Sun	29	Nairobi	Fair	31
Chicago	Cloudy	14	New York	Fair	13
Copenhagen	Snow	-5	Oslo	Fair	-8
Dallas	Thunder	22	Paris	Sun	0
Delhi	Fair	30	Perth	Sun	29
Doha	Thunder	25	Prague	Sun	-7
Dubai	Sun	28	Rio	Thunder	31
Dublin	Snow	0	Rome	Sun	7
Edinburgh	Snow	-2	San Francisco	Cloudy	14
Frankfurt	Sun	-2	Seoul	Rain	9
Geneva	Fair	2	Shanghai	Cloudy	14
Hamburg	Sun	-8	Singapore	Fair	32
Hong Kong	Fair	23	Stockholm	Cloudy	-7
Istanbul	Shower	10	Sydney	Sun	29
Jakarta	Thunder	31	Taipei	Cloudy	23
Johannesburg	Fair	26	Tokyo	Fair	14
Karachi	Fair	32	Toronto	Drizzle	11
Kuala Lumpur	Fair	34	Vancouver	Shower	7
Kuwait	Fair	22	Venice	Fair	2
Lisbon	Thunder	16	Vienna	Fair	-6
London	Fair	1	Washington	Cloudy	15
Los Angeles	Sun	17	Wellington	Fair	23
Luxembourg	Sun	-3	Yangon	Sun	35
Madrid	Rain	14	Zurich	Fair	-2

CROSSWORD
No. 15,794 Set by ALBERICH



JOTTER PAD

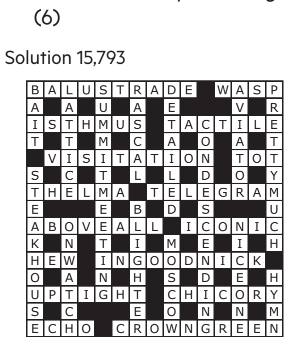
ACROSS

7 They've stopped working on island with spades (8)
8 Thoracic adaptation partly identifies insect (6)
11 Officer in charge gets stomach pain (5)
12 A bad egg dish for starter served with a medium port (9)
13 Stand-up comic that may be required to clean up (7)
14 Disparage weak summary (3,4)
15 Very quickly approve of appreciative audience? (4,3,8)
18 Be hesitant about watts needed for loudspeaker (7)
20 Retiring salesman's eating fish, a kipper (7)
22 She advises social worker to house a young criminal (5,4)
23 Engaged in a fight (5)
24 One is packing guns? That's for mugs (6)
25 He composed *Ring*, resulting in pitched battle (8)

DOWN

1 Playing role, cad cries to fake grief (9,5)
2 Second on pitch, son means to walk tall? (6)
3 Expert flipping lid becomes crazy (8)
4 With tedious repetition suggesting clue for a rye, a rye? (4,2,4,3)
5 One bird or another needing weight, not power (6)
6 Liberal Democrat consumed by shame? No, sadly (8)
9 Notice car on street before helping management (14)
10 Cleansing procedure riles one swimming in Channel (13)
16 Almost prevent sweetheart's collapse (4,4)
17 Perhaps wolf prowled, striking bird on a hill (8)
19 Tiresome scribbler finally stops drawing (6)
21 Tom has healthy advantage (6)

Solution 15,793



Companies & Markets

FINANCIAL TIMES

The son also rises Rothschild to pass on to seventh generation — ANALYSIS, PAGE 15

Passive aggressive The flaws of investing in index funds — MARKETS INSIGHT, PAGE 20

GKN speeds split to fight takeover

● UK engineer to demerge units by mid-2019 ● Move to fend off hostile £7bn Melrose bid

PEGGY HOLLINGER — LONDON

GKN has pledged to demerge its aerospace and automotive businesses by mid-2019, setting a timeline on a split in an effort to fend off a hostile £7bn approach from Melrose Industries.

Revealing a 16 per cent drop in underlying annual pre-tax profits, the FTSE 100 engineer said it aimed to create two investment-grade listed companies with the demerger.

GKN is fighting for its independence against a hostile cash-and-share bid from Melrose, a turnround specialist.

It has promised to deliver £340m in recurring cash benefits to shareholders by 2020 from a three-year restructuring plan unveiled by Anne Stevens, its recently appointed chief executive.

Melrose targeted GKN last month in a rare hostile bid after the 259-year-old engineer discovered mountains of overvalued inventory in its US aerospace business. It was forced to part ways with its chief executive designate, who had been in charge of the division.

The debacle of the succession, along with two years of disappointing performance in aerospace, left GKN vulnerable to investor discontent over its structure and management.

The swift demerger will unwind a decade of diversification but is likely to please investors who have pushed for a split to improve transparency.

It could also flush out those interested in bidding for one of GKN's divisions.

Spirit, a leading aerospace supplier, has been reported to be interested in GKN's aircraft components business. The automotive division, which supplies parts for more than 50 per cent of cars, has also attracted interest.

GKN said the demerger represented its "base case separation structure for a number of reasons, including that the timetable is within GKN's control, it allows GKN to allocate liabilities appropriately and it is tax efficient".

Christopher Miller, Melrose chairman, described the plans as "full of long-term promises and more short-term actual misses".

The aerospace unit was the main cause of GKN's lower profit as it was hit by charges of £112m as a result of the overstated inventory. The automotive business, meanwhile, has been investing in systems for electric vehicles.

Sandy Morris, analyst at Jefferies, said the decision to demerge reflected the difficulty of absorbing the challenges of two sectors. "The market could arguably understand the setbacks in aerospace were it covered by sellside aerospace analysts. Likewise for automotive. But there was too much not going right."

£340m
Cash benefits to shareholders pledged by GKN

£112m
Charges taken by GKN's aerospace unit last year, denting profit

Smart Money

John Authers

True believers in the inflationist scenario were watching closely the new US Federal Reserve chair Jay Powell's Humphrey-Hawkins testimony before Congress yesterday. Inflationary pressure is at last making a return to the world along with economic growth, the argument goes. If you believe this, where should you invest? The answer, according to Larry McDonald of the Bear Traps Report, is agricultural commodities — with some commodity-sensitive emerging markets on the side.

"We believe a colossal transition is now facing investors, a moment where a widely embraced belief system gets turned on its head," Mr McDonald declares boldly. "The genie is out of the bottle, and there are inflationary forces oozing underneath the bond market . . . As we move through 2018 and capital flows surge out of bonds, the late cycle winners will be found in (soft) commodities."

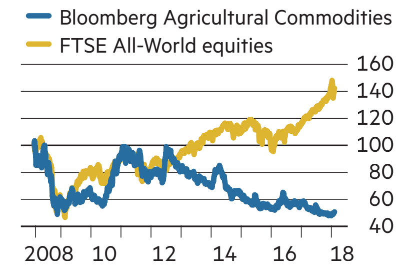
He is right both that soft commodities make an interesting and direct play on inflation and that they look very contrarian at present. Soft commodities are now below their worst levels of the crash of 2008. Interest in the sector has steadily drained away. If inflation does make a return and consumers start bidding up prices, it makes complete sense to expect that to show up, in a levered way, in the prices of agricultural commodities. The greatest risk, he concedes, would be a strengthening of the US dollar, which is possible if higher US rates attract funds to the dollar (commodities are inversely correlated to the dollar).

Having recognised dollar risk, Mr McDonald suggests doubling down by investing in fertiliser stocks such as Mosaic. They have been out of favour for a long time. He also suggests trying out commodity-driven emerging markets, such as Brazil, which have also had a dreadful time.

If commodities were an overbought fad 10 years ago, they do look under-loved now. The ETF industry has a range of options for those who want to buy exposure to agricultural commodities. Mr McDonald says environmental considerations might also help out as the "La Niña weather phenomenon could lead to reduced crop yields".

For those who are convinced that we are entering a reflationary regime — and who have the intestinal fortitude to make a contrarian stand — his arguments do seem good.

Agricultural commodities underperform



Source: Thomson Reuters Datastream

Interest in the soft commodities sector has steadily drained away over the past decade

john.authers@ft.com

Leader of the pack Tech stocks fuel New York rebound

US tech stocks eclipsed every other sector last year, and they have led Wall Street's rebound from the correction at the start of the month.

The S&P 500 info tech index is up 12 per cent since the broader index reached its low for the year on February 8, during a sell-off deepened by the unwinding of bets on lower volatility.

Although some expected tech stocks to struggle to match last year's performance as hopes for faster US growth encouraged investors to rotate into areas that fared less well in 2017, it remains the only part of the S&P 500 on course for a positive showing in February.

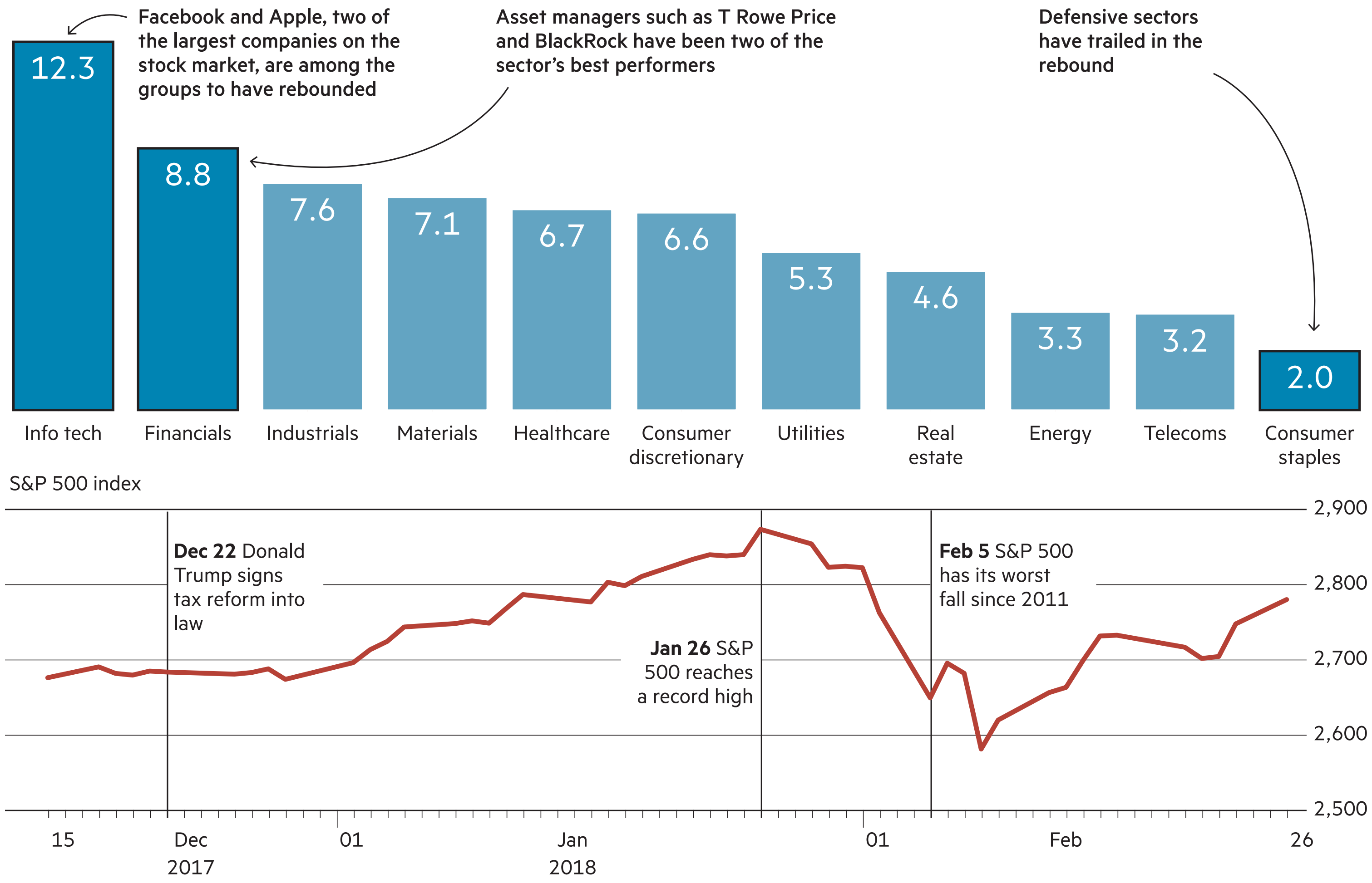
Justin Patterson, an analyst at Raymond James, said the rebound of the sector suggested investors were seeing the largest players as not simply tech companies but ones that compete across large parts of modern economies.

The financial sector has also been among the best performers in the rebound that has seen the S&P 500 claw back almost 8 per cent of the correction it suffered in the first week of February.

Analysts at Goldman Sachs noted that "financials is the most overweight sector among large-cap mutual funds for the first time in five years".

Higher interest rates are seen as helping lift the income banks can generate from their lending activities. Economists at Barclays expect the Federal Reserve to raise interest rates four times this year and deliver a further four rate rises next year. *Joe Rennison*

S&P 500 sector recovery



Sources: Bloomberg; Thomson Reuters Datastream

Investors prick up their ears on Pinterest posting

Investors have long been excited by Pinterest because it often functions as a wish list for users, a platform attractive to advertisers. Now the 'visual search engine' has hired its first chief operating officer, fuelling expectation of an IPO.

Report ▸ PAGE 14

Alibaba aims to eat up Ele.me as China tech titans duel for food delivery sector

LOUISE LUCAS — SHENZHEN
EMILY FENG — BEIJING

Alibaba is in talks to acquire Ele.me as the online food delivery sector emerges as a new front in the battle for dominance between China's tech titans.

Alibaba and rival Tencent, each with an equity value of more than $500bn, have kicked off the year with aggressive buying sprees in ecommerce, payments, food delivery and other services.

While they began life on clearly defined turf — Alibaba in ecommerce and Tencent in social media — both are evolving into tech conglomerates reaching into many aspects of life.

China's food delivery market was valued at Rmb204.6bn ($32.5bn) in 2017, according to the China Cuisine Association, an industry group. Alibaba and its payments affiliate Ant Financial own 40 per cent of Ele.me and are seeking to buy the remaining 60 per cent from investors, including Baidu, according to people familiar with the matter.

Ele.me was valued at $5.5bn at its last funding round in 2015, according to CBInsights. The company accounts for 48.8 per cent of the online food delivery market in China, closely followed by Meituan, with 43.1 per cent, according to Analysys International. Tencent-backed, Meituan-Dianping was valued at $30bn in a funding round last year.

Alibaba and Baidu declined to comment.

Ele.me, a play on the Chinese phrase for "hungry yet?", has grown to be one of the biggest food delivery companies in China since it was founded in 2008.

For Baidu, China's third big internet company, the deal would mean another exit from services as it focuses on developing technologies in artificial intelligence and autonomous driving.

Tencent and Alibaba have dominated the M&A calendar in the past three months, particularly in retail. Tencent has linked with Chinese supermarket operator Yonghui and Carrefour of France, and has invested in online retailer Vipshop. Alibaba has taken a stake in Easyhome, a furniture retailer, and Shiji, a data service company focusing on the hotel and travel industry.

Henny Sender page 12

Companies / Sectors / People

Companies

Sectors

People

Banks

Buoyant StanChart restarts dividend

Lender marks return to profit with symbolic payout for investors

DON WEINLAND — HONG KONG
MARTIN ARNOLD — LONDON

Standard Chartered has restarted its dividend after leaving shareholders empty-handed for two years, as the bank returns to profit.

The bank, which operates across Asia, the Middle East and Africa, cancelled its dividend to rebuild capital after Bill Winters took over as chief executive in 2015. But yesterday it announced a final payout for 2017 of 11 cents per share — what some analysts have called a symbolic offering to shareholders.

Shares in StanChart, which have climbed more than 90 per cent since February 2016, gave up early gains to trade down slightly at 827.8p.

The move came as StanChart said its loan book grew by 11.6 per cent last year. Revenues rose 2.6 per cent to $14.4bn, breaking four years of consecutive declines. Impairments for bad loans fell more than 50 per cent, boosting the bottom line. Net profits were $774m against a loss of $478m in the previous year.

StanChart suffered a tough few years after being fined by US regulators for sanctions breaches in 2012 and incurring heavy losses on risky loans to some large Asian clients.

Mr Winters launched a drastic restructuring and tightening of risk controls in 2015. But in recent years he has been trying to regain lost revenues. The bank said yesterday it now expected annual revenue growth of 5 to 7 per cent with costs growing below inflation.

As the bank re-enters some markets and expands its loan book, executives have stressed that the deployment of capital will be measured and the bank will not run into the same problems with non-performing loans that it did several years ago. "There is absolutely going to be no blowing up the bank," said Andy Halford, the chief financial officer.

Mr Winters said results were held back by exceptionally low volatility in markets last year, but this had reversed since the start of the year, generating double-digit growth across all its main businesses. "It's a little bit of a bumpy road, but we never expected anything else," he said. "I'm just pleased that the bumps are going in our favour since the start of this year."

Joseph Dickerson, banks analyst at Jefferies, said fourth-quarter profits were a third below expectations, hit by a 31 per cent drop in financial markets revenues. "Fourth-quarter revenue performance was weak in our view and the quarterly revenue run rate in 2017 has to grow 7 per cent year on year to meet consensus [estimates]," he said.

$774m
StanChart's net profit last year on revenues of $14.4bn

$478m
The emerging markets-focused bank's loss in the previous year

Mr Winters received £4.68m in annual pay in 2017, a 38 per cent increase on the year before. Mr Halford saw a 34 per cent rise in pay to £2.86m.

The bank said its female staff were paid on average 30 per cent less than their male colleagues per hour and received bonuses that were on average 57 per cent smaller. Women make up 46 per cent of its total staff, but the bank blamed its gender pay gap on the fact that only 26 per cent of senior management roles are held by women, which it aims to increase to 30 per cent by 2020.

StanChart's return on equity last year was 3.5 per cent, up from 0.3 per cent in 2016 but still below its medium-term target of 8 per cent.

Greater China and north Asia remain by far StanChart's largest market. In 2017 more than 95 per cent of the bank's profits before tax were derived from Asia, the Middle East and Africa.

See Lex

Financials

First fund dedicated to superbug fight set for launch

CLIVE COOKSON — SCIENCE EDITOR

The first venture fund dedicated to investing in companies fighting superbugs resistant to modern drugs is to be launched today, with $165m finance from Novo Holdings of Denmark.

The Repair Impact Fund aims to put $20m-$40m a year over three to five years into European and US start-ups and early-stage ventures developing innovative antibiotics aimed at bacteria the World Health Organisation regards as the greatest threat to human health.

The evolution of microbe resistance to existing drugs — and the lack of new medicines in development — is recognised as one of the 21st century's biggest health challenges.

More than 700,000 people die each year from infections resistant to most or all antibiotics, Novo says, and antimicrobial resistance is projected to kill more people than cancer by 2050.

Growing recognition of the threat is yielding more investment in AMR research, notably the Carb-X partnership between the UK-based Wellcome Trust and US federal agencies. It aims to spend up to $455m on research grants over five years to 2021.

But Carb-X and other AMR initiatives focus on grants rather than venture funding, a gap that the Repair aims to fill.

"We have established this impact fund to provide a fresh approach to a global healthcare challenge," said Kasim Kutay, Novo Holdings chief executive.

Its approach is similar to the London-based Dementia Discovery Fund, a venture capital fund managed by SV Health on behalf of a private-public consortium, which finances start-ups and early-stage companies with innovative approaches to Alzheimer's and related diseases.

Novo Holdings manages the $60bn portfolio of the Novo Nordisk Foundation, a Danish medical and research charity. Its main assets are Novo Nordisk, the healthcare group specialising in diabetes and hormones, and Novozymes, a biotech group.

Novo's Repair fund will act either as sole investor or in a syndicate, making investments ranging from $1m to $15m with advice from a board of AMR experts.

Financials. SWF portfolio

Norway cuts its gunmaker stakes

Customers at a gun shop in Merrimack, New Hampshire
Dominick Reuter/AFP/Getty

Holdings sharply reduced in US groups Sturm Ruger and American Outdoor Brands

RICHARD MILNE
NORDIC CORRESPONDENT

The largest sovereign wealth fund has sharply reduced its stakes in the three largest listed gunmakers in the US amid a debate over how investors should react to mass shootings.

Norway's $1.1tn oil fund cut its stake in American Outdoor Brands — formerly known as Smith & Wesson — by almost 90 per cent during last year. As of December 31 2017, the fund owned just 0.15 per cent of the company.

The fund — Government Pension Fund Global — almost halved its stake in Sturm Ruger, a maker of pistols, revolvers and rifles, to 1 per cent while it cut its holding in Vista Outdoor by a quarter to 0.7 per cent.

The fund only discloses its ownership positions once a year and noted that the reduction took place in 2017, before the recent debate sparked by the killing of 17 people in a shooting at a Florida school earlier this month.

Yngve Slyngstad, the oil fund's chief executive, declined to comment on the individual companies but emphasised that the fund had "not put these companies on a divestment route".

He said: "We don't have a deliberate strategy with regards to gun use because this is not a sector that we are covering in our security selection strategies. Our changing ownership in these companies will be an effect of quantitative strategies more than any specific analytics."

Norway's oil fund is barred from owning a number of companies based on the products they make, from nuclear weapons and coal to tobacco and cluster munitions. It has proposed excluding oil and gas companies from its portfolio but Mr Slyngstad said any decision on gunmakers would be for the council of ethics, an independent body, to take.

The disclosures of its holdings, which came as part of its annual report released yesterday, come amid a growing debate about how investors and companies should deal with the large number of shootings in the US.

BlackRock, the world's largest asset manager and also the biggest shareholder in American Outdoor Brands and Sturm Ruger, said it spoke to gunmakers "to understand their response" to the school shooting but did not say whether it would reduce its stakes.

> The move took place last year, before the debate sparked by the Florida shootings

State Street, another large US investor, said it would talk to gunmakers "to seek greater transparency from them on the ways that they will support the safe and responsible use of their products".

Separately, the oil fund reported one of the best years in its 20-year history as it returned 13.7 per cent in 2017, helped by booming equity markets, which returned almost 20 per cent. Property and bonds also contributed positively. The NKr1tn ($128bn) return was the biggest ever measured in kroner.

But Mr Slyngstad stressed that the good times would not continue forever, warning Norwegians to be prepared for a potential fall in value in the future.

He also reiterated the fund's position that it would stay invested in the UK regardless of the outcome of Brexit talks. "We remain a long-term and committed investor in the UK in all asset classes," Mr Slyngstad said.

See Florida Notebook

INSIDE BUSINESS
ASIA

Henny Sender

Alibaba and Tencent square up on China's tech battleground

In January, one of the early investors in Pinduoduo, a young Shanghai-based ecommerce company, received a phone call from an executive at SoftBank. The powerful Japanese group, with about $270bn in its various pockets, wanted to invest in the start-up.

The app had begun to take off in China. If users perusing Pinduoduo find products they like and are able to induce others to buy the same item, they all receive substantial discounts.

The service thus combines two local passions: shopping and securing bargains. It is especially popular in third and fourth tier cities — existing investors say they consider it a bet on rising incomes in lower tier urban areas, where users prefer value to brand.

But Pinduoduo was not looking for fresh capital, expertise or new investors. Although it is less than two years old, it has plenty of all of these. Pinduoduo's second round of financing came from Sequoia Capital China, one of the more respected investors on the mainland. But, more tellingly, it had also drawn support from another, much larger tech group that made Softbank's overtures unwelcome: Tencent.

This conflict is the latest signal of an emerging tech battleground in China. Tencent has been investing in a variety of young tech companies such as Pinduoduo, and using them to take on its great rival in the internet space, Alibaba. And given that SoftBank is often allied with Alibaba — and in which it owns just under 30 per cent — the presence of the Japanese group in Pinduoduo would hardly be attractive.

Tencent's backing of Pinduoduo says much about how the tech sector in China is changing as businesses — whether online or offline — and investment more broadly come to be skewed by the unacknowledged rivalry between the two internet giants.

> Ecommerce is a key arena in which Tencent and Alibaba are sparring

Ecommerce in particular has become a key arena in which Tencent and Alibaba are sparring. Tencent tried to directly take on Alibaba in ecommerce but struggled. Instead, Pinduoduo has become the latest player backed by Tencent as it mounts a second — albeit more indirect — attempt to challenge Alibaba's dominance. To the extent that Tencent's new thrust results in greater competition in ecommerce, it is also good news for consumers.

For his part, it is hardly surprising that Colin Huang, the founder of Pinduoduo, chose to ally himself with Tencent: his business model is built on WeChat, the powerful messaging app that sits at Tencent's core. Mr Huang depends on WeChat to bring traffic to his site.

"It is natural for Tencent to enter ecommerce,' says Mr Huang. "It is so big. It is much bigger than games. It influences everyone's life in China."

Mr Huang, like many others on the periphery of the battle, tries to talk down the extent to which the two giants are in competing camps.

Tencent, too, has always tried to damp speculation about the rivalry. For example, when a group led by Citic Capital invited Tencent to join its bid to buy the biggest McDonald's franchise in China, Tencent refused.

People familiar with the matter say it feared it would be seen as simply opposing Alibaba, which has a small stake in Yum Brands, owner of KFC. Investors also play down the rivalry. "We want to access users who aren't on Taobao [Alibaba's online shopping site] — we want to reach new users," says one early investor.

But nonetheless, the sheer size of the two companies and their increasingly world-spanning ambitions has made rivalry inevitable. To an extent, they can now only compete with one another in China even if they are managing to find other international tech competitors to bump up against.

But this does add complexity to what appears from the outside as a situation that has been allowed, even if only tacitly, by Beijing. Although not state owned, Alibaba and Tencent are clearly national champions that have been allowed dominance in their respective endeavours. In most other countries their quasi-monopoly power would almost certainly have been challenged by antitrust regulators.

In China, though, other than the government the only entity that seemingly can act as a counterbalance to one of the giants is the other.

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Personal goods

Robot lasers to zap Levi's jeans jobs

SHAWN DONNAN
WORLD TRADE EDITOR

Levi Strauss is turning to laser-wielding robots to get the worn look and strategic rips that consumers demand in their denim in a move to replace "finishers" who beat, sand and bake its jeans into different styles.

In what it is billing as the biggest change in more than a decade to a supply chain that turns out 150m pairs of jeans a year, the group has begun deploying lasers that by 2020 it hopes will replace almost all people doing the labour-intensive, sometimes toxic, finishing work.

The goal is to cut waste and costs while shortening a design and manufacturing process that at more than a year is too slow to respond to swiftly changing trends. The privately held company would not say how much it was investing in the initiative, though much of the cost is likely to be borne by its vendors.

It is the latest effort by Chip Bergh, the former Procter & Gamble executive who took over as chief executive in 2011. "This is the future of jeans manufacturing," he said.

The rollout comes after Levi Strauss this month reported 2017 profits that fell 3 per cent year on year to $281m, on the back of revenues that rose 8 per cent to $4.9bn.

The group has been facing increasing competition and pressure on margins from fast-fashion groups such as H&M and trends such as athleisure.

Speeding up and adding "agility" to its production to respond to changing demand is vital. Lasers, which etch digital patterns into jeans by burning off a fine layer of cloth and pigment, can finish a pair every 90 seconds versus every six to eight minutes when done by hand.

According to Bart Sights, vice-president for innovation at Levi Strauss, the aim is to stock only three basic jeans in light, medium and dark shades that can quickly be customised into 1,000 finishes with strategically located banks of lasers to meet orders from wholesale customers.

One of its first laser-finishing lines operates out of a distribution centre in Nevada. Designers in San Francisco send digital files to the depot, where lasers can start mass-producing customised jeans in minutes, which can be delivered to a nearby customer in hours. "It moves us closer to making what we sell," said Mr Sights.

Personal & household goods

Unilever chief regrets wooing investors

ANDREW EDGECLIFFE-JOHNSON
NEW YORK

Unilever's chief executive regrets steps the company took last year to woo shareholders in the wake of Kraft Heinz's unsolicited $143bn takeover approach, and has urged investors to rethink their short-term focus on maximising shareholder value.

"We had to make some practical compromises . . . which I frankly would not have done," Paul Polman told a New York conference of CEOs and institutional investors organised by CECP on Monday. "You'd be daft if you don't ask [us] to invest in our company but we did a €5bn share buyback to satisfy some others."

Unilever in April announced the buyback alongside a 12 per cent increase in its dividend and a doubling of planned cuts to €2bn by 2020, resulting in a 20 per cent operating profit margin by the same year.

"We were well on track to do that but I would never have put the margin out there. I come from a part of [the Netherlands] that we deliver. We just deliver and let the numbers talk, but unfortunately that's not possible for the majority of how the financial markets still operate," Mr Polman said.

> 'We had to make some practical compromises . . . which I frankly would not have done'

Investors' focus on maximising shareholder value was "distracting many companies from doing what they should be doing" to innovate, invest, renew their strategies and take care of all their stakeholders, he argued.

Without naming Kraft Heinz, the food group backed by Warren Buffett and the Brazilian billionaires behind 3G Capital, Mr Polman described the failed bid attempt as "a clash between people who think about billions of people in the world and some people that think about a few billionaires".

Speaking to portfolio managers representing an estimated $25tn of assets, Mr Polman told them to stop asking companies like his why they heeded environmental, social and governance concerns and start pressing those that did not to explain "why [they] have the courage to destroy . . . this wonderful planet".

Cabby's tip put Comcast chief on to Sky deal

Murdochs under pressure to increase offer for broadcaster's shares in order to complete sale of Fox assets to Disney

MATTHEW GARRAHAN AND ARASH MASSOUDI — LONDON

The London cab driver asked by an American passenger what he thought of the UK pay-television market could not have known that his answer might potentially sway a set of takeover deals worth tens of billions of dollars.

But back in November, Brian Roberts, Comcast's chief executive, asked his driver for his opinion. "[He] was incredibly knowledgeable about the differences between Virgin and Sky," he said. After taking the cab to a shopping centre, where he saw a demonstration of Sky's latest set-top box, Mr Roberts was "terribly impressed".

Mr Roberts subsequently identified Sky as his company's most logical target. Three months later, he has stunned media watchers with a $22.1bn proposal to buy the pan-European broadcaster.

The deal sketched out by Comcast — it has not yet made a formal offer — is the latest twist in a reshaping of the global media industry, pitting Mr Roberts, the son of Comcast founder Ralph Roberts, against the Murdoch family and the might of Walt Disney, the world's largest media company.

The Murdochs control 21st Century Fox and have agreed to sell its entertainment assets — including its 39 per cent stake in Sky — to Walt Disney in a deal worth $66bn including debt. Separately, Fox is trying to buy the shares in Sky that it does not own in a deal worth £11.7bn, or £10.75 a share, valuing Sky at £18.5bn.

Before Comcast's intervention, Sky seemed to be destined to become part of Fox and then Disney. Analysts believe the UK government will eventually approve Fox's offer after it agrees to implement several remedies, such as ringfencing Sky News to prevent the Murdoch family exerting any influence over it. Government approval would then clear the way for Disney to add Sky to the assets it is buying from Fox, including its cable channels, Hollywood movie studio and Star of India.

> 'Comcast has a history of buying companies to build our company'
> Brian Roberts, chief executive

But the £12.50-a-share all-cash Comcast deal, pitched at a significant premium to the Fox offer, is likely to appeal to the independent Sky shareholders that own about 60 per cent of the company — and raises the prospect of a counterbid from Fox and Disney.

The first communication Comcast made with Sky's leadership came early yesterday when Mr Roberts phoned Jeremy Darroch, Sky chief executive, and Martin Gilbert, Sky's deputy chairman. Comcast's pitch in the coming weeks will be geared towards Sky's independent directors: this has turned the spotlight to Mr Gilbert, who the Murdochs courted only 14 months ago — and who eventually recommended shareholders accept the Fox offer of £10.75 a share.

Sky said in a statement that it noted the possible all-cash offer and advised shareholders to take no action because no firm offer had yet been made. Disney declined to comment on Comcast's proposal for Sky but analysts believe it is likely to respond.

"I think Disney will ask Fox to offer more for Sky and then Disney will absorb that cost," says Michael Nathanson, an analyst with MoffettNathanson.

Under the guidelines for UK takeovers, Fox and Disney cannot attempt to buy shares of Sky in the market to try to build up enough of a shareholding to block a deal by Comcast. One of the few options available if they want to secure Sky is to table a higher offer than Fox's current proposal. This bid would probably need to be more than the £12.50 offer from Comcast.

It is unclear how much Disney and Fox would need to offer — or whether Comcast is ready for a bidding war.

Analysts say Sky is worth more since its success in securing rights to Premier League football for another three years — mainly because it is paying significantly less for the packages. Analysts had expected the cost of the rights to increase by £300m a year but it is falling by £200m. "That's £500m [a year] lower than originally thought," says Citi analyst Thomas Singlehurst. "Every £100m of costs less than consensus forecast adds 5p to earnings. The standalone Sky valuation in our view is about £13 a share when you factor in the savings from the Premier League."

Mr Roberts told the Financial Times that Sky would be a good fit for Comcast, pointing to its record in acquiring companies and investing in them. Universal Studios, NBC Universal's theme park unit, now generates more annual cash flow than its parent company did at the time Comcast bought it in 2011.

The NBC broadcast network now leads its peers after trailing rival networks before it was owned by Comcast.

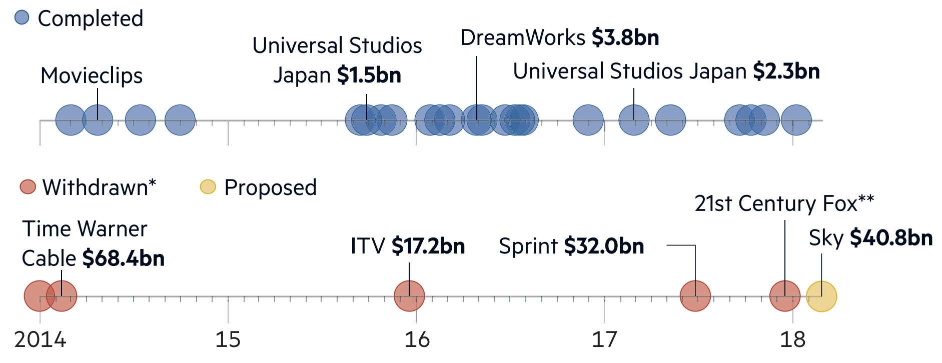
"Comcast has a history of buying companies to build our company," he adds, referring to the long history of acquisition started by his late father in 1963, when he and his partners acquired a cable television operation in Tupelo, Mississippi with 1,200 subscribers.

Mr Roberts and his colleagues have big plans for Sky but will have to wait for Disney and Fox to respond before they know whether they will be able to put those plans into action.

See Lex

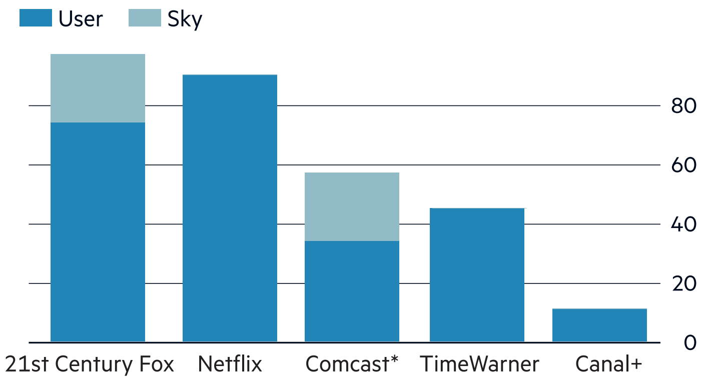
On the radar

Will Disney/Fox make the next move?
Significant Comcast deals, value ($bn)



* Includes terminated and rejected deals
** Reports of an offer of around $60bn but rejected by Fox amid concerns it could face antitrust issues
Sources: Blomberg; 21st Century Fox

Comcast puts Disney's avenue to 100m Fox viewers under threat
Users (m)



* Includes Hulu and Tata Sky

Profile

Dealmaker pitted against old sparring partners

The softly spoken Brian Roberts, pictured, does not come across as an all-conquering dealmaker but in the past 20 years he has been involved in several landmark media deals.

As a keen squash player who won gold at the Maccabiah Games — also known as the Jewish Olympics — Mr Roberts, below, knows about the rigours of competition.

In 2001, he led the $50bn merger of Comcast with AT&T Broadband in a deal that laid the foundations for the company's fastest growing business — internet provision.

A decade later, Comcast snapped up NBC Universal in a deal that eventually valued the broadcaster at about $30bn.

Not all of his big moves have come off. A $54bn bid for Walt Disney in 2004 that looked to marry Comcast's distribution with Disney's content was rejected by Disney.

Comcast also came close to buying rival Time Warner Cable in 2014 with an all-share deal worth $42.5bn, but withdrew the offer in the face of mounting regulatory opposition.

His interest in Sky pits him against old sparring partners — Rupert Murdoch and his sons at Fox, and Bob Iger at Disney. He will know that the competition will be intense.

Technology

Apple to set up staff medical centres

TIM BRADSHAW — LOS ANGELES

Apple is preparing to launch a network of clinics for staff and their families, in what might be a way to test its broader ambitions in healthcare.

Tim Cook, chief executive, recently described the healthcare industry as an area where the company might make a "meaningful impact", but the iPhone maker has been typically secretive about its plans.

The discovery of a website for an organisation called the AC Wellness Network provides a hint that Apple's ambitions extend beyond digital health devices such as its Watch.

AC Wellness describes itself as an "independent medical practice dedicated to delivering compassionate, effective healthcare to the Apple employee population", launching in spring 2018.

Job advertisements on recruitment sites describe AC Wellness as a "subsidiary of Apple", operating in the Santa Clara area that surrounds the iPhone maker's Cupertino headquarters.

"AC Wellness Network believes having trusting, accessible relationships with our patients, enabled by technology, promotes high-quality care and a unique patient experience," its website says. "The centres offer a unique concierge-like healthcare experience for employees and their dependants."

According to records from the internet Archive, the domain name acwellness.com was bought, presumably by Apple, in the second half of last year.

News of AC Wellness was first reported by CNBC.

Apple did not immediately respond to a request for further comment on its plans or the website.

Apple's apparent move into medical services follows Amazon's plan to partner Berkshire Hathaway and JPMorgan Chase to create a new not-for-profit healthcare company to try to lower healthcare costs for their collective 1m employees.


Tim Cook sees healthcare as a sector where Apple can make an impact

The trio's intention to extend the new company's services to "potentially all Americans" wiped tens of billions of dollars from the market cap of traditional healthcare companies such as Walgreens Boots Alliance last month.

While the scope of Apple's health centre initiative is still unclear, the most valuable company has been making slow but steady inroads into the health market for several years.

After the launch of Apple Watch in 2014, it has used its HealthKit and ResearchKit software and data platforms to connect its users' health information across third-party apps and into clinical research projects.

Apple is working with Stanford University on a study to see if the Watch's sensors can detect heart abnormalities. With a forthcoming software update, iPhone owners will be able to download their electronic medical records from some US hospitals.

At Apple's annual meeting this month, Mr Cook was critical of the US healthcare and insurance system, saying it "doesn't always motivate the best innovative products".

Financials

Danske Bank hit by fresh Estonia probe

Alleged money-laundering linked to Moscow dubbed a 'world-class scandal'

RICHARD MILNE
NORDIC CORRESPONDENT

Danske Bank is facing a fresh investigation by Estonian regulators amid a growing scandal for Denmark's largest lender and its management over money-laundering allegations.

The Estonian Financial Supervision Authority said yesterday that it would probe whether Danske had failed to provide information about allegations of money-laundering linked to the Russian elite and intelligence services.

Estonian regulators first investigated Danske over alleged money-laundering in 2014.

The probe increases pressure on Danske's management, which is facing an outcry from Danish politicians about why it did not act quicker to sort out problems in its Estonian business.

Danske has faced a spiralling series of allegations from newspaper Berlingske that lax controls in its Estonian operations led to potential money-laundering from the likes of Azerbaijan, Moldova, and Russia.

Danske was facing "a world-class scandal", said Jeppe Kofod, an opposition Social Democrat MEP.

"The affair highlights a total lack of responsibility at Danske Bank as well as the authorities in Denmark, Estonia and the EU."

Danske started its own probe in September that is due to be finished later this year. It appointed Jens Madsen, former head of Denmark's intelligence agency and ex-chief of its fraud squad, to head a compliance incident team.

It admitted "major deficiencies in control and governance" in Estonia that allowed its branch there to potentially be used for money-laundering.

Some Danish politicians say this is not enough. Lisbeth Bech Poulsen, an MP for the opposition Socialist People's party, said: "It is clear Danske Bank cannot or should not investigate itself. It is time the Danish financial regulator and anti-fraud police took charge."

The Danish Financial Supervisory Authority could not comment on whether it was investigating Danske.

It said supervision of Danske's Estonian branch for money-laundering was in general a matter for Estonian authorities, but the Danish regulator could become involved if the allegations were so serious that they raised questions about management and governance.

Anders Jorgensen, head of group compliance at Danske, said: "We are not able to comment in detail on our dialogue with the authorities. However, we have a constructive dialogue with the Estonian authorities. We have launched a thorough investigation to get to the bottom of the events at that time in our Estonian branch."

Thomas Borgen, Danske's chief executive since 2013, called the lack of controls in Estonia "deeply regrettable and completely unacceptable".

Danske was fined DKr12.5m ($2m) by Danish authorities in December for violating anti-money-laundering rules unrelated to the allegations in Estonia.

Berlingske reported this week that Danske's senior management was informed in 2013 by a whistleblower of allegations that a relative of President Vladimir Putin and Russia's intelligence services were behind money-laundering in the bank's Estonian branch.

Latvia is another Baltic country in the spotlight over potential money-laundering after the enforced collapse of its third-largest bank over the weekend.

Aerospace. Supply chain

Safran plays down hopes for aircraft production

Engine maker wary of push by Boeing and Airbus for faster deliveries of single-aisle jets

DAVID KEOHANE — PARIS
PEGGY HOLLINGER — LONDON

Safran is already hoping to increase production of the Leap engine from 459 in 2017 to about 1,100 next year — Jason Alden/Bloomberg

Safran, the French jet engine maker, has poured cold water on a push by Boeing and Airbus to accelerate production of single-aisle aircraft in a sign that the supply chain may not be as bullish about the scope to step up deliveries.

"There have been some discussions, especially with Airbus, regarding another potential increase up to 70 aircraft a month . . . " said Philippe Petitcolin, chief executive. "We don't want to move and we would really like to wait until the beginning of next year to really discuss with our customers on this opportunity."

Success in accelerating production will depend on managing global and diverse supply chains

Safran is one of the world's biggest commercial jet engine makers in a joint venture with General Electric of the US.

Airbus and Boeing have been increasingly bullish about the prospects for raising production of single-aisle aircraft from current targets of about 60 a month due to strong demand from airlines keen to tap into rising passenger traffic.

Boeing expects 41,000 passenger and cargo aircraft to be delivered over the next 20 years, while passenger traffic is forecast to grow close to 5 per cent a year. Yet production slots for Airbus's A320neo and Boeing's 737 Max are almost full for most of the next decade, meaning that customers ordering a single-aisle aircraft now would have to wait years for delivery.

Both companies are keen to accelerate production and deliveries as the protracted delivery timetable raises the prospect that the cycle could turn and cancellations increase or that airlines might consider alternatives.

Success in accelerating production will depend on managing global and diverse supply chains, which becomes increasingly challenging as rates increase.

Over the past two years, Airbus deliveries have been delayed by problems on the new geared engine powering the A320neo, supplied by Pratt & Whitney, as well as with cabin equipment made by Zodiac for the A350.

Eric Schulz, new head of sales at Airbus, was optimistic at the Singapore Air Show this month that these challenges could be overcome, saying the supply chain was robust.

However, as Safran reported full-year numbers in Paris yesterday that saw operating income and sales narrowly beat expectations, its chief executive remained cautious about increasing its jet engine supply further next year.

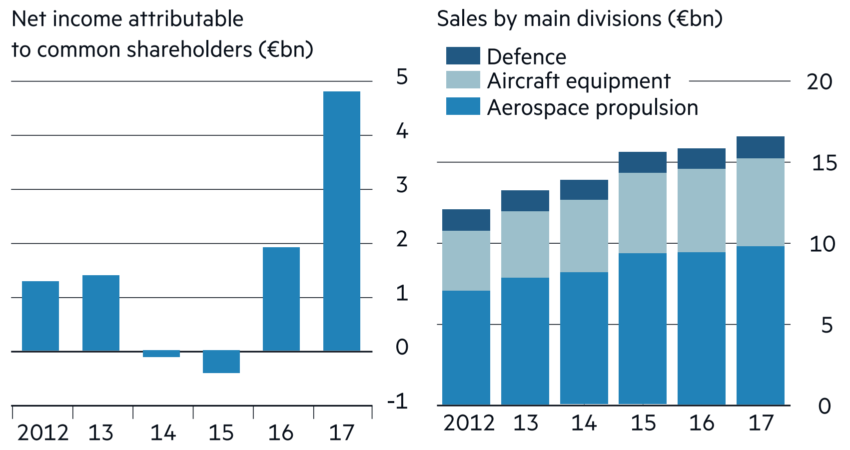
Safran, one of France's most successful engineers, is already looking to raise production of Leap engines from 459 in 2017 to about 1,100 this year. The company said the cost of transitioning to the new Leap engines had peaked at €342m in 2017.

"The first reason we want to wait is that, by the end of this year, we will have a lot better understanding of how our supply chain reacts to this huge increase," said Mr Petitcolin.

"And the second reason, I think we will have to discuss also the kind of investment that will be needed and for how long they are going to be needed. Because if you want to ramp up to 70 aircraft for a period of six months or for one year, the additional investment may not be justified.

"No, it's too early [to have discussed this with the aircraft makers]. We would really prefer to discuss that if possible at the beginning of 2019 because, again, by the end of 2018 we will be at the production level which will give us a lot more confidence in the ability to grow."

Safran performance



Sources: Bloomberg; company

Yesterday, Safran said it would start a €2.3bn buyback programme over the next two years and that the Peugeot family had taken a share in the company and a seat on the board. The results come at the end of a critical year for Safran and Mr Petitcolin, who was appointed to the top job in 2015.

Last year, he sold the company's security business and doubled down on the exposure to commercial aerospace with the €8.5bn deal to buy Zodiac Aerospace, the struggling French supplier of cabin equipment and seats. Safran took full control of Zodiac this month and must now push through the efficiency gains promised to shareholders.

Mr Petitcolin, whose mandate was extended by two years, said: "You have to give [the current team at Zodiac] a chance . . . up to the end of year, by the end of 2018, if there are things to change at the management level we will do so."

See Lex

Technology

Pinterest eyes IPO as it hires first head of operations

HANNAH KUCHLER — SAN FRANCISCO

Pinterest, one of the largest private start-ups in San Francisco, has hired its first chief operating officer as it tries to bolster its advertising business and prepare for a potential initial public offering.

The company, valued last year at $12.3bn, has appointed Françoise Brougher, who most recently oversaw business operations at payments start-up Square and previously led the teams responsible for Google's small and medium-sized business advertisers.

Pinterest is an app that describes itself as a "visual search engine", allowing users to collect images of products they like or activities they would like to do and pin them to online boards.

More recently, it has developed its computer vision capabilities so, for example, users can snap an item they like in real life and find similar products on the internet.

Last September, the eight-year-old company said that it had 200m monthly active users, up 40 per cent year on year.

"We are really excited that Françoise is joining Pinterest as our first chief operating officer," said chief executive Ben Silbermann.

The eight-year-old group said last September that it had 200m monthly active users, up 40% year on year

"She is a world-class manager and a sharp strategic thinker. Françoise's experience is going to be an incredible asset for our company and our mission of helping people discover and do what they love."

Ms Brougher will support Mr Silbermann and fellow co-founder Evan Sharp, who is the company's chief product officer. Tim Kendall, Pinterest's president who previously oversaw business operations, left late last year to pursue his own start-up.

She will be responsible for expanding Pinterest's operations globally and leading the sales, partner marketing, business development and communications teams.

Pinterest has long been tipped as a candidate for an IPO. In 2016, it hired its first chief financial officer Todd Morgenfeld from Twitter. But the company raised $150m last summer from existing investors including venture capital firm Andreessen Horowitz and SV Angel from Silicon Valley, and Goldman Sachs and Wellington Management from Wall Street. Those funds could allow the company to delay listing until next year.

Investors have been excited by Pinterest's potential because it often functions as a wish list, which advertisers would be eager to pay for ads on. Pinterest has launched "buyable pins" to try to take advantage of users' browsing for purchases.

But online advertising is dominated by Google and Facebook, which together account for more than 60 per cent of the US digital advertising market. Pinterest's user base is smaller than many of the social networks to which it is compared. Facebook-owned Instagram, another visually focused platform, has 800m monthly active users and 500m logging on every day.

Financials

Rothschild prepares for dynastic change of guard

Chairman's son set to take reins as the Franco-British bank starts to diversify

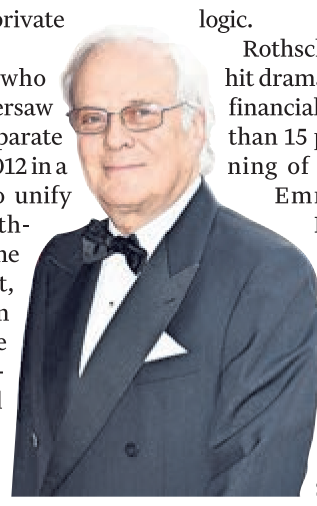
HANNAH MURPHY — LONDON

David de Rothschild is stepping aside as chairman of Rothschild this summer to pass the reins to his son Alexandre in a long-awaited changing of the guard at the Franco-British investment bank.

The younger Mr de Rothschild has long been groomed to succeed his father as the seventh generation of the banking dynasty that was founded 200 years ago. Currently executive deputy chairman, he joined the bank in 2008 after stints in both investment banking and private equity at Bank of America and Bear Stearns.

The dynastic handover, expected to take place in June, comes amid a push by the investment bank to diversify from its core French and British advisory business to help it ride out less buoyant periods in Europe's mergers and acquisitions market.

Since joining the bank, Alexandre de Rothschild, 37, has set up and helped oversee the private equity business. The group has also been increasingly investing in its small US operations and last year completed its first sizeable acquisition to expand its private bank.



David de Rothschild, who was born in New York, oversaw the merger of the then-separate French and UK banks in 2012 in a combination designed to unify two branches of the Rothschild family and bolster the balance sheet. Before that, the 75-year-old had been running the UK part of the bank after Evelyn de Rothschild, his cousin, retired in 2004.

The overhaul of the corporate structure was an opportunity for Mr de Rothschild to put in motion a succession plan by bringing his third child and only son to the supervisory board. It also allowed the family to tighten control over the group by buying out minority shareholders.

Still, his tenure has occasionally been dogged by family infighting among offshoots of the financial dynasty that sit outside the unified group.

Today, the family has 58 per cent of voting rights and owns a 49 per cent stake in the company. Just over 26 per cent of the group's shares are listed on Paris's Euronext exchange.

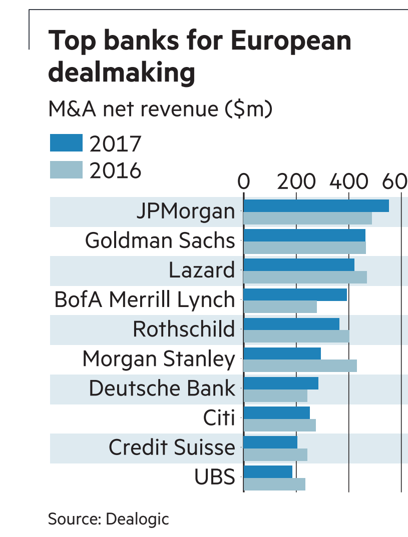
Rothschild's latest half-year results, published in November, showed revenue from its global advisory business, which accounts for about three-fifths of revenues, fell 8 per cent to €492m. By contrast, its private wealth and asset management and merchant banking divisions each posted growth of more than 30 per cent in the six months to September.

Overall, revenues rose 6 per cent year on year to €852m and pre-tax profit increased 10 per cent to €206m.

Despite the dip in advisory revenue, the bank remained steady in fifth position by EU M&A revenue in 2017 as with the previous year, taking a 6 per cent share of the market, according to Dealogic.

Rothschild's shares, which were hit dramatically in the wake of the financial crisis, have gained more than 15 per cent since the beginning of 2017. The bank boasts Emmanuel Macron, the French president, as a former employee. Mr Macron became known as the "Mozart of finance" for his role at Rothschild in advising Nestlé on its $12bn acquisition of a Pfizer unit in 2012.

See Lex



Waiting in the wings: Alexandre de Rothschild will this summer take over from his father David, inset, as chairman of Rothschild — the seventh generation of the banking dynasty founded 200 years ago
Balint Porneczi/Bloomberg

Automobiles

California gives green light to allow fully driverless cars

TIM BRADSHAW — LOS ANGELES

California has approved broad new rules allowing driverless cars that do not require a human operator to sit behind the wheel, in a long-awaited win for Silicon Valley lobbyists.

The state's Department of Motor Vehicles has been given the green light to allow car manufacturers and tech companies to test and deploy autonomous vehicles without a "natural person" inside the car.

Until now, a human had always been present to take over in the event of emergency, a requirement that pushed some Silicon Valley companies to start testing outside their home state.

"This is a major step forward for autonomous technology in California," said Jean Shiomoto, director of the California DMV.

However, some safety campaigners argue it could turn California's roads into a potentially lethal "video game".

The new rules — approved on Monday — have been in development for more than three years and have been eagerly anticipated by Silicon Valley, where the law has often been seen as holding back technological innovation. Fifty companies, including Alphabet, Uber, Apple, GM, Ford and Toyota are already testing self-driving cars in California.

If manufacturers can show the DMV that their technology is safe and resilient to cyber attacks, local residents could be taking rides in driverless vehicles within a few months. The DMV can start issuing the permits from April 2, even as proposed federal rules governing autonomous vehicles remain stalled in Washington.

For the first time in Silicon Valley neighbourhoods, vehicle designers will be able to deploy cars without a steering wheel, brake or accelerator pedal, as long as they can demonstrate compliance with safety standards.

That marks a change to the DMV's original proposals from 2015, and is a concession that tech companies have long demanded. Waymo, formerly Google's self-driving car project, has argued it will be safer for passengers and other road users to rely only on computers and sensors than to allow a human driver to take hold of manual controls.

For now, humans will not be taken out of the system altogether. Robot cars will require constant supervision and any vehicle without a human driver must have a "remote operator" that can take over using a wireless connection or talk to the car's occupants.

Companies must also provide a "law enforcement interaction plan" explaining how they will respond if their car is pulled over by the police, even if empty.

Proponents of autonomous driving say computers are better drivers than people. But John Simpson of Consumer Watchdog said using a remote operator

> '[Using a remote operator] will be just like playing a video game, except lives will be at stake'

"will be just like playing a video game, except lives will be at stake".

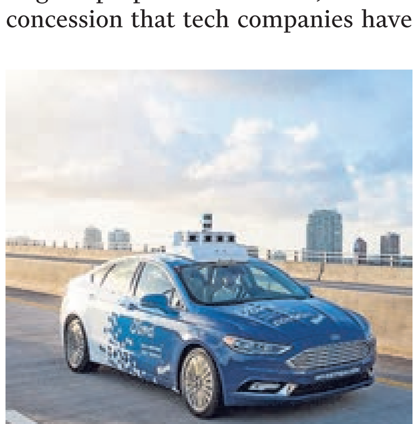
California is not the first state to permit completely self-driving vehicles. In October, Waymo started testing cars without a driver in Phoenix, Arizona, and plans to launch a commercial service there this year. Nevada and Michigan have also allowed fully driverless vehicles, while other states have run pilots.

The development in California is significant because it leads the country in terms of the number of companies testing autonomous cars on its highways, ranging from global car manufacturers to small Silicon Valley start-ups.

Mr Simpson of Consumer Watchdog said Californian drivers anxious about sharing a road with robot cars should keep a close eye on the "disengagement reports" that manufacturers must submit every year. At the most recent count, Waymo's autonomous driving system disengaged — meaning a human had to step in — once every 5,596 miles. General Motors' Cruise division had a disengagement every 1,254 miles.

A day after California's new rules were approved, Ford announced that it was looking to the other side of the US for its next autonomous test.

The automaker is working with food delivery services Domino's and Postmates in Miami, Florida, to investigate how ordinary people respond to receiving their pizza or groceries via self-driving car. Ford ran a similar pilot in Ann Arbor, Michigan last year and has been part of the Californian testing programme since 2015.



Ford is among groups already testing self-driving cars in California

MARKET DATA

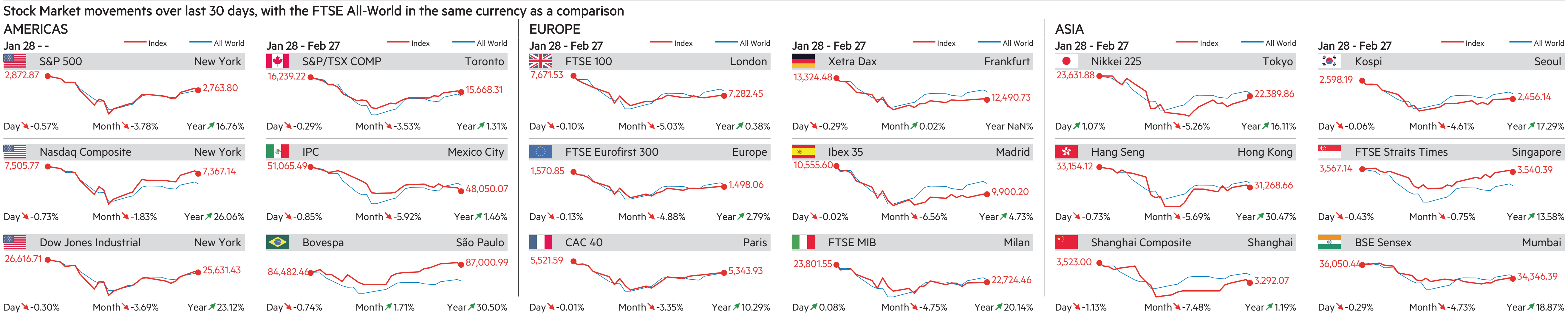
WORLD MARKETS AT A GLANCE

FT.COM/MARKETSDATA

Change during previous day's trading (%)

S&P 500	Nasdaq Composite	Dow Jones Ind	FTSE 100	FTSE Eurofirst 300	Nikkei	Hang Seng	FTSE All World $	$ per €	$ per £	¥ per $	£ per €	Oil Brent $ Sep	Gold $
-0.57%	-0.73%	-0.30%	-0.10%	-0.13%	1.07%	-0.73%	-0.49%	-0.407%	-0.430%	0.566%	No change	-0.70%	-0.58%

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



STOCK MARKET: BIGGEST MOVERS

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UK MARKET WINNERS AND LOSERS

[illegible]

CURRENCIES

Currency	Closing Mid	Day's Change	Closing Mid	Day's Change	Closing Mid	Day's Change	Feb 27	Currency	Closing Mid	Day's Change	Closing Mid	Day's Change	Closing Mid	Day's Change
Japanese Yen	107.5500	0.6050	131.6305	0.2226	149.2900	0.2460	Russia	Russian Ruble	56.2525	0.2525	68.8475	0.0379	78.0840	0.0396
	107.5498	0.6046	131.6305	0.2226	149.2899	0.2458	Saudi Arabia	Saudi Riyal	3.7504	0.0000	4.5901	-0.0181	5.2059	-0.0208
	107.5493	0.6037	131.6306	0.2227	149.2897	0.2454	Singapore	Singapore Dollar	1.3235	0.0056	1.6198	0.0005	1.8371	0.0005
	107.5470	0.5991	131.6307	0.2230	149.2899	0.2442	South Africa	South African Rand	11.7400	0.0988	14.3686	0.0645	16.2963	0.0724
Kenyan Shilling	101.6500	-0.0500	124.4095	-0.5537	141.1002	-0.6341	South Korea	South Korean Won	1071.2500	-2.1000	1311.1033	-7.7678	1487.0006	-8.8743
Kuwaiti Dinar	0.3000	-	0.3672	-0.0015	0.4164	-0.0017	Sweden	Swedish Krona	8.2252	0.0592	10.0668	0.0329	11.4173	0.0368
Malaysian Ringgit	3.9080	0.0050	4.7830	-0.0128	5.4247	-0.0147	Switzerland	Swiss Franc	0.9403	0.0020	1.1508	-0.0021	1.3052	-0.0024
Mexican Peson	18.8010	0.1298	23.0106	0.0684	26.0976	0.0764	Taiwan	New Taiwan Dollar	29.1955	-0.0375	35.7324	-0.1875	40.5262	-0.2144
New Zealand Dollar	1.3806	0.0122	1.6898	0.0083	1.9165	0.0093	Thailand	Thai Baht	31.3500	0.0400	38.3693	-0.1027	43.5169	-0.1183
Nigerian Naira	360.0000	-1.0000	440.6041	-2.9720	499.7155	-3.3924	Tunisia	Tunisian Dinar	2.4005	-0.0119	2.9380	-0.0263	3.3321	-0.0300
Norwegian Krone	7.8650	0.0226	9.6259	-0.0103	10.9173	-0.0122	Turkey	Turkish Lira	3.8089	0.0182	4.6617	0.0039	5.2871	0.0042
Pakistani Rupee	110.5350	-	135.2838	-0.5353	153.4335	-0.6137	United Arab Emirates	UAE Dirham	3.6730	-0.0001	4.4954	-0.0179	5.0985	-0.0205
Peruvian Nuevo Sol	3.2513	0.0013	3.9793	-0.0141	4.5131	-0.0162	United Kingdom	Pound Sterling	0.7204	0.0029	0.8817	0.0000	-	-
Philippine Peso	52.0300	0.1800	63.6795	-0.0308	72.2228	-0.0380	..One Month		0.7206	0.0029	0.8816	0.0000	-	-

Feb 27	Currency	Closing Mid	Day's Change	Closing Mid	Day's Change	Closing Mid	Day's Change
United States	United States Dollar	-	-	1.2239	-0.0048	1.3881	-0.0056
..One Month		-	-	1.2236	-0.1698	1.3883	-0.0055
..Three Month		-	-	1.2231	-0.1698	1.3887	-0.0055
..One Year		-	-	1.2202	-0.1698	1.3904	-0.0055
Venezuela	Venezuelan Bolivar Fuerte	28962.5000	37.5000	35447.2132	-94.1709	40202.8012	-108.5403
Vietnam	Vietnamese Dong	22750.5000	7.5000	27844.3722	-101.0002	31580.0111	-115.8104
European Union	Euro	0.8171	0.0032	-	-	1.1342	0.0000
..One Month		0.8168	0.0031	-	-	1.1341	-0.0001
..Three Month		0.8162	0.0032	-	-	1.1339	0.0000
..One Year		0.8134	0.0032	-	-	1.1330	0.0000

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

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FT 30 INDEX

	Feb 27	Feb 26	Feb 23	Feb 22	Feb 21	Yr Ago	High	Low
FT 30	3152.10	3131.70	3143.70	3151.30	3143.80	0.00	3377.70	3060.60
FT 30 Div Yield	1.94	1.94	1.95	1.94	1.93	0.00	3.93	2.74
P/E Ratio net	22.96	22.96	22.89	23.03	23.08	0.00	19.44	14.26

FT 30 since compilation: 4198.4 high: 19/07/1999; low49.4 26/06/1940Base Date: 1/7/35

FT 30 hourly changes

8	9	10	11	12	13	14	15	16	High	Low
3131.7	3144.9	3140.6	3148	3153.4	3154.6	3155.2	3154.7	3151.6	3161.9	3131.7

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

FX: EFFECTIVE INDICES

	Feb 26	Feb 23	Mnth Ago		Feb 27	Feb 26	Mnth Ago
Australia	93.22	92.88	95.95	Sweden	76.24	76.12	78.06
Canada	91.15	91.34	94.13	Switzerland	154.10	154.34	152.89
Denmark	110.55	110.55	110.45	UK	79.11	79.28	80.24
Japan	138.64	138.99	135.11	USA	96.70	96.52	95.52
New Zealand	116.32	115.93	116.49	Euro	95.56	95.49	96.15
Norway	87.16	86.99	87.53				

Source: Bank of England. New Sterling ERI base Jan 2005 = 100. Other indices base average 1990 = 100. Index rebased 1/2/95. for further information about ERIs see www.bankofengland.co.uk

FTSE SECTORS: LEADERS & LAGGARDS

Year to date percentage changes

Automobiles & Parts	31.76	Banks	-2.31	Leisure Goods	-7.09
Industrial Metals &	19.25	Financial Services	-2.39	Health Care	-7.41
Industrial Transport	9.35	Financials	-2.60	Pharmace & Biotech	-8.44
Chemicals	1.47	Forestry & Paper	-2.77	Beverages	-8.45
Food & Drug Retailer	1.05	FTSE SmallCap Index	-3.12	Oil & Gas	-8.80
Basic Materials	0.72	Industrials	-3.31	Oil & Gas Producers	-8.90
Health Care Eq & Srv	0.58	Oil Equipment & Serv	-3.75	Personal Goods	-9.32
Mining	0.50	Travel & Leisure	-4.00	Food Producers	-9.86
Industrial Eng	-0.15	FTSE 250 Index	-4.46	Fixed Line Telecomms	-10.14
Electronic & Elec Eq	-0.93	Construct & Material	-4.91	Consumer Goods	-10.47
General Retailers	-1.17	FTSE All{HY-}Share Index	-5.46	Utilities	-10.52
Aerospace & Defense	-1.35	Support Services	-5.73	Technology	-10.75
Media	-1.75	Real Est Invest & Tr	-5.74	Software & Comp Serv	-10.99
Equity Invest Instr	-2.09	Electricity	-5.75	Gas Water & Multi	-11.87
Nonlife Insurance	-2.23	FTSE 100 Index	-5.77	Telecommunications	-12.25
Consumer Services	-2.27	Tech Hardware & Eq	-5.87	Tobacco	-12.43
Life Insurance	-2.29	Real Est Invest & Se	-5.94	Household Goods & Ho	-12.84
		NON FINANCIALS Index	-6.49	Mobile Telecomms	-13.05

FTSE 100 SUMMARY

FTSE 100	Closing Price	Day's Change	FTSE 100	Closing Price	Day's Change
3I Group PLC	948.00	2.40	Legal & General Group PLC	263.40	1.10
Admiral Group PLC	1931	-3.00	Lloyds Banking Group PLC	69.03	0.48
Anglo American PLC	1842	-1.60	London Stock Exchange Group PLC	4054	-30.00
Antofagasta PLC	905.80	-6.20	Marks And Spencer Group PLC	300.00	-0.30
Ashtead Group PLC	2108	38.00	Mediclinic International PLC	607.20	7.20
Associated British Foods PLC	2661	-65.00	Micro Focus International PLC	2060	-2.00
Astrazeneca PLC	4795	-18.50	Mondi PLC	1893.5	8.00
Aviva PLC	506.00	4.00	Morrison (Wm) Supermarkets PLC	224.90	0.10
Bae Systems PLC	572.60	-5.00	National Grid PLC	756.50	-9.20
Barclays PLC	212.00	3.50	Next PLC	4912	-18.00
Barratt Developments PLC	548.00	-3.20	Nmc Health PLC	3516	-8.00
Berkeley Group Holdings (The) PLC	3892	30.00	Old Mutual PLC	257.80	3.00
Bhp Billiton PLC	1525	-17.40	Paddy Power Betfair PLC	8585	85.00
BP PLC	478.20	-2.65	Pearson PLC	727.00	13.00
British American Tobacco PLC	4397.5	-67.00	Persimmon PLC	2604	116.00
British Land Company PLC	637.20	-13.00	Prudential PLC	1841	2.00
Bt Group PLC	243.25	0.45	Randgold Resources LD	5948	-142.00
Bunzl PLC	1969.5	-5.50	Reckitt Benckiser Group PLC	5841	-139.00
Burberry Group PLC	1538	-8.50	Relx PLC	1491	-11.00
Carnival PLC	4821	-8.00	Rentokil Initial PLC	292.10	0.10
Centrica PLC	141.80	-2.10	Rio Tinto PLC	4047.5	-16.50
Coca-Cola Hbc AG	2442	-30.00	Rolls-Royce Holdings PLC	852.40	2.60
Compass Group PLC	1550	-2.50	Royal Bank Of Scotland Group PLC	270.40	2.30
Crh PLC	2436	-37.00	Royal Dutch Shell PLC	2302.5	24.00
Croda International PLC	4550	2.00	Royal Dutch Shell PLC	2316.5	2.50
Dcc PLC	6735	-80.00	Rsa Insurance Group PLC	633.60	-5.20
Diageo PLC	2479	-8.00	Sage Group PLC	692.20	-3.40
Direct Line Insurance Group PLC	387.90	-0.70	Sainsbury (J) PLC	257.70	0.90
Easyjet PLC	1679	14.50	Schroders PLC	3471	21.00
Evraz PLC	438.00	12.10	Scottish Mortgage Investment Trust PLC	467.00	0.40
Experian PLC	1557.5	-17.50	Segro PLC	575.20	-10.80
Ferguson PLC	5186	-32.00	Severn Trent PLC	1757.5	-22.50
Fresnillo PLC	1273	-59.00	Shire PLC	3054	51.50
G4S PLC	265.60	2.70	Sky PLC	1331.5	226.50
Gkn PLC	430.70	0.70	Smith & Nephew PLC	1284	7.50
Glaxosmithkline PLC	1303.8	2.80	Smith (Ds) PLC	483.00	-2.20
Glencore PLC	396.50	-4.90	Smiths Group PLC	1600	5.00
Halma PLC	1213	-15.00	Smurfit Kappa Group PLC	2528	22.00
Hammerson PLC	455.70	-10.10	Sse PLC	1241	-12.50
Hargreaves Lansdown PLC	1725.5	-8.50	St. James's Place PLC	1125.5	-18.50
HSBC Holdings PLC	719.20	-2.20	Standard Chartered PLC	839.00	10.00
Imperial Brands PLC	2606	-28.50	Standard Life Aberdeen PLC	374.00	3.00
Informa PLC	686.00	-0.80	Taylor Wimpey PLC	193.75	1.55
Intercontinental Hotels Group PLC	4699	54.00	Tesco PLC	207.10	1.10
International Consolidated Airlines Group S.A.	603.40	0.60	Tui AG	1553	23.50
Intertek Group PLC	4925	15.00	Unilever PLC	3752	-79.50
Itv PLC	173.20	1.75	United Utilities Group PLC	681.60	-6.40
Johnson Matthey PLC	3155	3.00	Vodafone Group PLC	204.80	-0.75
Just Eat PLC	875.00	2.40	Whitbread PLC	3928	14.00
Kingfisher PLC	362.50	2.20	Wpp PLC	1374	-7.50
Land Securities Group PLC	927.50	-15.70			

FTSE GLOBAL EQUITY INDEX SERIES

Feb 26 Regions & countries	No of stocks	US $ indices	Day %	Mth %	YTD %	Total retn	YTD %	Gr Div Yield
FTSE Global All Cap	7778	597.93	0.8	-4.0	2.8	861.45	3.0	2.2
FTSE Global Large Cap	1446	528.00	0.9	-3.9	3.2	780.98	3.5	2.3
FTSE Global Mid Cap	1707	798.65	0.4	-4.3	1.7	1089.42	1.9	2.0
FTSE Global Small Cap	4625	836.98	0.4	-4.0	1.2	1104.68	1.3	1.8
FTSE All-World	3153	349.37	0.8	-4.0	3.0	531.87	3.2	2.3
FTSE World	2577	616.10	0.8	-3.9	2.8	1259.30	3.1	2.3
FTSE Global All Cap ex UNITED KINGDOM In	7457	622.32	0.8	-3.8	3.1	882.39	3.3	2.1
FTSE Global All Cap ex USA	5913	536.78	0.5	-4.8	1.8	828.79	2.0	2.7
FTSE Global All Cap ex JAPAN	6471	610.16	0.8	-4.0	2.7	887.53	3.0	2.3
FTSE Global All Cap ex Eurozone	7117	617.52	0.8	-3.8	2.8	872.97	3.1	2.2
FTSE Developed	2122	557.98	0.9	-4.0	2.6	810.62	2.9	2.3
FTSE Developed All Cap	5655	586.14	0.8	-4.0	2.4	840.97	2.7	2.2
FTSE Developed Large Cap	908	515.52	1.0	-3.9	2.8	760.81	3.1	2.3
FTSE Developed Europe Large Cap	231	387.09	0.5	-5.9	0.3	657.04	0.6	3.4
FTSE Developed Europe Mid Cap	321	649.34	0.1	-4.3	1.8	982.93	1.9	2.6
FTSE Dev Europe Small Cap	713	923.06	0.2	-5.1	1.6	1352.21	1.7	2.3
FTSE North America Large Cap	283	596.62	1.2	-3.2	4.0	823.01	4.3	1.9
FTSE North America Mid Cap	392	850.77	0.5	-4.3	1.4	1089.65	1.6	1.6
FTSE North America Small Cap	1400	866.07	0.5	-3.8	0.7	1076.37	0.9	1.5
FTSE North America	675	396.28	1.1	-3.4	3.6	559.25	3.9	1.9
FTSE Developed ex North America	1447	279.20	0.5	-4.9	1.1	463.50	1.3	2.9
FTSE Japan Large Cap	186	408.36	0.6	-4.0	3.3	534.02	3.3	1.9
FTSE Japan Mid Cap	317	674.72	0.5	-4.8	1.9	845.04	2.0	1.5
FTSE Global wi JAPAN Small Cap	804	763.20	0.0	-3.5	2.5	989.48	2.6	1.6
FTSE Japan	503	173.47	0.6	-4.2	3.0	254.43	3.0	1.9
FTSE Asia Pacific Large Cap ex Japan	544	767.42	0.7	-4.1	3.0	1224.24	3.2	2.6
FTSE Asia Pacific Mid Cap ex Japan	454	992.59	0.5	-4.9	1.8	1517.65	2.0	2.8
FTSE Asia Pacific Small Cap ex Japan	1461	625.69	0.6	-4.4	1.5	940.19	1.7	2.4
FTSE Asia Pacific Ex Japan	998	604.79	0.7	-4.2	2.9	1024.76	3.0	2.6
FTSE Emerging All Cap	2123	854.10	0.4	-3.8	5.8	1292.69	6.0	2.5
FTSE Emerging Large Cap	538	816.53	0.4	-3.8	6.6	1244.88	6.7	2.5
FTSE Emerging Mid Cap	493	1037.93	0.2	-3.5	4.7	1559.23	4.8	2.9
FTSE Emerging Small Cap	1092	853.29	0.5	-4.3	1.8	1238.46	1.9	2.4
FTSE Emerging Europe	121	425.42	0.9	-1.0	9.2	679.23	9.2	4.0
FTSE Latin America All Cap	240	1031.91	0.0	-2.4	11.3	1617.73	11.9	2.6
FTSE Middle East and Africa All Cap	239	818.00	-0.5	-2.8	4.3	1293.93	4.5	3.0
FTSE Global wi UNITED KINGDOM All Cap In	321	361.43	0.3	-6.5	-2.3	619.86	-1.7	3.8
FTSE Global wi USA All Cap	1865	682.49	1.1	-3.3	3.6	912.69	3.9	1.8
FTSE Europe All Cap	1458	460.74	0.4	-5.4	1.0	754.35	1.2	3.2
FTSE Eurozone All Cap	661	458.68	0.4	-5.4	2.2	754.82	2.3	2.8
FTSE RAFI All World 3000	3000	7207.20	0.7	-4.8	1.8	9666.63	2.1	2.8
FTSE RAFI US 1000	983	11725.30	1.1	-4.6	1.6	15603.18	2.0	2.2
FTSE EDHEC-Risk Efficient All-World	3153	413.43	0.5	-3.9	1.9	582.06	2.1	2.2
FTSE EDHEC-Risk Efficient Developed Europe	552	343.80	0.2	-4.4	1.6	529.37	1.7	2.7
Oil & Gas	145	382.33	0.8	-8.8	-2.3	631.05	-1.7	3.5

Feb 26 Sectors	No of stocks	US $ indices	Day %	Mth %	YTD %	Total retn	YTD %	Gr Div Yield
Oil & Gas Producers	109	368.63	0.9	0.9	-2.0	622.02	-1.4	3.6
Oil Equipment & Services	27	300.60	-0.2	-0.2	-4.5	444.29	-4.0	3.4
Basic Materials	256	560.29	0.6	0.6	2.8	865.13	2.8	2.4
Chemicals	119	817.62	0.3	0.3	1.5	1267.29	1.5	2.2
Forestry & Paper	16	327.52	0.7	0.7	6.3	563.52	6.6	3.0
Industrial Metals & Mining	69	512.26	1.1	1.1	5.1	788.36	5.1	2.3
Mining	52	680.09	1.0	1.0	3.6	1048.57	3.6	2.7
Industrials	558	427.58	0.8	0.8	3.0	622.30	3.2	1.9
Construction & Materials	115	552.71	0.2	0.2	-0.7	838.42	-0.6	2.0
Aerospace & Defense	27	868.95	1.1	1.1	13.0	1253.24	13.3	1.7
General Industrials	58	237.89	1.1	1.1	-0.9	376.20	-0.2	2.3
Electronic & Electrical Equipment	73	479.81	0.7	0.7	4.0	638.68	4.1	1.5
Industrial Engineering	103	885.13	0.6	0.6	2.5	1268.48	2.6	1.8
Industrial Transportation	102	716.93	1.2	1.2	0.0	1044.37	0.1	2.1
Support Services	80	398.58	0.4	0.4	4.0	553.96	4.1	1.6
Consumer Goods	437	505.35	0.7	0.7	-0.8	756.89	-0.7	2.4
Automobiles & Parts	108	462.60	0.8	0.8	2.7	669.52	2.8	2.5
Beverages	45	659.14	0.5	0.5	-2.1	1002.44	-2.0	2.5
Food Producers	110	617.80	0.8	0.8	-2.4	947.50	-2.3	2.3
Household Goods & Home Construction	49	437.67	0.6	0.6	-7.1	651.35	-6.8	2.6
Leisure Goods	33	246.70	0.7	0.7	3.1	327.06	3.0	1.2
Personal Goods	81	772.24	1.0	1.0	2.3	1092.91	2.5	1.9
Tobacco	11	1324.22	0.3	0.3	-6.0	2794.92	-5.8	4.4
Health Care	189	518.97	1.1	1.1	3.2	755.19	3.4	2.0
Health Care Equipment & Services	72	929.12	1.2	1.2	5.7	1088.35	5.7	1.0
Pharmaceuticals & Biotechnology	117	360.44	1.1	1.1	2.1	549.68	2.5	2.4
Consumer Services	403	498.60	0.5	0.5	5.3	671.95	5.5	1.5
Food & Drug Retailers	60	292.80	0.5	0.5	0.1	413.22	0.4	2.2
General Retailers	132	765.35	0.7	0.7	10.6	1002.79	10.7	1.2
Media	81	349.75	0.5	0.5	2.0	472.17	2.1	1.6
Travel & Leisure	130	486.36	0.4	0.4	1.6	663.78	1.8	1.7
Telecommunication	92	162.13	0.9	0.9	-2.4	310.58	-2.0	4.4
Fixed Line Telecommuniations	40	130.63	1.2	1.2	-3.3	276.59	-2.6	5.0
Mobile Telecommunications	52	179.66	0.6	0.6	-1.3	307.38	-1.3	3.6
Utilities	168	267.67	0.0	0.0	-3.0	530.95	-2.5	3.8
Electricity	110	293.66	-0.1	-0.1	-2.9	575.86	-2.4	3.7
Gas Water & Multiutilities	58	281.40	0.2	0.2	-3.2	573.15	-2.8	4.0
Financials	710	268.03	0.7	0.7	3.7	444.52	4.0	2.8
Banks	247	244.24	0.5	0.5	5.3	436.25	5.7	3.1
Nonlife Insurance	72	283.07	1.5	1.5	4.0	414.31	4.1	2.2
Life Insurance	53	250.98	0.3	0.3	-0.5	406.87	-0.3	2.8
Financial Services	154	328.32	1.3	1.3	6.8	456.95	7.0	1.7
Technology	195	290.47	1.4	1.4	8.3	359.06	8.5	1.3
Software & Computer Services	96	503.04	0.9	0.9	8.6	590.36	8.8	0.8
Technology Hardware & Equipment	99	217.66	1.8	1.8	7.9	281.05	8.2	1.9
Alternative Energy	9	103.55	0.3	0.3	7.5	140.55	7.5	1.8
Real Estate Investment & Services	107	374.65	0.5	0.5	1.8	631.15	1.8	2.4

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

UK STOCK MARKET TRADING DATA

	Feb 27	Feb 26	Feb 23	Feb 22	Feb 21	Yr Ago
	-	-	-	-	-	-
Order Book Turnover (m)	95.32	77.80	77.80	77.80	255.59	151.20
Order Book Bargains	1065418.00	937976.00	937976.00	937976.00	1175365.00	1058207.00
Order Book Shares Traded (m)	1641.00	1656.00	1656.00	1656.00	1947.00	1897.00
Total Equity Turnover (£m)	4978.86	4314.15	4314.15	4314.15	5136.80	5941.32
Total Mkt Bargains	1204024.00	1025457.00	1025457.00	1025457.00	1308451.00	1190573.00
Total Shares Traded (m)	5809.00	5282.00	5282.00	5282.00	5696.00	6457.00

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

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

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

POWERED BY MORNINGSTAR

UK RIGHTS OFFERS

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

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

UK COMPANY RESULTS

Company		Turnover		Pre-tax		EPS(p)		Div(p)		Pay day	Total	
Coats Group $	Pre	1510.300	1457.300	142.900	122.500	0.058	0.043	1.00000	0.84000	May 29	1.400	0.800
Croda International	Pre	1373.100	1243.600	314.100	275.700	180.800	148.200	0.00000	41.25000	-	35.000	74.000
Derwent London	Pre	202.600	193.700	314.800	54.500	281.790	52.730	0.00000	38.50000	-	17.330	52.360
Direct Line Insurance Group	Pre	3338.800	3187.900	539.000	353.000	31.800	20.400	13.60000	9.70000	May 17	20.400	14.600
Drax Group	Pre	3685.200	2949.800	183.200L	197.100	37.200L	47.700	7.40000	0.40000	May 11	12.300	2.500
Elementis $	Pre	782.700	616.600	78.500	76.100	0.254	0.147	5.87400	5.67500	Jun 1	8.500	8.400
Fisher (James) & Sons	Pre	505.400	466.000	49.000	44.900	80.100	79.400	19.30000	17.60000	May 11	28.700	26.150
Fresnillo $	Pre	2093.308	1905.503	741.489	718.240	0.761	0.579	29.80000	20.53200	Jun 4	40.400	29.400
GKN	Pre	9671.000	8822.000	658.000	292.000	29.300	14.100	6.20000	5.90000	May 14	9.300	8.850
Greggs	Pre	960.005	894.195	71.945	75.142	56.600	57.800	22.00000	21.50000	May 18	32.300	31.000
Inchcape	Pre	8949.200	7838.400	369.900	267.800	64.600	43.200	18.90000	16.80000	Jun 22	26.800	23.800
Jupiter European Opportunities Trust	Int			21.697	10.792	19.280	10.190	0.00000	0.00000	-	6.500	5.470
Persimmon	Pre	3422.300	3136.800	966.100	774.800	255.000	203.000	0.00000	110.00000	-	0.000	135.000
Standard Chartered $	Pre	13063.000	11269.000	2415.000	409.000	0.235	0.145L	0.00000	0.00000	-	0.000	0.000

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

UK RECENT EQUITY ISSUES

Issue date	Issue price(p)	Sector	Stock code	Stock	Close price(p)	+/-	High	Low	Mkt Cap (£m)
01/24	10.00	AIM	CRA	Cradle Arc PLC	6.13	-0.13	11.84	6.13	1269.5

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

MARKET DATA

FT500: THE WORLD'S LARGEST COMPANIES

	Price	Day Chg	52 Week High	52 Week Low	Yld	P/E	MCap m
[illegible]							
PngAnBnk RMB	12.28	-0.35	15.24	8.54	1.26	9.69	32938.99
Pwr Cons Corp RMB	7.39	-	9.00	6.62	1.13	15.92	11248.13
SaicMtr RMB	34.39	-0.09	35.88	24.04	4.71	11.94	62722.47
ShenwanHong	0.20	0.00	0.35	0.19	-	-2.33	226.60
ShgPdgBk RMB	12.69	-0.04	14.02	11.16	1.19	6.95	56544.49
Sinopec Corp	6.50	-0.07	7.16	5.40	5.03	11.62	21190.44
Sinopec Oil RMB	2.30	-0.02	4.09	2.14	-	-3.13	4391.48
Denmark (kr)							
DanskeBk	242.50	-7.60	259.50	223.00	3.74	10.85	37344.06
MollerMrsk	10160	35.00	14260	9768	1.32	-147.96	16802.06
NovoB	323.00	-6.20	354.80	230.20	2.35	20.85	104202.08
[illegible]							
Bk Cent Asia	23550	25.00	24700	15350	0.89	24.77	42034.3
Israel (ILS)							
TevaPha	68.66	-1.07	131.70	38.20	4.45	-1.18	19985.78
Italy (€)							
Enel	4.84	0.01	5.59	4.01	3.72	20.17	60186.85
ENI	13.82	-0.04	15.45	12.94	5.79	29.42	61469.7
Generali	15.42	0.01	16.48	13.21	5.17	11.56	29475.29
IntSPaolo	3.10	0.02	3.23	2.15	5.73	8.87	60212.31
Luxottica	48.98	-1.52	55.60	45.32	1.87	25.22	29076.58
Unicred	17.44	0.25	18.38	11.93	-	-1.69	47512.47
[illegible]							
KoreaElePwr	33350	-450.00	49000	32400	5.75	7.47	19985.54
SK Hynix	78700	1200	90300	46200	0.74	6.35	53483.12
SmsungEl	2369000	-	2876000	1898000	1.98	9.37	283918.42
Spain (€)							
BBVA	6.95	-0.01	7.93	6.08	4.33	11.79	56717.78
BcoSantdr	5.73	0.04	6.25	4.97	3.71	13.33	113162.04
CaixaBnk	4.02	0.02	4.51	3.20	3.26	14.24	29392.55
Iberdrola	6.17	0.00	7.30	5.87	5.06	12.74	47691.05
Inditex	25.25	-0.22	36.90	24.75	1.97	24.14	96315.39
Repsol	14.21	-0.06	16.30	13.28	5.35	11.35	27069.45
Telefonica	8.02	-0.07	10.63	7.45	5.02	14.23	50964.3
[illegible]							
Mrcntl Srvcs	2000000	-	2000000	14100	0.00	359.95	4203.94

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 %
BSkyB	1331.50	1105.00	226.50	20.50	225.50	20.4	-98.73
PTT Explor	574.00	566.00	8.00	1.41	86.00	17.6	18.11
Hew-Pack	23.60	23.46	0.14	0.58	2.21	10.3	-1.34
Hngzh HikVDT	42.55	43.00	-0.45	-1.05	3.10	7.9	3.58
Intel	49.86	49.11	0.75	1.53	3.54	7.6	-0.36
Petrobras	23.29	23.18	0.11	0.47	1.61	7.4	7.37
Fresenius SE	67.94	65.06	2.88	4.43	4.42	7.0	6.96
UtdTech	135.21	135.47	-0.26	-0.19	8.75	6.9	-2.02
Ch Coms Cons	8.87	8.83	0.04	0.45	0.55	6.6	-8.27
MTN Grp	132.00	129.37	2.63	2.03	7.58	6.1	-2.04
Gzprm neft	146.50	147.00	-0.50	-0.34	8.19	5.9	-0.47
KBC Grp	77.00	75.48	1.52	2.01	4.24	5.8	-0.98
SouthCpr	53.38	53.78	-0.40	-0.74	2.91	5.8	5.37
AmerAir	54.69	55.00	-0.31	-0.56	2.97	5.7	3.13
CanNatRy	100.78	100.04	0.74	0.74	5.45	5.7	3.28
CSL	164.66	163.33	1.33	0.81	8.80	5.6	11.59
Sant Gbn	46.75	45.87	0.88	1.92	2.49	5.6	-2.46
MediaTek	301.00	296.50	4.50	1.52	16.00	5.6	-2.27
Barclays	212.00	208.50	3.50	1.68	10.95	5.4	-98.99
BT	243.25	242.80	0.45	0.19	12.45	5.4	-99.08

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 %
GenMills	50.91	51.42	-0.51	-0.99	-5.04	-9.0	-15.42
Devon Energy	31.88	31.61	0.27	0.84	-2.78	-8.0	-27.44
Inditex	25.25	25.47	-0.22	-0.86	-2.08	-7.6	-19.79
Comcast	37.14	39.58	-2.44	-6.16	-2.33	-5.9	-13.41
JapanTob	3085.00	3066.00	19.00	0.62	-123.00	-3.8	-15.66
MollerMrsk	10160.00	10125.00	35.00	0.35	-405.00	-3.8	-10.45
HiltonWwde	81.09	82.14	-1.05	-1.28	-3.22	-3.8	-7.52
Perrigo	83.80	88.30	-4.50	-5.10	-3.24	-3.7	-11.94
Walgreen	68.69	70.60	-1.91	-2.71	-2.22	-3.1	-13.00
CVS	68.48	68.23	0.25	0.37	-2.18	-3.1	-16.42
EquityResTP	55.90	57.13	-1.23	-2.15	-1.74	-3.0	-9.10
SunPhrmInds	544.80	555.95	-11.15	-2.01	-16.60	-3.0	-6.04
Bk Cent Asia	23550.00	23525.00	25.00	0.11	-700.00	-2.9	3.74
Imperial Brands	2606.00	2634.50	-28.50	-1.08	-69.50	-2.6	-99.11
China Vanke	35.80	36.40	-0.60	-1.65	-0.95	-2.6	-12.15
Williams Cos	28.38	28.41	-0.04	-0.12	-0.72	-2.5	-12.79
Siemens	109.50	110.80	-1.30	-1.17	-2.74	-2.4	-2.44
HSBC	719.20	721.40	-2.20	-0.30	-17.80	-2.4	-99.06
LasVegasSd	73.33	73.95	-0.62	-0.84	-1.71	-2.3	-2.91
CBS	54.97	55.68	-0.71	-1.28	-1.28	-2.3	-8.38

Based on the FT Global 500 companies in local currency

BONDS: HIGH YIELD & EMERGING MARKET

[illegible]

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

Feb 27	Red date	Coupon	Ratings S*	Ratings M*	Ratings F*	Bid price	Bid yield	Day's chge yield	Mth's chge yield	Spread vs US
US$										
FleetBoston Financial Corp.	01/28	6.88	BBB+	Baa2	A-	116.84	4.72	0.02	0.38	1.84
FleetBoston Financial Corp.	01/28	6.88	BBB+	Baa2	A-	116.84	4.72	0.02	0.38	1.84
NationsBank Corp.	03/28	6.80	BBB+	Baa2	A-	116.91	4.67	0.02	0.38	1.79
NationsBank Corp.	03/28	6.80	BBB+	Baa2	A-	116.91	4.67	0.02	0.38	1.79
Barclays Bank plc	01/29	4.50	A	A1	A	96.92	4.87	-0.01	0.21	1.99
Barclays Bank plc	01/29	4.50	A	A1	A	96.92	4.87	-0.01	0.21	1.99
Euro										
Barclays plc	08/29	2.29	BBB	Baa2	A	91.81	3.15	-0.01	0.20	0.27
AT&T Inc.	12/29	2.60	BBB+	Baa1	A-	104.88	2.12	-0.01	0.05	-0.76
AT&T Inc.	12/29	2.60	BBB+	Baa1	A-	104.88	2.12	-0.01	0.05	-0.76
Electricite de France (EDF)	04/30	4.63	A-	A3	A-	129.02	1.92	-0.01	0.01	-0.96
Yen										
Poland	11/27	2.50	-	A2	A-	109.71	1.42	-0.01	-0.04	-1.46
£ Sterling										
Cooperatieve Rabobank U.A.	05/29	4.63	BBB+	A3	A	113.09	3.22	-0.02	0.40	0.34
innogy Fin B.V.	06/30	6.25	BBB	Baa2	A-	132.19	3.06	0.00	0.28	0.18

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

Feb 27	Rate	Current	Since	Last	Mnth Ago	Year Ago
US	Fed Funds	1.25-1.50	15-06-2017	1.00	1.25-1.50	0.50-0.75
US	Prime	4.50	15-06-2017	4.50	4.25	3.50
US	Discount	0.75	15-06-2017	0.75	1.75	1.00
Euro	Repo	0.00	16-03-2016	0.05	0.00	0.00
UK	Repo	0.50	04-08-2016	0.25	0.25	0.25
Japan	O'night Call	0.00-0.00	01-02-2016	0.00	0.00--0.10	0.00--0.10
Switzerland	Libor Target	0.00-0.25	15-01-2015	0.00-0.75	-1.25--0.25	-1.25--0.25

INTEREST RATES: MARKET

Feb 27 (Libor: Feb 26)	Over night	Change Day	Change Week	Change Month	One month	Three month	Six month	One year
US$ Libor	1.44750	-0.001	0.003	0.017	1.64800	1.98419	2.20113	2.46938
Euro Libor	-0.44143	0.002	0.001	0.000	-0.40257	-0.38000	-0.32543	-0.25571
£ Libor	0.47424	0.000	0.002	0.001	0.49938	0.58006	0.69294	0.91063
Swiss Fr Libor				-0.001	-0.79690	-0.74460	-0.66340	-0.53340
Yen Libor				0.003	-0.04150	-0.05850	0.00283	0.09600
Euro Euribor				-0.001	-0.37100	-0.32800	-0.27100	-0.19000
Sterling CDs				0.000	0.47000	0.57000	0.72500	
US$ CDs				0.370	1.58000	1.87500	2.02500	
Euro CDs				0.000	-0.44500	-0.40500	-0.34500	

Feb 27	Short term		7 Days notice		One month		Three month		Six month		One year	
Euro	-0.50	-0.35	-0.50	-0.35	-0.62	-0.37	-0.48	-0.33	-0.42	-0.27	-0.43	-0.18
Sterling			0.42	0.52	0.42	0.52	0.52	0.62	0.65	0.80	0.84	0.99
Swiss Franc	-	-	-	-	-	-	-	-	-	-	-	-
Canadian Dollar	-	-	-	-	-	-	-	-	-	-	-	-
US Dollar	1.46	1.56	1.45	1.55	1.65	1.75	1.93	2.03	2.15	2.25	2.45	2.55
Japanese Yen	-1.10	-0.60	-0.40	-0.10	-0.50	-0.20	-0.35	0.05	-0.30	0.10	-0.20	0.10

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

BOND INDICES

	Index	Day's change	Month's change	Year change	Return 1 month	Return 1 year
Markit IBoxx						
ABF Pan-Asia unhedged	192.56	0.56	-0.69	1.12	-1.14	7.92
Corporates(£)	340.03	0.12	-1.25	-1.92	-1.58	1.62
Corporates($)	272.91	0.20	-1.48	-2.41	-1.48	-2.41
Corporates(€)	225.86	0.05	-0.02	-0.30	-0.21	1.41
Eurozone Sov(€)	232.27	0.01	0.16	-0.07	-0.21	[illegible]
Gilts(£)	317.22	0.16	[illegible]	[illegible]	[illegible]	[illegible]
Global Inflation-Lkd	268.30	0.24	-1.18	-0.19	-1.29	7.27
Markit iBoxx £ Non-Gilts	334.46	0.10	-1.77	-1.20	-1.17	[illegible]
Overall ($)	234.52	0.22	-1.27	-2.23	-1.07	-2.23
Overall(£)	319.29	0.14	-0.15	-1.86	-0.49	[illegible]
Overall(€)	228.46	0.09	0.02	-0.31	-0.22	[illegible]
Treasuries ($)	219.82	0.26	-0.85	-2.25	-0.85	-2.25
FTSE						
Sterling Corporate (£)	113.55	-0.09	-	-	-1.62	-3.67
Euro Corporate (€)	106.28	-0.09	-	-	-0.32	[illegible]
Euro Emerging Mkts (€)	657.53	6.19	-	-	-2.80	-21.36
Eurozone Govt Bond	110.68	-0.03	-	-	-0.37	-1.39

CREDIT INDICES	Index	Day's change	Week's change	Month's change	Series high	Series low
Markit iTraxx						
Crossover 5Y	268.32	-5.13	4.84	37.48	282.02	221.09
Europe 5Y	52.97	-1.82	1.78	8.73	59.12	42.77
Japan 5Y	47.98	-1.11	1.92	5.35	51.66	42.43
Senior Financials 5Y	53.08	-2.11	3.00	10.43	60.79	40.86
Markit CDX						
Emerging Markets 5Y	116.57	-4.48	-3.39	0.84	137.62	109.50
Nth Amer High Yld 5Y	322.52	-8.18	3.79	25.92	354.72	291.49
Nth Amer Inv Grade 5Y	53.42	-2.12	1.81	6.96	60.63	45.28

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

VOLATILITY INDICES

[illegible]

† 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

[illegible]

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

GILTS: UK CASH MARKET

Feb 27	Price £	Red Yield	Change in Yield Day	Change in Yield Week	Change in Yield Month	Change in Yield Year	52 Week High	52 Week Low	Amnt £m
	-	-	-	-	-	-	-	-	-
Tr 5pc '18	100.10	0.04	100.00	-63.64	-83.33	-42.86	105.00	100.10	35.24
Tr 4.5pc '19	103.92	0.64	3.23	12.28	14.29	3100.00	109.05	103.92	36.35
Tr 4.75pc '20	108.03	0.74	4.23	5.71	15.63	516.67	113.97	108.03	33.31
Tr 1.5pc '21	101.78	0.88	4.76	3.53	15.79	193.33	104.73	101.68	32.46
Tr 4pc '22	111.92	0.97	4.30	2.11	15.48	162.16	118.04	111.84	37.95
Tr 5pc '25	124.68	1.31	3.15	0.00	11.97	57.83	132.93	124.15	35.08
Tr 1.25pc '27	97.16	1.58	3.27	-0.63	8.97	37.39	131.42	96.41	23.45
Tr 4.25pc '32	130.65	1.80	1.69	0.00	7.14	19.21	139.13	129.40	35.44
Tr 4.25pc '36	135.86	1.89	2.16	0.00	5.00	11.83	144.09	134.34	29.76
Tr 4.5pc '42	149.70	1.96	2.08	0.00	3.16	10.11	159.30	147.31	26.64
Tr 3.75pc '52	147.89	1.86	2.20	-0.53	3.33	8.77	159.09	144.61	23.59
Tr 4pc '60	166.45	1.75	1.74	-1.13	2.34	6.06	179.15	162.07	23.61

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	Feb 27	Day's chg %	Total Return	Return 1 month	Return 1 year	Yield
1 Up to 5 Years	92.70	-0.07	2403.60	-0.12	-1.17	0.89
2 5 - 10 Years	177.29	-0.29	3408.93	-0.50	-2.19	1.39
3 10 - 15 Years	207.14	-0.40	4130.40	-0.82	-2.12	1.74
4 5 - 15 Years	184.09	-0.33	3585.20	-0.61	-2.18	1.54
5 Over 15 Years	325.50	-0.72	5026.46	-0.85	-1.27	1.87
7 All stocks	175.09	-0.40	3509.17	-0.54	-1.41	1.74

[illegible]

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

BONDS: INDEX-LINKED

	Price Feb 26	Yield Feb 26	Yield Prev	Month return	Value stock	Market	No of stocks
Can 4.25%' 21	115.30	0.161	0.145	0.38	5.18	73153.67	7
Fr 2.25%' 20	109.60	-1.627	-1.614	0.09	20.31	232694.64	15
Swe 0.25%' 22	113.69	-1.736	-1.764	0.01	31.83	240896.74	8
UK 2.5%' 20	362.94	-1.970	-1.976	0.27	6.58	640201.49	28
UK 2.5%' 24	359.08	-1.625	-1.624	-0.06	6.82	640201.49	28
UK 2%' 35	263.98	-1.482	-1.472	-0.56	9.08	640201.49	28
US 0.625%' 21	101.41	0.207	0.246	0.10	35.84	1273207.63	38
US 3.625%' 28	128.09	0.741	0.246	-0.84	16.78	1273207.63	38

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	2.81	2.21	-0.07	Italy	2.01	1.41	-0.87
Austria	0.77	0.17	-2.11	Japan	0.04	-0.56	-2.84
Belgium	0.82	0.22	-2.06	Netherlands	0.70	0.10	-2.18
Canada	2.27	1.68	-0.61	Norway	1.89	1.29	-0.99
Denmark	0.72	0.12	-2.16	Portugal	1.82	1.23	-1.06
Finland	0.78	0.19	-2.10	Spain	1.48	0.88	-1.40
France	0.93	0.34	-1.95	Switzerland	0.05	-0.54	-2.83
Germany	0.60	0.00	-2.29	United Kingdom	1.53	0.94	-1.35
Greece	4.41	3.82	1.53	United States	2.88	2.29	0.00
Ireland	1.26	0.67	-1.62				

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

COMMODITIES

www.ft.com/commodities

Energy		Price*	Change	Agricultural & Cattle Futures		Price*	Change
Crude Oil†	Mar	63.59	-0.45	Corn♦	Mar	368.75	0.25
Brent Crude Oil‡		66.51	-1.05	Wheat♦	Mar	462.75	2.50
RBOB Gasoline†	Mar	1.99	0.17	Soybeans♦	Mar	1033.50	-0.75
Heating Oil†	Mar	1.67	0.00	Soybeans Meal♦	Mar	379.20	1.30
Natural Gas†	Mar	2.65	-0.04	Cocoa (ICE Liffe)✠	Mar	1565.00	19.00
Ethanol♦		-	-	Cocoa (ICE US)♥	Mar	2218.00	-10.00
Uranium†	Mar	18.10	0.00	Coffee(Robusta)✠	Mar	1782.00	-5.00
Carbon Emissions‡		-	-	Coffee (Arabica)♥	Mar	120.15	-0.15
Diesel†		-	-	White Sugar✠		350.10	-8.90
Unleaded (95R)		-	-	Sugar 11♥		13.23	-0.16
Base Metals (♠ LME 3 Months)				Cotton♥	Mar	81.00	-0.74
Aluminium		2148.00	9.00	Orange Juice♥	Mar	147.55	0.00
Aluminium Alloy		1805.00	-75.00	Palm Oil♣		-	-
Copper		7034.00	-77.50	Live Cattle♣	Apr	124.00	0.00
Lead		2575.00	-2.00	Feeder Cattle♣	Mar	145.75	-0.45
Nickel		13845.00	-90.00	Lean Hogs♣	Apr	70.00	0.00
Tin		21705.00	130.00				
Zinc		3495.00	-35.50		Feb 26	% Chg Month	% Chg Year
Precious Metals (PM London Fix)							
Gold		1325.75	-7.75	S&P GSCI Spt	449.41	-3.02	11.85
Silver (US cents)		1661.00	-6.00	DJ UBS Spot	88.54	-2.51	1.18
Platinum		997.00	7.00	R/J CRB TR	200.86	1.99	2.66
Palladium		1062.00	21.00	M Lynch MLCX Ex. Rtn	231.14	-9.84	-33.05
Bulk Commodities				UBS Bberg CMCI TR	15.47	-1.46	-
Iron Ore (Platts)		79.55	-0.40	LEBA EUA Carbon	9.03	0.00	68.47
Iron Ore (The Steel Index)		76.55	-1.30	LEBA CER Carbon	0.17	0.00	-39.29
GlobalCOAL RB Index		95.50	-2.50	LEBA UK Power	9420.00	168.38	467.47
Baltic Dry Index		1188.00	-3.00				

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

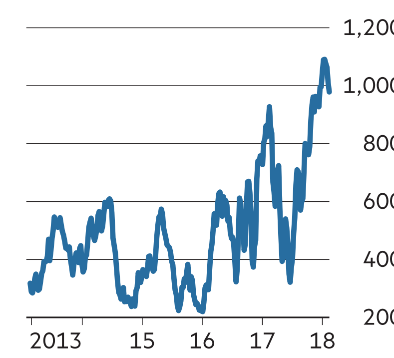
Commodities. Crude positioning

For a new breed of oil speculator, fundamentals are beside the point

Futures markets have become even more anonymous because of electronic trading — Luke Sharrett/Bloomberg

Funds build bullish holdings in oil market

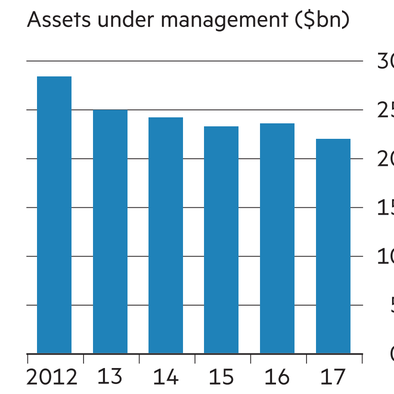
Managed money net long position in crude oil futures (million barrels equivalent)



Aggregate position in Brent and WTI contracts on ICE and Nymex exchanges

Commodities hedge funds fade in prominence

Assets under management ($bn)



Sources: CFTC; ICE; HFR

Trading signals are sought in price action as well as currency and bond markets

GREGORY MEYER — NEW YORK

Investors have built a billion-barrel bet on higher oil prices. But they are a different breed of bull than in years past.

The net long position held by fund managers in crude oil futures is a powerful reflection of speculative sentiment. This year, the position has swelled to records of 1bn barrels equivalent across the main oil contracts, helping sustain prices above $60 a barrel.

Who trades oil is changing, however. Investors who bother little with details such as inventories and pipeline flows are replacing dwindling ranks of specialist commodities hedge funds.

The shift could alter the way prices are formed.

The identities of oil investors are murky. Futures markets, anonymous by design, have become more so because of electronic trading. Regulators shed some light by publishing weekly data on broad categories of trader, including money managers.

In recent years, the number of money managers large enough to report positions has increased, reaching more than 100 in Brent futures on Intercontinental Exchange.

This comes despite shutdowns of some of the biggest funds in oil markets, such as one run by Andy Hall of Astenbeck Capital Management.

Oil exchange-traded funds, vehicles listed on stock markets, have also shrunk. The $2bn United States Oil Fund ETF now holds less than 10 per cent of the open interest in West Texas Intermediate crude futures for April delivery, a smaller footprint than before.

Then who is driving oil positions higher?

Newly prominent oil speculators are not necessarily reacting to news about supply and demand or utterances from Riyadh. Instead, they may be buying and selling oil based on moves in currencies, interest rates or the price of oil itself.

Ed Morse, global head of commodities research at Citigroup, says: "There are large investors in energy, and they don't care about talking to people who deal with fundamentals. They have no interest in it."

His research team suggested in a note that so-called macro investors were becoming a "commodities whale".

1bn Fund managers' net long position, barrels equivalent, across main contracts

$146bn Value of the managed futures sector, which absorbed $2.6bn last month

One attraction for these fair-weather investors is a shift in the slope of oil futures prices.

Crude for immediate delivery now sells for a premium — a condition known as backwardation. That means selling expiring contracts and buying new ones can earn a long investor a modest return.

Another attraction is the flicker of inflation after years of dormancy. Fund managers have been dusting off old sales pitches touting commodities as an efficient hedge against inflation.

DoubleLine Capital, a Los Angeles-based fund company, launched a commodities mutual fund in 2015.

Portfolio manager Jeffrey Sherman is quick to reply when asked how much he reacts to oil inventory readings: "Zero. We are more of a quantitative system trader."

Instead, DoubleLine uses rules to manage the fund, acting on signals such as the slope of the futures curve.

"We're trying to take advantage of the market structures," Mr Sherman says.

Citigroup analysts also pointed to the growth of funds known as managed futures or commodity trading advisers (CTAs), which latch on to price trends in futures markets. The $146bn sector absorbed $2.6bn in inflows in January, according to eVestment.

Aspect Capital, an $8bn CTA based in London, allocates about 15-20 per cent of its risk to energy markets, on average. While it holds an almost neutral position in WTI crude, its systems are eyeing an uptrend in Brent crude, says Anthony Todd, chief executive.

> One draw for these fair-weather investors is a shift in the slope of futures prices. Another is the flicker of inflation

He says: "The majority of our inputs, the vast majority, are price-driven. And the overwhelming factor we capitalise on is the tendency of crowd behaviour to drive medium-term trends in the market."

Energy producers have increasingly acknowledged fund managers' clout in setting oil prices and dictating market sentiment. In the past two years, leaders of the Opec cartel have met hedge funds to understand how they trade.

A weakening of the economic breezes might prompt the funds to abandon bullish oil positions, irrespective of what is happening inside tanks and pipelines.

Indeed, money managers' huge net long position has declined modestly since late January, in line with a retreat in equity markets.

Greg Sharenow, a portfolio manager at the bond fund Pimco, which manages $15bn in commodities investments, says it would be "foolish" to deny that investing based on macro signals can exacerbate price moves.

But he insists that the balances of oil supply, demand and stocks still set prices.

"In our mind, the thing that ultimately matters most to the commodity markets is not these strategies," he says, "but rather what price is going to clear a physical and fundamental market."

Tail risk

Powell makes cool start as money markets heat up

MICHAEL MACKENZIE

The new Federal Reserve chair Jay Powell signalled a steady course for monetary policy in his first appearance before Congress since taking over from Janet Yellen.

While making few waves was mission accomplished for Powell, the focus on him meant the continued pressure in the money market went little noticed. Money markets and short-term interest rates are usually trusty gauges for judging the pace of a central bank tightening cycle.

For example, traders said that three-month Libor set above 2 per cent on Tuesday. Not since late 2008 has the benchmark lending rate been this high, and its recent rise has outpaced expectations for the projected path of the Fed's overnight federal funds rate. What is more, the two-year swap spread, a closely watched relationship between Treasury yields and money market rates which some see as a proxy for bank credit, has nearly doubled from its low in January.

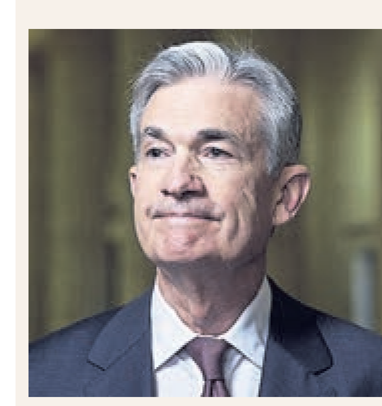
It is true that in recent weeks the bond market has become more certain the US central bank will tighten policy in March and then again in June, while investors have kept an open mind about further rate increases during the second half of the year.

Such a repricing, however, fails to explain the scale of the rise in various measures of short-term US market rates. Beyond the risk of a more active Fed, there has been a deluge of new Treasury bills to help plug the financing gap as the Fed trims its balance sheet and slows its reinvestments. That's duly pushed up implied yields for T-bills

But that still doesn't fully explain the pressure on rates in the money market. We are seeing sales of short-dated bank bonds and other corporate bonds with a maturity of between one and three years, as investors anticipate large US blue-chip companies selling such securities that proved popular homes for their piles of overseas cash.

Now as multinationals bring their money home following US tax reform, analysts say we can expect more upward pressure on short-term rates.

For Powell and his fellow policymakers, this should be welcomed as another sign of financial markets showing some normality. It also means that should economic data force a more active policy stance from the Fed in coming months, the short-end of the market was pointing the way.



Jay Powell: signalled a steady course ahead of Fed handover

Commodities

Mining stocks face prospect of upgrade amid 'promising' outlook for the sector

NEIL HUME
COMMODITIES AND MINING EDITOR

Mining stocks will justify an upgrade versus the broader market should commodity prices retain their recent strength and management teams return excess cash to shareholders rather than blowing it on ambitious projects or deals, said one of the world's most influential mining investors.

Evy Hambro, BlackRock's chief equity investment officer for natural resources, says the outlook for the sector "is once again promising" with supply constrained and the global economy set to grow 3.7 per cent.

That could help trigger further gains for the sector but only if top executives remain disciplined and use excess capital to bump up dividends or fund share buybacks, said Mr Hambro.

"The outlook above should leave . . . shareholders at the mercy of management teams in terms of them either remaining disciplined and not over-investing capital back into the business or reverting to the bad old ways of value destruction," said Mr Hambro in an annual results statement for the BlackRock World Mining Trust, which he co-manages with Olivia Markham.

"Should the former play out again as it did in 2017, it leaves the companies in a strong position to return surplus cash to investors and hopefully trigger a share price re-rating as investors rotate their portfolios back towards the sector."

In spite of the sector's strong performance over the past two years — the FTSE 350 mining index has risen 170 per cent — it has yet to re-rate and is cheaper than ever compared to the wider market. Glencore, the Swiss miner and commodity trader, says the enterprise value of the FTSE 350 mining index is 5.8 times prospective earnings before interest, tax, depreciation and amortisation. The FTSE 100 by contrast trades on 7.6.

London's big four miners have slashed spending on new projects

While London's four big miners — Anglo American, BHP Billiton, Rio Tinto and Glencore — have just announced bumper dividend payments and slashed spending on new projects, many investors remain wary of the sector because of its record and the inherently volatile nature of these markets.

During the commodities boom of the 2000s, the mining industry invested more than $900bn of shareholder money on new projects and deals to feed China's seemingly insatiable appetite for raw materials.

Much of this new supply hit the market just as growth in China started to slow, sending prices — and with them the profits of the biggest miners — into a tailspin during 2015 and 2016.

To drive a re-rating, analysts say the industry needs to show that it has learnt the lessons of the past and can be responsible stewards of capital.

A survey of 40 senior executives published by lawyers White & Case yesterday showed that dividends and share buybacks remain the top priority for the industry in 2018.

Commodity prices have risen sharply over the past two years, supported by a lack of investment in new capacity and supply-side reforms in China that have reduced excess capacity.

Equities

Fidelity operating income surges 54% after fund management rebound

ROBIN WIGGLESWORTH — NEW YORK

Fidelity made a record $5.3bn in operating income last year, a 54 per cent jump from 2016, as buoyant financial markets and a turnround in performance of its fund manager lifted the investment giant's results.

The Boston-based group is privately owned by the founding Johnson family and its senior executives but yesterday reported that its operating income bounced back strongly from the $3.4bn it made in 2016. There was a 13.7 per cent increase in its revenue year on year to $18.2bn.

Fidelity's once-fabled stock pickers continue to bleed assets — another $47bn was pulled out of its actively managed equity funds last year. But it enjoyed inflows into its actively managed non-mutual funds, as well as its suite of cheaper index-tracking funds. Its asset management arm now controls $2.45tn, up 15 per cent in 2017.

"This demonstrates that customers still see value in active management but many are looking for exposure to different types of investment vehicles," Abigail Johnson, chief executive and chairman, said in the company's 2017 report.

While Fidelity's results improved markedly in 2017, the company continues to be buffeted by a series of shifts that are shaking the entire investment industry, such as the rise of cheaper passive investing, disruptive technologies and struggles to beat the returns of benchmarks.

The company's culture has also come under the spotlight with the departure of two fund managers after accusations of inappropriate behaviour and long-standing concerns over a "boys' club" culture and its pay structure.

> 'Customers still see value in active management but many are looking for different types of vehicles'

One of the fund managers let go ran the $19.5bn Fidelity OTC Portfolio, which was one of the best-performing major mutual funds in the US last year, according to Morningstar data and has beaten 99 per cent of its peers over the past five years.

In a video message to Fidelity's 40,000 employees last year, Ms Johnson said: "I'd like to remind everyone that we have no tolerance at our company for any type of harassment. We simply will not, and do not tolerate this type of behaviour, from anyone."

Nonetheless, Fidelity's fund managers last year enjoyed a broad performance renaissance after a "challenging period" in 2016 with its mutual funds on aggregate beating 78 per cent of their industry peers over the past year. Indeed, on an asset-weighted basis, all of the major divisions within Fidelity Asset Management outperformed their benchmarks in 2017, the report said.

The stock pickers that Fidelity is arguably best known for enjoyed a particularly sharp improvement, outperforming their indices by an average of more than 4 per cent when weighted by fund size — their strongest overall performance since 2009.

"After a challenging 2016, this outperformance — as well as the three- and five-year outperformance for equity and other categories — highlighted how investors can be rewarded by taking a long-term view when investing in actively managed strategies," Charles Morrison, head of Fidelity's asset management arm, argued in the report.

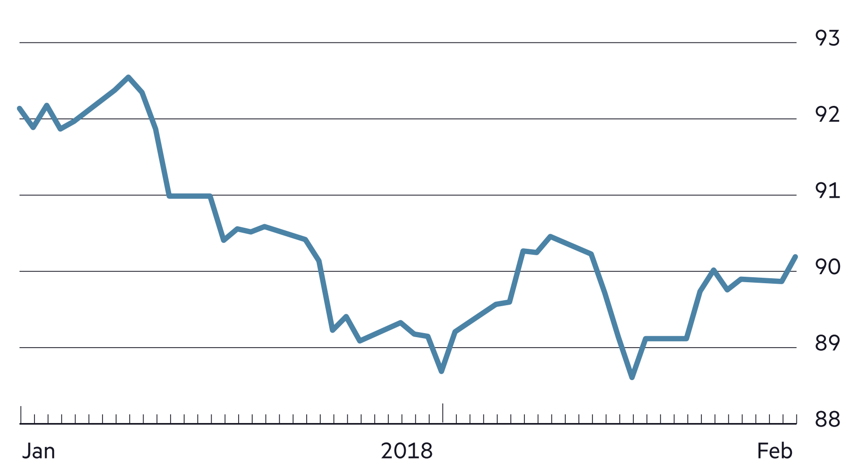
Fidelity is a sprawling financial behemoth that serves 29m workplace pension plan participants, 19.4m retail investors and 6.7m institutional investors.

The day in the markets

What you need to know

- Dollar hits two-week high in response to Powell testimony
- 10-year Treasury yield tops 2.9%
- S&P 500 index breaks three-day winning streak
- Gold falls to two-week low and oil prices retreat

US currency continues to pull away from three-year low
Dollar index



Source: Thomson Reuters Datastream

The dollar made a concerted push higher while Treasuries and US stocks sold off following some relatively hawkish comments on inflation, fiscal policy and growth from Jay Powell, the new chair of the Federal Reserve.

In an upbeat inaugural congressional testimony, Mr Powell told lawmakers that his outlook on the US economy had strengthened since December, and that he saw inflation moving towards the US central bank's 2 per cent target.

But he stopped short of saying whether the Fed's projection for three further rate rises this year would change at next month's Federal Open Market Committee meeting — although interest rate futures moved to price in a slightly higher chance of four increases in 2018.

"While Mr Powell stuck to the gradualist mantra, as expected, he did say the Fed 'will strike a balance between avoiding an overheated economy and moving inflation to a 2 per cent target on a sustained basis', and this had slightly hawkish undertones," said Action Economics.

The dollar index — a measure of the US currency against a basket of peers — rose as much as 0.7 per cent to its highest level for two weeks, while copper fell sharply. Brent oil eased back from Monday's three-week closing high.

Meanwhile, the yield on the 10-year US Treasury climbed back above 2.9 per cent, but stayed shy of the four-year high above 2.95 per cent struck a week ago. The two-year yield was up 4bp at 2.27 per cent.

The S&P 500 index retreated following a three-day run of gains that saw it advance 2.9 per cent.

The rise in the dollar helped drive gold to its lowest level for two weeks, while copper fell sharply. Brent oil eased back from Monday's three-week closing high.

Mr Powell's comments overshadowed US economic data that showed consumer confidence reaching its highest point since 2000 this month — underlining that household sentiment had not been knocked by the recent bout of market volatility, analysts said.

January's durable goods orders report was more disappointing, however.
Dave Shellock

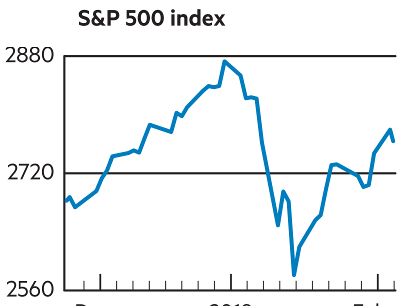
Markets update

	US	Eurozone	Japan	UK	China	Brazil
Stocks	**S&P 500**	**Eurofirst 300**	**Nikkei 225**	**FTSE100**	**Shanghai Comp**	**Bovespa**
Level	2763.80	1498.06	22389.86	7282.45	3292.07	87000.99
% change on day	-0.57	-0.13	1.07	-0.10	-1.13	-0.74
Currency	**$ index (DXY)**	**$ per €**	**Yen per $**	**$ per £**	**Rmb per $**	**Real per $**
Level	90.007	1.224	107.550	1.388	6.307	3.250
% change on day	0.171	-0.407	0.566	-0.430	-0.008	0.374
Govt. bonds	**10-year Treasury**	**10-year Bund**	**10-year JGB**	**10-year Gilt**	**10-year bond**	**10-year bond**
Yield	2.912	0.676	0.041	1.559	3.825	9.612
Basis point change on day	6.390	2.500	-0.360	4.800	-0.100	-3.700
World index, Commods	**FTSE All-World**	**Oil - Brent**	**Oil - WTI**	**Gold**	**Silver**	**Metals (LMEX)**
Level	347.65	66.51	62.97	1325.75	16.61	3402.70
% change on day	-0.49	-1.55	-1.62	-0.58	-0.36	0.33

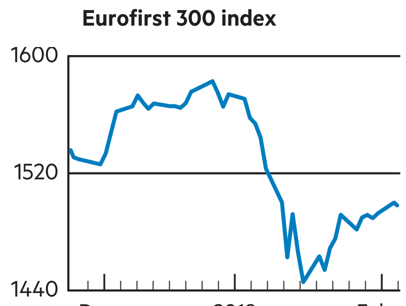
Yesterday's close apart from: Currencies = 16:00 GMT; S&P, Bovespa, All World, Oil = 17:00 GMT; Gold, Silver = London pm fix. Bond data supplied by Tullett Prebon.

Main equity markets

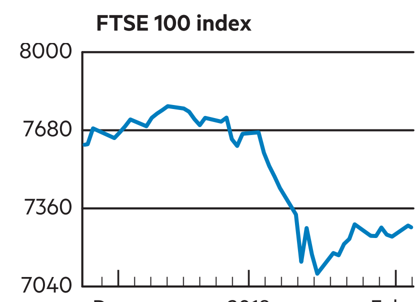
S&P 500 index



Eurofirst 300 index



FTSE 100 index



Biggest movers

%	US		Eurozone		UK	
Ups	Discovery Communications	5.83	Poste Italiane	5.80	Sky	20.50
	Discovery Communications	5.52	Fresenius Se+co.kgaa O.n.	4.43	Persimmon	4.66
	Macy's	4.48	Ucb	2.37	Evraz	2.84
	Chipotle Mexican Grill	4.07	Dassault Aviation	2.20	Ashtead	1.84
	E*trade Fin	3.96	Rtl	2.10	Pearson	1.82
Downs	Autozone	-9.91	Gecina Nom.	-5.54	Fresnillo	-4.43
	Comcast	-6.16	Kone	-4.64	Associated British Foods	-2.38
	Amerisourcebergen (holding Co)	-5.12	Iliad	-3.40	Randgold Resources Ld	-2.33
	Perrigo	-5.10	Telefonica Dtld Hldg Na	-3.28	Reckitt Benckiser	-2.32
	Sba Communications	-4.73	Essilor Intl.	-3.06	Hammerson	-2.17

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

Akorn fell as much as 40 per cent on concerns that **Fresenius** will scrap its takeover or cut its offer price. Fresenius, which last April agreed to buy the generic drugmaker for $4.75bn, said it was "conducting an independent investigation, using external experts, into alleged breaches of FDA [Food and Drug Administration] data integrity requirements relating to product development at Akorn".

Fresenius management has continued to support the transaction, at least publicly, but is likely to want a reprice following two quarters of weak results from Akorn, said Jefferies analysts.

"It now appears that Fresenius has spent time trying to identify a 'material adverse event' that would allow the company to renegotiate or possibly even try to terminate what was perceived to be a 'hell or high water' ironclad agreement by merger experts," it said.

Fitbit tumbled after its fourth-quarter revenue missed expectations and reduced 2018 guidance, due in part to disappointing demand for its new Ionic smart watch.

Department store **Macy's** was in demand after reporting better than expected like-for-like sales growth for the fourth quarter. *Bryce Elder*

Eurozone

Paris-listed **Essilor**, which makes prescription lenses and is soon to be combined with luxury eyewear company **Luxottica**, retreated the most in the blue-chip pan-Europe Euro Stoxx 50 index, falling 3 per cent.

The decline came after Luxottica on Monday reported that net income for 2017 rose 11 per cent to just over €1bn. The Essilor-Luxottica deal has yet to be approved by competition regulators in Europe, the US and China. Milan-listed Luxottica fell 2.3 per cent.

Dax-listed **BASF**, the biggest chemicals company, also had a disappointing day, falling 2 per cent after it reported an annual dividend payout which missed analyst expectations.

Amid a wave of consolidation in the chemicals industry, BASF last year bought parts of **Bayer**'s agricultural business for €5.9bn and merged its oil and gas units with LetterOne group.

Choppy trading affected the eurozone's markets as investors kept an eye on the other side of the Atlantic and on the new Federal Reserve chair Jay Powell's inaugural testimony.

Frankfurt's Xetra Dax slipped 0.3 per cent and France's CAC 40 was flat. But Milan's FTSE MIB edged into the green, up nearly 1 per cent. *Chloe Cornish*

London

Reckitt Benckiser slipped to a three-year low amid concerns that it may have to launch a costly call to buy Pfizer's consumer healthcare division.

Exane BNP Paribas analysts saw Reckitt as highly likely to outbid **GlaxoSmithKline** for the Pfizer unit and said an equity raise is "inevitable" to fund the deal, which investors expect to have a price tag of $15bn to $20bn. "The timing could hardly be worse from a Reckitt perspective, and we believe that it is not the mid-single digit sales growth asset that many think," Exane added.

Sky hit a record high after Comcast's takeover approach for the broadcaster raised the prospect of a bidding war with 21st Century Fox.

Provident Financial jumped by the most on record after the doorstep lender agreed to pay fines and compensation to customers who bought payment policies, funded by a £300m rights issue.

Sirius Minerals, the developer of a potash mine in Yorkshire, was in demand after updating its investor presentation with more details on project financing.

Engineer **Spirax-Sarco** rose on the back of an upgrade to "overweight" from Morgan Stanley. Recent weakness gives investors the most attractive entry point in five years, it said. *Bryce Elder*

Beware of using past data to draw conclusions about indices of today

Miles Johnson
Markets Insight

The last decade in markets could plausibly be called the Age of Indexation. The rise of passive investment has seen hundreds of billions of dollars move into index funds, which has coincided with a growing belief that the index can be used as the principal building block in investing.

A corollary of this has been the near universal acceptance that indices can be studied over time to provide both broad and specific conclusions about what investors should do with their money. Robert Shiller, the Yale professor, won a Nobel Prize for his theory based on top-down valuation analysis of indices to judge future returns. Acolytes have taken his work and applied it in some form to professional money management. Modern finance is addicted to explaining the world through indices.

For everyday savers indices continue to have practical value as a simple way to gain exposure to equities and bonds. For most people they probably remain the worst form of investing apart from all those other forms that have been tried. The problems begin when intelligent observers use historical observations about indices to draw conclusions about the world today that may be far less meaningful than they believe.

Index-based analysis in its crudest form takes a valuation yardstick, such as the price/earnings ratio, and compares the value of the index today on this basis to its historical average. Its logic is one of mean reversion: if the current valuation of the index on any chosen metric is above its historical average then "stocks" are "expensive" due to a tendency for the market to revert.

There are many versions of this thinking, with arguably the most popular based on Mr Shiller's "cyclically adjusted" p/e ratio that attempts to smooth the "e" part over an economic cycle. (Debate over this version's specific merits continues, and there is not space to go into it here. However as an aside, is it really meaningful to cyclically adjust back Facebook's earnings from 2008, or is it just an analytical nonsense? Should we cyclically adjust back motor car sales from 1930?)

A big issue with using indices in this way is not with mean reversion as a concept, but that the data set it uses to derive its mean has changed so frequently that it may not be producing a meaningful average to revert to.

> In the past, most companies in an index did their business at home. This is no longer the case

Indices are to a large extent still constructed on a country by country basis. Investors wanting to invest in US stocks will pick the S&P 500, those keen on Spain will choose the Ibex 35 and so on. In the past this made sense as most of their components did the majority of their business at home. This is no longer the case, and raises problems when reaching grand conclusions about today based on the index in the past.

Many S&P 500 members derive an increasing amount of sales outside the US. As such, charts that try to measure the ratio of the index to US GDP over time make less sense. Apple, the largest component of the index, sells more outside the US than within. Similarly, companies in Spain's Ibex make just 34 per cent of sales at home, and 46 per cent outside the EU. Does the historical average accurately reflect this shift, and how should we account for it?

A different problem with index-based analysis is that it glosses over huge changes in the component parts of these benchmarks. This becomes particularly problematic for those that rely on historical average valuation multiples for an index to draw conclusions. Elroy Dimson, Paul Marsh and Mike Staunton of the London Business School have shown how in 1900 over 60 per cent of the value of listed US equities was in rail. Today much of this value is accounted for by technology.

At the same time returns on invested capital for the most profitable US-listed companies have exploded since the turn of the millennium. According to McKinsey, ROIC, excluding goodwill, for non-financial companies in the 90th percentile of profitability surged to above 80 per cent by the financial crisis, and further since. This compares to less than 25 per cent for this cohort in the 1970s.

What this means is that those who put average valuations from the past next to those of today are comparing hugely capital intensive operations of the past to vastly more profitable businesses that logically trade on higher multiples than railroad and steel companies that were dominant more than a century ago. Again, how do we adjust for this when looking at historical comparisons? Is it even meaningful to do so?

The world is a constantly changing. Looking at the average does not tell the real story; frequently this is happening at the margins. While it may be reassuring to boil this uncertainty and complexity down into simple measurements and formulas this is likely to only ever provide a superficial imitation of reality.

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FT Health

The Future of Rare Diseases

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Niche drugs market looks set to balloon

Genetics Treatments are being tailored to a specific mutation, writes *Andrew Jack*

In just a few years, rare diseases have moved from neglected "orphan" status into the mainstream of drug development, with a growing number of pharmaceutical companies acquiring and investing in life-saving treatments that benefit targeted groups of patients.

Now they are converging with the broader trend of "personalised medicine" that is transforming research, outcomes and the economics of the industry more widely. "We're moving from blockbusters to niche-busters," says Hilary Thomas, chief medical adviser at KPMG.

Many thousands of orphan conditions affecting small numbers of patients with unusual conditions remain poorly researched with few medical options for treatment and poor prognoses. However, a growing number — from Gaucher's disease, which can cause an enlarged spleen and liver as well as skeletal disorders, to cystic fibrosis, which affects mainly the lungs — have potent treatments that were inconceivable until recently.

That is reflected in growing corporate investment. In January, Sanofi paid nearly $12bn for Bioverativ, a US company focused on haemophilia and other rare blood conditions. Shire, which acquired Baxalta for $32bn in 2016 to strengthen its rare disease portfolio, has been subject to fresh speculation that it will itself be bought after a previous thwarted takeover bid by AbbVie.

EvaluatePharma, a research group, estimates total orphan drug sales will rise from $127bn for 2017 to $217bn in 2022, while their share of the revenue from all prescription medicines will increase from 16 per cent to 21 per cent.

Orphan treatments were long viewed as pioneers in personalised medicines, focused on conditions with a single mechanism and transformative,

Continued on page 2

Discovery will aid fight against the horrifying birth defect caused by Zika

Breakthrough: a team led by Brazilian scientist Mayana Zatz has found that only babies with a genetic predisposition are born with microcephaly after infection with the Zika virus. Page 3 — Hilaea Media/Dado Galdieri for Financial Times

Inside

Founding father's legacy is a vibrant biotech sector

Profile Henri Termeer
Former Genzyme chief helped make 'orphan' drugs viable, says *David Crow*

A crusader against rare diseases, Henri Termeer is credited with building the market for "orphan" drugs, which treat illnesses affecting only small numbers of people. His crowning achievements at Genzyme, a biotech group set up in 1981, were not just the development of new medicines for devastating genetic disorders, but also his ability to convince healthcare systems to pay high prices for the company's products.

By showing that it was possible to profit from diseases that Big Pharma had dismissed as uneconomical, Termeer helped spawn a new generation of biotech groups dedicated to illnesses that had largely been ignored. These include cystic fibrosis, which affects mostly the lungs; Pompe disease, which causes muscle weakness and difficulty breathing; and spinal muscular atrophy (SMA), involving progressive muscle wasting.

Until then, drugmakers had assumed they would not be able to recoup the costs of developing such niche medicines.

The Dutch executive, lauded as a founding father of the modern biotech industry, was 71 when he died in May last year after collapsing at his home in Marblehead, Massachusetts.

During his tenure at Genzyme, Termeer turned the company from a tiny outfit that had 20 staff into one of the world's largest biotech groups with 12,500 employees.

In doing so, he played a major role in the emergence of the Boston-Cambridge cluster in Massachusetts as the epicentre of the world's life sciences industry.

Because Genzyme made medicines for such a small number of people, Termeer was able to take a different approach to drug development, which saw the company forge enduring personal relationships with patients that benefited from its products. That in turn gave rise to a patient advocacy movement for rare illnesses.


New focus: Genzyme forged enduring relations with its patients — Getty Images

"His major accomplishment was he helped invent the whole area of rare disease drug development by keeping the focus on the patient — he was all about the patient," says Michael Rosenblatt, who served on several boards with Termeer, and who is the chief medical officer of Flagship Pioneering, a life sciences venture fund based in Cambridge.

Born in the Netherlands in 1946, Termeer studied economics at the Nederlandse Economische Hogeschool, Erasmus University, before earning an MBA at the Darden School of Business in the US. He spent 10 years in sales and marketing at Baxter, a large US drugmaker, before taking a 50 per cent pay cut to become Genzyme's president in 1983.


Henri Termeer: had seen the 'enormous impact' of treatment

Genzyme's first drug was an enzyme-replacement therapy for Gaucher's disease, a sometimes fatal condition caused by the body's inability to break down lipids. Unchecked, the fatty substances build up in the bone marrow, liver and spleen, causing swollen organs and confining sufferers to a lifetime of pain.

Although the drug, which was originally identified by the US National Institutes of Health, at first appeared promising, subsequent trial data were less clear-cut and many in the industry faulted Termeer as unrealistic when he tried to raise funds for fresh studies in 1987.

But Termeer persisted, emboldened by what Dr Rosenblatt describes as a "journey of enlightenment". Termeer had seen the "enormous impact" the medicine had on a four-year-old victim of Gaucher's and was determined to extend its benefit to others.

The subsequent trials were a success and, in 1991, Genzyme won regulatory approval for the medicine, which was marketed under the Ceredase brand. It was a first not just for people with Gaucher's, but also for the field of pharmacoeconomics, with a price tag of $150,000 per year.

To the surprise of some in the industry, Termeer convinced insurers and governments it was a price worth paying. Today, it is not uncommon for rare disease medicines to cost in excess of $300,000 annually.

In the following years, Genzyme would bring out medicines for other rare diseases such as Pompe.

Termeer had hoped to keep Genzyme independent, fearing its patient-focused approach would be stifled if it were acquired by a large pharmaceutical company. However, that dream began to unravel in 2009, when its main factory became contaminated with a virus, earning it a rebuke from patients, regulators and shareholders and forcing it to drastically scale back production.

The group's share price tumbled, creating an opening for activist investors, including Carl Icahn, who agitated for Genzyme to be sold.

After nine months of fending off advances from Sanofi, the French drugmaker, Termeer capitulated and agreed to the sale of the company for $20bn.

The takeover came as a blow to Termeer, who resigned as chairman and chief executive when the sale was completed in 2011.

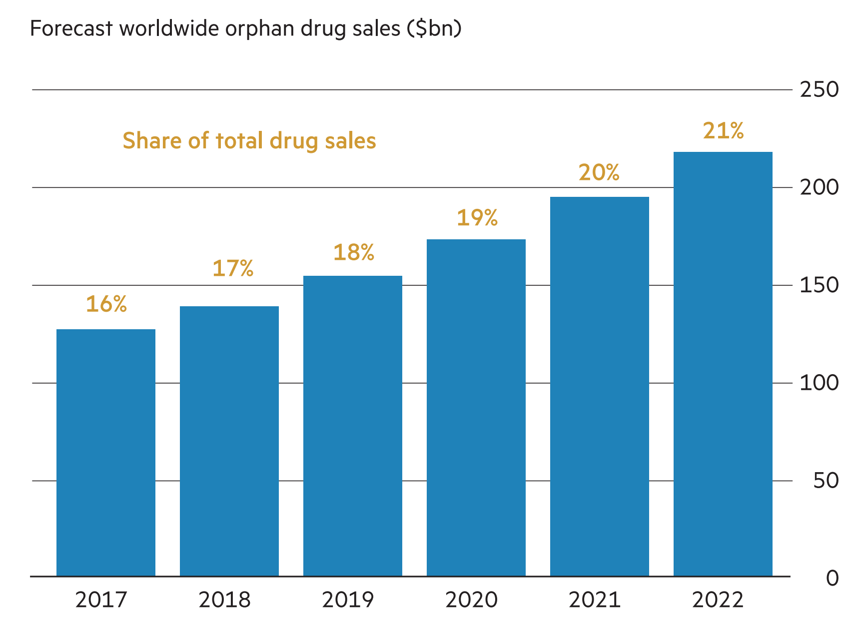
Termeer remained active in biotech after his departure from Genzyme, becoming a director of several companies while joining the boards of various not-for-profit institutions.

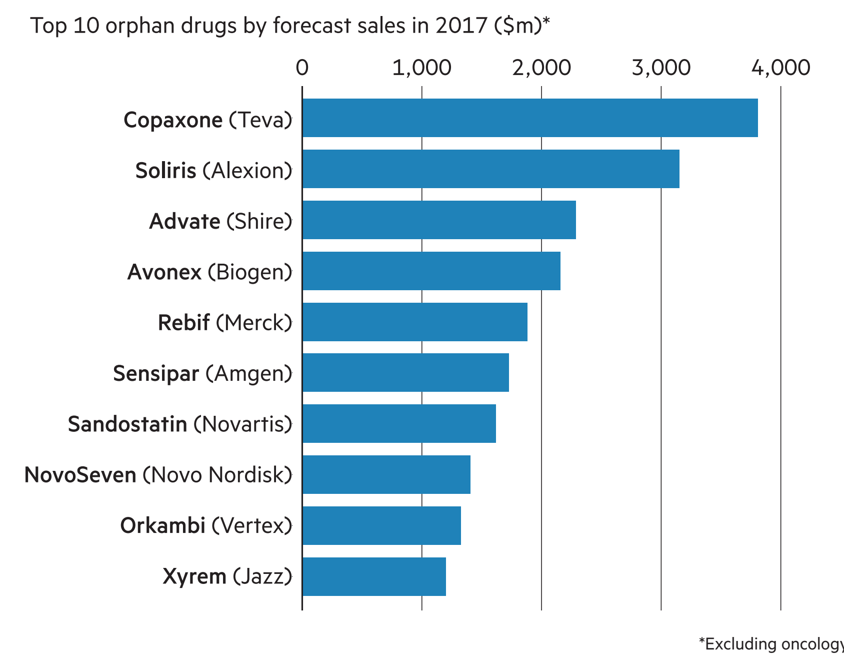
Some of today's biotech executives say the sale of Genzyme in fact ended up reigniting the US biotech scene, because so many of his protégés left the company to start or join smaller outfits.

"What Henri did [while he was in charge] was he instilled so much passion that there was so little staff attrition at Genzyme," observes Stephane Bancel, chief executive of Moderna, a large private biotech company that counted Termeer as a director until he died.

Mr Bancel adds: "Then, when it was sold, there was a total implosion, and today there is almost no one left at Genzyme from Henri's days: and that ended up really seeding the biotech industry with new leaders in a big way."

Rare no more: orphan drugs spending is large and growing





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Value of niche drugs market is expected to balloon

Continued from page 1

targeted response such as enzyme replacement. "You often have a monogenic [controlled by one gene] disease with one cause, compared with other medical conditions such as hypertension which are multi-causal," says Andreas Busch, chief scientific officer at Shire.

One of the most striking evolutions in the field has been in oncology, the study and treatment of cancer and tumours, where previously broad-brush treatments are being replaced with therapies for smaller patient populations. For these patients, the therapy is so targeted and suitable for so few that the treatments are also classified as orphans.

EvaluatePharma's largest sales forecasts are for cancer treatments: it estimates that in 2017 orphan drugs will have generated $12.4bn in annual sales for Novartis, the Swiss pharmaceutical group, and $10.7bn for Celgene of the US. Its Revlimid (the top-selling rare disease drug) for multiple myeloma, a cancer of the blood, alone accounted for $8bn.

"In breast and lung cancer, there is a lot of work to identify the specificities of populations where certain drugs may work in the best possible way," says Samit Hirawat, head of oncology global drug development at Novartis. "Large diseases are converting to smaller, rare diseases with drugs that have the best transformational effect."

In more personalised cancer treatment, there are challenges of toxicity, complexity and the need for precise diagnostics. That has sparked a shift towards immunotherapy, such as around individualised CAR T-cell therapy which collects and uses patients' own immune cells to treat their cancer.

There is a broader interest in individualised gene therapies that extract, modify and return genes to the body of each patient.

"This is a completely new arm of medicine and we believe it's going to be the next big thing," says Keith Thompson, chief executive of the UK's Cell and Gene Therapy Catapult, which supports research and manufacture in the field. "It was really a cottage industry, but now it's an absolute boom area. It's a remarkable time for medicine." He likens gene therapy to receiving a transplant rather than conventional drug


Drugs: the industry has changed


Targeted: smaller can be better

treatments, which typically "don't cure you but just keep disease at bay."

These advances are challenging some longer-established rare disease treatments. In cystic fibrosis, for instance, Vertex's ivacaftor works on an estimated 8 per cent of patients with specific gene mutations.

Yet this trend of personalisation creates multiple difficulties. The first is the risk of undermining some of the exceptional power of small but united patient groups for rare diseases, which have been a force for lobbying and recruitment for clinical trials to ease new drug development.

"We are seeing that the fragmentation of common diseases is replicated for rare diseases," says Alastair Kent, ambassador for Genetic Alliance UK, the patient advocacy group. "That risks putting patients into different camps and fragmenting the solidarity that has

> 'Large diseases are converting to smaller, rare diseases'

been a characteristic of patient support organisations."

There is a trade-off to make between creating economic incentives to tackle rare diseases and the spiralling cost of treating growing numbers of ever-smaller populations of patients. "How can you maintain the impetus towards innovation if diseases are too small for industry to see a return on investment or only at a price healthcare systems cannot afford to pay?" he asks.

Last year, GSK's Strimvelis gene therapy for adenosine deaminase deficiency or "bubble baby" syndrome, won draft approval by the UK's National Institute for Health and Care Excellence (Nice), the NHS' drugs advisory body — at $700,000 per treatment.

Yet in February, Nice decided not to recommend BioMarin's Brineura for Batten disease, another very rare genetic disease that affects the nervous system. It concluded that at £500,000 per treatment, the drug did not offer sufficient proven value.

"Quick and dirty development is not possible any more," says Jan-Anders Karlsson, chief executive of Verona Pharma, which works on respiratory diseases including cystic fibrosis. "It's going to be less and less attractive unless you truly have a cure or a very targeted molecular mechanism."

Mr Kent cautions: "We have to find a way of creating an environment that is sustainable, with a reasonable prospect of patients getting treated, the industry rewarded and with treatments that are affordable in the long term for the health system, or it will crash and burn."

Brexit risks for UK patients living with a rare disease must be addressed

OPINION
Jayne Spink
Yann Le Cam

Rare diseases affect an estimated 3.5m people in the UK, 30m people in the EU and 300m worldwide. It is possible to identify more than 6,000 different rare diseases and the number of diagnosable diseases is increasing on an almost daily basis thanks to research, science and developments in novel technologies.

Many rare conditions are severe and life-changing. They are commonly genetic in origin and therefore can affect more than one member of a family. Delays in diagnosis, misdiagnosis and hurdles in accessing expert help and co-ordinated care are familiar experiences faced by far too many patients suffering from rare disease and their families.

Rare diseases, because of their very nature, involve many isolated patients and scattered local medical expertise. Therefore, tackling such conditions is an area of medical endeavour that is ripe for a broad European-wide approach, where the most effective strategies are collaborative and cross-border.

With Britain's exit from the EU looming, it is a priority for patients and families affected by rare diseases in the UK to ensure they continue to benefit from this broader European regulatory framework.

Through the enactment of the 2011 EU directive on patients' rights in cross-border healthcare and other policies affecting rare diseases, the EU has been instrumental in improving patients' access to medicines and healthcare across member states.

This has been exemplified by the creation of 24 European Reference Networks for rare diseases, which draw on the expertise of doctors and researchers at 900 specialised healthcare units located in 313 hospitals in 26 EU countries and EEA countries.

Few treatments exist for rare conditions, with only 5 per cent of all rare diseases having a product approved to treat some manifestations of their diseases.

So, clearly, further extending research, development and access to medicines are high priorities on the agenda of the rare disease community.

The EU's medicines regulator, the European Medicines Agency (EMA) has created the largest single supranational regulatory environment, covering 500m people.

Since the introduction in 2000 of the EU regulation on orphan medicinal products, the EU has been an extremely important vehicle for incentivising the development of medicines. Being part of the EU has cemented the UK's pole position for the launch of new medicines, being either first or second (after the USA) on the list of markets where pharmaceutical companies seek to launch their products.

Nowhere has the value of a single market been seen more clearly than in the rare disease sector — medicines for rare diseases and medical devices get a single authorisation to be used in the EU, providing for cost-effective licensing and distribution of medicines for small populations. Losing this leverage and the incentives of the centralised process could be the difference between UK patients being able to access a new treatment for a rare disease or not.

The UK government has stated its desire and commitment to continue working in partnership with the EU on medicines regulation. It has outlined three principles in developing a new regulatory system following Brexit: patients should not be disadvantaged; innovators should be able to get their

> Nowhere has the value of a single market been seen more clearly than in the rare disease sector

products on to the UK market as quickly and simply as possible; and the UK should continue to play a leading role promoting public health.

Whether the UK breaks away from the centralised procedure or not, both the EMA and the UK's Medicines and Healthcare Products Regulatory Agency (MHRA) need to co-operate to guarantee the best possible outcome for patients in the UK and Europe.

Despite the UK government's wishes, there remains legitimate concern that the UK risks having less influence in EMA activity. The uprooting of the EMA from its current base in London to Amsterdam poses challenges for the UK's contribution to the work of the Agency. Over 30 years and with more than 3,500 medicines approved for the EU market, the MHRA has contributed as the lead regulator in the EMA's evaluation systems. The UK agency is currently leading 35 per cent of the EMA's medicines safety monitoring, and about 40 per cent of the evaluation of highly complex therapies.

Clearly, the shape of many arrangements that will follow Britain's departure from the EU remain to be agreed.

However, it will be in the best interest of all rare disease patients across the EU to ensure the UK can continue its valuable contribution to EU-level rare disease collaboration.

Our organisations, Eurordis-Rare Diseases Europe and Genetic Alliance UK, are determined that the voice of UK rare disease patients will continue to be heard at the EMA, irrespective of its location following Brexit, and more broadly at the EU level for collaboration on research and treatment. Families living with a rare disease deserve the benefits European collaboration can bring.

Dr Jayne Spink is chief executive of Genetic Alliance UK. Yann Le Cam is chief executive of Eurordis-Rare Diseases Europe and member of the management board of the European Medicines Agency.
The views expressed are those of the authors alone.

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Mayana Zatz Her work on twins shows a genetic component to the birth defect, says *Andres Schipani*

Brazilian team finds clue to congenital Zika syndrome

Soon after the Zika epidemic broke out in Brazil, Mayana Zatz — an acclaimed geneticist who, for the preceding four decades had been tracking rare genetic disorders that destroy muscles — received a surprise phone call from the scientific director of a research foundation in São Paulo.

Carlos de Brito Cruz told her Brazil was in a crisis and asked if she could contribute in any way.

It was 2015, and scientists were trying to establish a link between the Zika virus — usually a mild condition that can cause flu-like symptoms — and a horrifying birth defect called microcephaly in which babies are born with abnormally small heads. The affected children also face a lifetime of mental disabilities, seizures, as well as hearing and sight problems.

Prof Zatz's first thought was: "I am not an infectologist, I have nothing to do with this."

Over the years, she and her team at the Human Genome Research Centre had helped close to 30,000 patients, after identifying genes responsible for muscular dystrophies, mainly neuromuscular.

"But [after hearing more about the birth defects] this caught my eye right away because only a small percentage was suffering from it." She immediately began to wonder whether there was a genetic component to the condition, so she rounded up her team and started looking for twins in Brazil's worst-affected areas.

"What interests us very much is what protects some people from the effects of mutation," says Prof Zatz, a larger-than-life 70-year-old, who has won accolades for her work as a scientist (see box).

Despite her scientific achievements, this new assignment was very different to the work she had been doing before. "This was completely out of her scope of action, she has never worked specifically with virology, but her acumen on this was incredible," says Ernesto da Silveira, a biological engineer who is a member of her team in the Zika project.

The scientists identified Brazilian twins whose mother had been exposed to the Zika virus. Two pairs were identical and the rest were non-identical.

The identical twins all had microcephaly, but of the seven other pairs of non-identical twins, only one pair of twins was both affected.

The remaining six pairs were "discordant", with only one child presenting with microcephaly, even though they had shared the same uterine environment.

"She got that stuck into her head, called us and said: 'Let's design a project, I think there is something there'," Mr da Silveira says.

Prof Zatz and her team went to Recife and interviewed and examined the families and twins, with particular interest in the patients she called *discordantes* or anomalous — that had one twin affected while the other was not.

To identify any possible genetic component, her team compared all the gene sequences from eight pairs of twins and 10 other babies that developed the Zika syndrome.

They found that between 6 and 12 per cent of the babies born from mothers infected with the Zika virus had what Prof Zatz calls "congenital Zika syndrome".

"[Even] if the baby has these genetic susceptibility factors, we believe the baby will not have microcephaly unless the baby is infected by the Zika virus," Prof Zatz explains.

The results, published in Nature earlier this month, confirm the hypothesis of a genetic influence on susceptibility to the congenital Zika syndrome and microcephaly, she says.

More than that, it suggests that there could be a value in taking this line of research with other diseases.

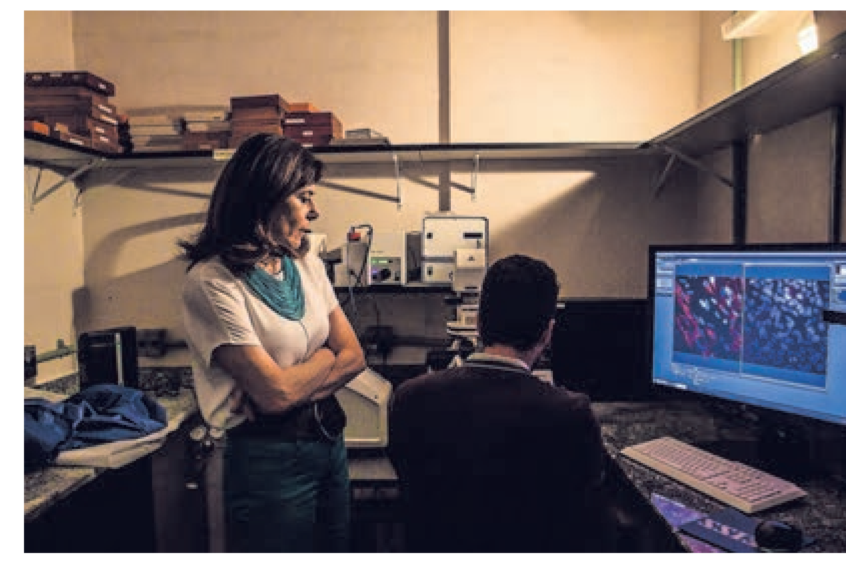
"This [work] shows that genetics and infectious diseases can have an intersection," Prof Katz says.

"We could identify the people with the genetic alteration and prioritise them in a future vaccine strategy. Same with mothers who are pregnant and have exposure to Zika, if they don't have this gene, they do not have to worry," says Prof Zatz, who has two children and has two grandchildren.

Since the outbreak, Zika has receded as people build up resistance to infection and authorities have been fighting the Aedes aegypti mosquitoes that spread the virus.

Brazil declared an end to its Zika emergency in May last year after recording a 95 per cent fall in the number of cases in the first four months of 2017 compared to the previous year. However, the virus remains a health threat in the region and a return could affect future generations.

The World Health Organization announced last year that 31 countries had reported microcephaly cases, or central nervous system malformations, potentially linked to Zika.



Mystery: Mayana Zatz (bottom right) tested non-identical twins where only one of the pair had the Zika birth defect (above left, top) — Hilaea Media/Dado Galdieri for Financial Times

CV Mayana Zatz

BORN
July 16, 1947, Tel Aviv, Israel. She moved with her family to Paris the following year and arrived in São Paulo in 1955.

EDUCATION
Bachelors in biology and PhD in human and medical genetics at University of São Paulo, post-doctoral research in medical genetics at UCLA.

TO STAY OR GO
She had several offers to stay on and work in the US, but decided to return to Brazil where she felt she could "make a difference".

She returned to São Paulo to focus on the diseases that cause muscular dystrophy: "Nobody worked on that here then," she says. She went on to pioneer the use of molecular biology in Brazil's fight against rare diseases.

CAREER HIGHLIGHTS
1982 — 1992
Assistant professor of human and medical genetics, University of São Paulo
1992 — present
Professor of human and medical genetics, University of São Paulo
2000 — present
Director of the Human Genome and Stem-Cell Research Centre (Hug-Cell), University of São Paulo
1996 — present
Member of the Brazilian Academy of Sciences
2005 — present
Member of The World Academy of Sciences (TWAS), a Trieste-based institution that fosters science in developing countries
1981 — 2015
Founder and president of the Brazilian Muscular Dystrophy Association (ABDIM)
2010 — 2012
Board of revisers (BORE) for Science, the scientific journal

INTERESTS
Her interests include jogging, travelling, watching films and going to the theatre.

Chinese rare disease patients 'waiting for death'

Costs

Recent moves by Beijing could open the door to wider coverage, say *Tom Hancock* and *Wang Xueqiao*

Li Wenyan was unable to afford medical bills for her seven-month-old daughter's rare disease, which could cause her heart to fail within months. So she turned to a new source of funding: asking strangers for money on the internet.

"I come from generations of peasants and my family has an annual income of Rmb30,000 [$4,730]," Ms Li wrote in a post on a crowdfunding site. She added that treatment costs were Rmb120,000 a month and with "debts piled high I have no other option," alongside two emojis showing hands clasped in prayer.

The campaign attracted more than 1,800 donations, raising almost Rmb30,000 — enough for one course of treatment with the drug Myozyme, manufactured by French company Sanofi.

But with thousands of other people vying for money on the platform, the final amount fell short of her Rmb300,000 target. "The second round of fundraising did not come in time," Ms Li said.

Ms Li's daughter, Yuxin, was nine months old when she died of Pompe disease, a genetic disorder which causes sugar molecules to build up in muscle tissue including the heart.

China has the world's largest population of people with rare diseases — numbering between 15m and 20m according to estimates. China has rolled out state medical insurance for some drugs over the past decade but the vast majority of orphan drugs are not included. Even when they are, there is no guarantee that regional insurers will cover them. Myozyme, a treatment for Pompe, was approved for use in China in 2015 but Ms Li was unable to gain any state reimbursement for the drug.

People trying to pay for a treatment for a rare disease in China face bills that are on average three times their annual individual incomes and nearly two times higher than their household incomes, according to a survey of rare disease sufferers carried out in 2015.

There are about 35,000 Pompe patients in China, according to an association representing sufferers. About 80 per cent of them are adults who face annual medical costs of around Rmb3m compared with annual average incomes in China of about Rmb70,000 a year. It is impossible for sufferers in most parts of China to obtain government insurance contributions for Pompe drugs.

Ji Chongzhe, of Jilin province in the north-east, says his child developed Pompe symptoms at seven months, but local doctors initially thought it was a cold. Only after a genetic test at a hospital in Beijing was the disease identified. Eight hospital stays later, Mr Ji says he has spent his life savings — over Rmb100,000 — on treatment. He earns just Rmb4,000 a month. "After the New Year holiday we will sell our house, but that will only keep us going for half a year. After that if there's still no medical coverage, we can only wait for death."

Medhat El-Bialy, head of rare diseases in emerging markets at Sanofi, admits limited insurance is a key barrier to access. With only 38 per cent of orphan drugs available in the US on the market in China "there is catching up to do," he says.

'Solving the payment problem in China is much tougher than solving the approvals problem'

Wang Cheng's four-year-old daughter suffers from Gaucher's disease, a rare genetic disorder that can cause a build-up of fatty substances in certain organs. He estimates that of the approximately 400 people in the country with the condition, 138 have received help from charity programmes while at least 100 patients have no access to medicine at all. Efforts to treat the disease severely strain charity budgets. Treating just six Gaucher's disease patients in Shanghai costs the Shanghai Rare Disease Prevention and Treatment Fund about Rmb2m a month, according to its chairman Li Dingguo.

Access to healthcare can also depend on residency. Zhou Yingchun's family has just paid Rmb300,000 for a bone-marrow transplant for their 15-year-old daughter who suffers from epidermolysis bullosa — a condition which causes the skin to blister and tear. As the operation was performed outside the family's official place of residence, the family had to pay the entire cost themselves.

Huang Rufang, founder of the Chinese Organisation for Rare Disorders, says wider government insurance was the most urgent need for rare disease patients. "Overall the provincial insurers do not do a good job," he says.

But recent moves by policymakers give some hope. Beijing last year announced it would draw up its first official list of rare diseases which could open the door for wider cost support.

Some wealthier provinces have already added rare disease drugs to their reimbursement lists, he adds, while the China Food and Drug Administration, the top pharmaceutical administrator, has vowed to speed up the process for approving new treatments. "I think the CFDA's measures have encouraged drug developers," Mr Huang says.

The drug administrator's move "creates an opportunity for Pfizer and for other companies to bring innovative drugs to Chinese patients", says Krishna Padmanabhan head of rare disease marketing in China for the US company, describing a "huge unmet medical need" in the country.

Chinese companies are also spotting the opportunities. Beijing-based start-up Prosit Sole Biotechnology is developing a treatment for norovirus gastroenteritis in immunocompromised patients, a market it estimates could be worth $500m per year in the US although only half of that amount in China.

The group intends to run trials in the US, a sign of its overseas ambitions. "Getting insurance coverage in China for orphan drugs is very tough, whereas the system in the US and Europe is more mature. That's why we are focusing on overseas markets," says Prosit's founder Liu Hongyu. "Solving the payment problem in China is much tougher than solving the approvals problem."

Expensive burden: there is scant health coverage for diseases such as epidermolysis bullosa (above) — Shanghai Butterfly Centre

Healthcare How it works in China

Basic healthcare coverage was free for Chinese citizens until the 1980s, after which state-run hospitals began to charge for treatments. China began rolling out universal state-subsidised health insurance around a decade ago. Contributions are means-tested, meaning lower earners pay less. Now, 95 per cent of the population is covered by schemes under which the state will fund part of the cost of medical treatment, compared with 30 per cent in 2012.

However, while state medical coverage in China is broad, it remains shallow. Apart from a few hundred drugs deemed essential, the only treatments eligible for state co-payment are those named on a national drug reimbursement list, which was updated last year to include about 2,500 drugs.

Many life-saving drugs, including most used to treat rare diseases, are not on this list — and their prices are set by manufacturers following the abolition of official price caps for most drugs in 2015.

Provinces determine the level at which most drugs on the national list are reimbursed, depending on their resources. As a result, the proportion of costs paid by the state can be as low as 30 per cent. Patients generally pay a larger proportion of their medical bills in China's poorest provinces and in the countryside, even though incomes are also generally lower.

A rare disease charity in China says the typical annual cost of Myozyme, which is used to treat Pompe disease, is Rmb2m ($315,000). Most provinces will not contribute towards the cost of the drug, which means patients or their families will have to fund the entire cost themselves.

Tom Hancock and Wang Xueqiao

'Diagnostic odyssey' nears its end for many families

Genomes Genomics England's progress enhances the quest for new treatments, says *Clive Cookson*

Just in time for Rare Disease Day, marked on February 28, the UK's 100,000 Genomes Project has reached its half way milestone. The £300m project, run by state-funded Genomics England, has read 50,000 whole genomes — each consisting of 6bn letters of genetic code — from people with cancer, rare diseases and their immediate families.

Some 42,000 of the genomes read so far come from the rare diseases arm of the initiative. Identifying the gene or genes associated with a particular ailment can provide a diagnosis for rare disease sufferers and could point the way to a treatment.

Mark Caulfield, chief scientist at Genomics England, says: "We have returned reports for 7,000 families [with rare diseases] and we are achieving a potential diagnosis for 20 to 25 per cent of them. We create an analysis of the individual's genome but the NHS is responsible for validating the findings and interacting with the patients."

So far NHS genomic medicine centres have provided diagnoses for around 1,500 rare disease patients.

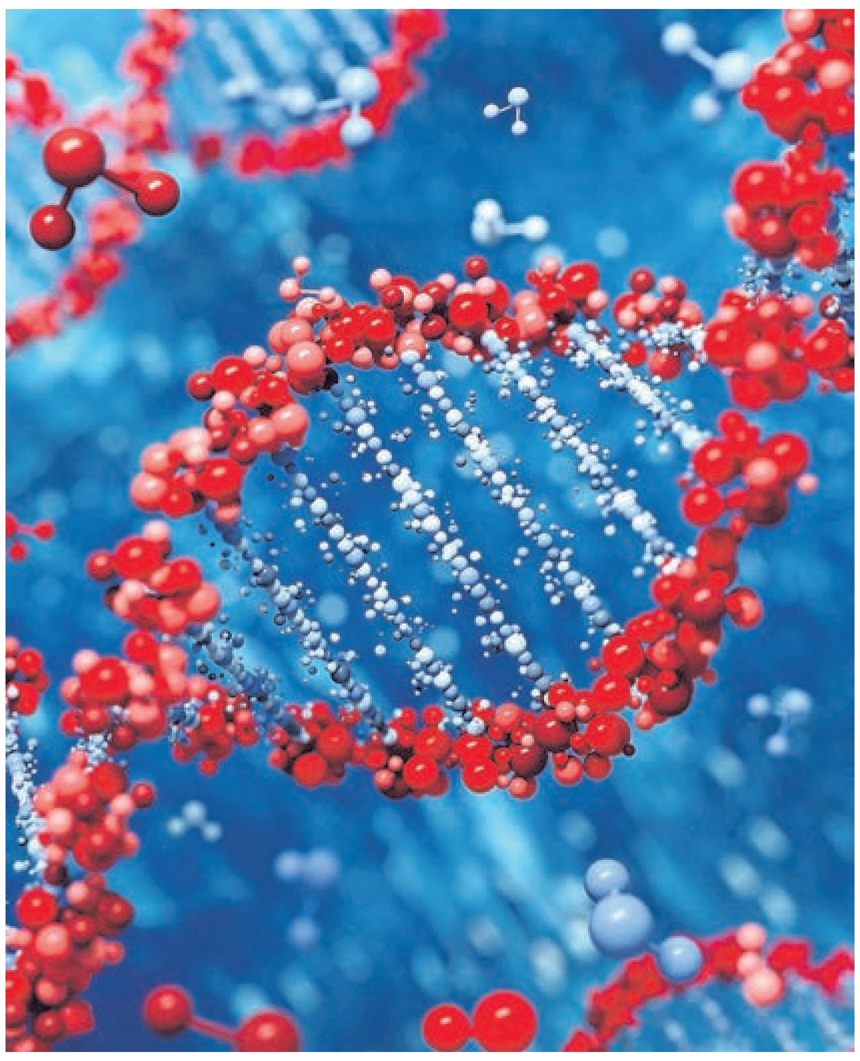
"Merely getting a diagnosis for the first time can be transformative for some people, who may have been through a 'diagnostic odyssey' lasting years, even if there is no immediate treatment," he adds.

Four-year-old Jessica is a good example of the way painstaking genome analysis can pin down the cause of a rare genetic disease. She was suffering from a range of disorders such as epilepsy and poorly co-ordinated movement, which doctors could not explain through conventional diagnostic techniques including brain scans and lumbar puncture. So her doctors enrolled her in the 100,000 Genomes Project.

A first comparison of Jessica's DNA with a standard "reference human genome" showed 6.4m differences, of which 677,556 were rare. These were narrowed down, using scientific studies and research papers, to 2,862 variants expected to cause a change in a protein produced by a gene.

Because Jessica's mother and father do not have her disease, the analysis focused on the 67 protein-coding variants that were different from her parents. These were checked against a database called PanelApp, curated by Genomics England, which has information on thousands of genes known or suspected to be linked to a rare disease. Just one mutation, in a gene called SLC2A1, was associated with symptoms similar to Jessica's.

SLC2A1 makes a protein that helps to transport sugar into the brain. The defect starved Jessica's brain of glucose fuel — and, once it was identified, her doctors mitigated its impact through a special low-carbohydrate ketogenic diet designed to maximise energy production in the brain.



Half way mark: the project has mapped 50,000 genomes — Dreamstime/Leigh Prather

In cases where the project cannot diagnose any genetic cause for a patient's disease, the genomes and clinical data are made available to the 2,700 scientists in 24 countries who have signed up for research partnerships with Genomics England, in the hope that they will find something.

"The 100,000 Genomes Project was a stunningly ambitious project when announced by the Department of Health five years ago," says Sir John Chisholm, executive chair of Genomics England. "Having built the platform and reached the 50,000 halfway point, we are now able to operate at a scale to complete the [100,000 genomes] target by the end of 2018."

When the 100,000 Genomes Project ends, says Sue Hill, NHS England's chief scientist, "the use of whole genome sequencing will be embedded in the NHS as part of the new Genomic Medicine Service offering real benefits to rare disease patients and healthcare delivery".

The road from diagnosing a genetic disease to finding an effective treatment can be a long one, as Kay Davies of Oxford university knows well. She has been working for more than 30 years on Duchenne muscular dystrophy (DMD), which causes muscle degeneration in about one boy in 5,000.

The genetic cause of DMD was discovered in 1986. A DNA defect stops cells making dystrophin, a protein that is essential for maintaining the structure and functioning of muscles.

But only now are DMD therapies showing promise in clinical trials. One is ezutromid from Summit Therapeutics, a company Prof Davies co-founded. Key clinical trial results from ezutromid are due this summer.

As genomic diagnostics reveals the cause of many more inherited diseases, much rarer than DMD, the pressure to find more treatments is mounting.

"We need to move as quickly as possible beyond animal models to carry out far more small, well-conducted trials of rare disease treatments in patients," she says.

Fight against leprosy is far from over

Case study

Fresh ideas for diagnosis, treatment and prevention are being tested, as 2m continue to live with the disease, says *Andrew Jack*

A few days after Mathias Duck first felt tingling and numbness in his right hand, the symptoms began to worsen. "I started having a weird feeling, almost as if the skin was getting too tight for my hand," he recalls.

He was lucky. He had been working in a specialist hospital in Paraguay for 20 months, and his colleagues swiftly diagnosed his condition as the very one in which they had deep expertise: he had contracted leprosy.

More than three millennia after the first case was identified in humans, and nearly two decades after the World Health Organization targeted its elimination in 2000, the disease is far from being consigned to history.

Leprosy is just one of many burdensome "rare" diseases in the developing world that are neglected even by the standards of "orphan" conditions, where better diagnostics and wider availability of treatment are needed.

A combination of three drugs has been available since the 1980s, which provide effective treatment and have been donated by Novartis. However, for many help comes too late — more than 200,000 individuals are diagnosed with leprosy each year and more than 2m people live with the disease, many with irreversible damage to nerves and limbs due to lack of treatment.

"There was a huge amount of enthusiasm up till 2000," says Cairns Smith, emeritus professor of public health at the University of Aberdeen. "But then people thought the job was done and lost commitment. It's quite difficult to explain that after an elimination programme, you still need to work in the field."

Even though Mr Duck was swiftly cured with no lingering physical damage, it took him years to overcome a heavy continuing burden of leprosy: stigma. "I was afraid of rejection," he says, adding that this feeling is common among sufferers. "Having leprosy means being abandoned by family members, losing their jobs, sometimes being abandoned by their spouse, their family, and with their kids struggling to be accepted at school."

Prejudice is just one barrier to limiting transmission of the disease, which requires better understanding of its spread from humans and animals, improved prevention, more effective diagnosis, and preventative treatment of those who may have come into contact with anyone who is infected.

Because leprosy can take years before symptoms occur, identification is typically late and crude. Yet work is under way on innovative approaches including computer analysis of photographs of skin taken on smartphones, as well as more sophisticated blood tests.

Some studies suggest the BCG vaccine given for tuberculosis provides signifi-

'It's quite difficult to explain that after an elimination programme you still need to work in the field'

cant protection from leprosy. New vaccines are also being investigated.

Ann Aerts, head of the Novartis Foundation, which has helped support innovation in the field, also points to the need for more detailed efforts in modelling, mapping and detection of cases.

She was part of efforts to create a new Global Partnership for Zero Leprosy this year designed to focus funding and effort across different organisations working on the disease.

Dr Aerts is cautious about progress but optimistic that recent efforts can help significantly drive down infections over the years ahead. "If we put our resources together . . . we can be sure we will address the priorities," she says.

'Holy grail' of gene therapy still a long way off for cystic fibrosis

Drug development

Conventional treatments developed by Vertex can now help many sufferers, but they have a hefty price tag, says *David Crow*

Until six years ago, there was nothing that could stop the relentless march of cystic fibrosis, a relatively rare disease that affects roughly 75,000 people worldwide, which causes the build-up of thick mucus in the lungs, pancreas, and other organs.

Sufferers did not expect to see their 40th birthday: after years of battling persistent infections since childhood, most succumbed to fatal lung disease.

The frustratingly slow progress was surprising given that the gene responsible for cystic fibrosis was discovered in 1989, well before the understanding of other hereditary diseases was unlocked by the completion of the human genome project in 2003.

The early finding raised hopes that the disease could be tackled with a gene therapy, a one-off intervention that would correct the defect in the cystic fibrosis gene at source.

But, as with other early attempts at gene therapy, the efforts were fruitless.

"Way back in 1989, it turns out we weren't ready for a gene therapy approach," explains Paul Negulescu, a senior vice-president at Vertex, which makes medicines that can arrest the development of cystic fibrosis.

"It resulted in a gap in the 1990s for the field, which was generally either working on gene therapy — which turned out to be a lot harder than people thought — or drugs that could treat the symptoms," he recalls.

Frustrated by slow progress in gene therapy, leaders of the US-based Cystic Fibrosis Foundation started to wonder if there was a way of using a traditional pill to target the disease. The organisation approached Mr Negulescu.

By 2005, his San Diego-based team had discovered ivacaftor, which was eventually approved by the FDA in 2012 for patients with a specific genetic mutation, and sold under the brand name Kalydeco. It was the first time patients had a medicine that would slow the disease down.

"We were able to show that you could

Denied: the UK has declined Orkambi

produce a viable drug, taken by mouth, that you could help the patient recover and improve," recalls Mr Negulescu.

Kalydeco, however, is only suitable for roughly 8 per cent of cystic fibrosis sufferers.

Since then, Vertex has managed to boost the number of patients who can benefit from treatment by combining ivacaftor with other medicines and today the company's drugs help a little over half of cystic fibrosis sufferers.

The next big step is the development of so-called triplet drugs that combine three separate medicines in one tablet. Vertex will soon start two late-stage trials of different triplets, which could

'Data shows we are cutting the rate of progression at least in half . . . our goal is a normal lifespan'

treat the underlying disease in 90 per cent of patients.

Because the disease progresses slowly, it will take years to find out whether Vertex's medicines can boost life expectancy, although recent mid-stage studies showed its triplets led to a 13 to 14 per cent improvement in an important measure of lung function.

"Patients can feel that immediately," says Mr Negulescu.

"Long term data shows that we are cutting the rate of progression at least in half and that should result in decades of life, assuming you treat early enough," he adds. "It could be longer than that: our goal is a normal lifespan."

While Vertex's medicines represent a big leap forward in the treatment of cystic fibrosis, they have been criticised as too expensive.

Kalydeco has a price tag of $311,000 per patient per year, while Orkambi, its other drug, is $272,000. Some countries, including the UK, have refused to pay for Orkambi, meaning patients cannot access the medicine.

Jeffrey Leiden, chief executive, says it is fair to charge high sums for an innovative drug for a rare disease. "These medicines were revolutionary for patients. They changed lives. They changed the course of the disease," he says.

Prices are unlikely to fall soon, in part because there are no viable competitors to Vertex on the immediate horizon.

The closest possible rival drug is being developed in a collaboration between Galapagos, a biotech group, and AbbVie, a Big Pharma company. However, analysts say the pair are significantly behind Vertex.

Vertex's recent announcement that it plans to start trials of a triplet drug in the first half of this year "could further limit opportunities for competitors", says Geoff Meacham, an analyst at Barclays.

Despite the big advances using traditional pills, some companies believe the holy grail lies in exploring the gene therapy approach that was tried in the 1990s, which could theoretically cure the disease.

But Dr Leiden, whose company is working on such an approach, warns the challenges remain formidable.

That is because the only gene therapy to win approval in the US — Luxturna for childhood vision loss — is delivered by injection directly into the eye.

The lung, however, has a surface area that is more than 50 square metres, and scientists have not come close to working out how to deliver a gene therapy to such a large organ.

Even if it were possible, it would not solve the damage that cystic fibrosis does to other organs like the liver and pancreas.

"We believe it is probably the ultimate answer," says Dr Leiden. "We're working on it hard, but it's a 10- or 15-year problem."