BIOTECH
Genome editing is gaining ground

MANAGEMENT
The CEO compensation controversy

ENERGY
The windfall of nuclear decommissioning

DOSSIER

FOCUS ON CHINA

30 firms loaded for bear

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China will strike back

2018 will be considered one of the darkest years for Chinese markets. Plagued by the trade conflict with the United States and sluggish growth, the Shanghai and Shenzhen exchanges lost nearly 30% of their value in one year, while the Nasdaq only fell 3%. But for many analysts, this downturn is a windfall for investors: the decline will be followed by a rebound!

In the short term, however, our dossier explains that it would be wise to remain cautious. If by late March, no agreement is reached in the negotiations between the United States and China, retaliation between the two countries will start up again and the markets could fall once more. Considering the legendary unpredictability of Donald Trump, there’s no doubt that volatility will continue, possibly even until the end of the US president’s term.

But over a longer period, China’s economic upswing seems inevitable. After learning by copying Western companies, the “factory of the world” is currently transforming itself into a fully-fledged research and development laboratory. From space conquest and new medicines to digital technologies and electric cars, in many industries, China is about to inch ahead of the United States.

Regardless of the international climate, they will be supported by China’s immense domestic market, which includes 1.4 billion people – one-fifth of the world’s population. This is because, according to Marc Bürgi, CEO of biopharmaceutical company Ascletis, whom we interviewed in this issue – Chinese people are increasingly inclined to spend money on their health, insurance and well-being, doing so gradually as their incomes rise.

In the negotiations between the two countries, the US companies receive – will not be easy. Chinese companies are producing ever more high value-added goods. This transformation – which is a matter of concern for Western countries annoyed by industrial espionage, technological theft and the government support that Chinese companies receive – will not be easy.

For new Chinese giants, such as Tencent, Alibaba, Baidu and Xiaomi, to expand even further internationally, Beijing has to make concessions, particularly regarding censorship and technology transfer, while simultaneously allowing their US counterparts (Google, Facebook and Amazon) to settle in China. It’s a win-win situation!

Happy reading!


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**SCANS**

__SULZER CONSIDERS GREEN PLASTICS__

Zurich-based Sulzer has partnered with TechnipFMC from the US and Futerro from Belgium to establish a network called “Planet” that offers turnkey solutions for companies that want to produce biodegradable green plastics. These three groups have mastered all the steps of the production process to create polyactic acid polymers, a material made from sugars found in plants. They will offer their clients a ready-to-use factory whose capacity could reach 100,000 tonnes of the plastic per year.

__24%__

The percentage of online sales in South Korea; the highest percentage in the world, exceeding that of China (23.7%) and the United States (13.7%).

__We want the people of Gaza to have jobs, real jobs, because where there is prosperity, there can be peace__

Daniel Birnbaum, CEO of SodaStream, justifying the construction of a factory in Palestine.

__TAKING ON THE DEEP SEA__

The possibility of deep-sea drilling is moving ever closer. Approximately 30 companies have received a 15-year permit to mine in the Clarion-Clipperton Zone, a deep-sea plain spanning 4.5 million square kilometres in the middle of the Pacific Ocean. Located between Hawaii and Mexico, and ranging from 3,700 to 5,500 metres deep, the region is full of nodules made up of rare metals (cobalt, manganese, copper, nickel). Some of the firms competing to extract these precious mineral clusters are DeepGreen Metals from Canada, ChinMetal from China, and Seabed Resources from the UK, which is owned by Lockheed Martin.

__CONSOLIDATIONS IN PHARMA__

In early January, Japanese pharma group Takeda acquired Irish company Shire for $46 billion, the largest foreign acquisition ever made by a Japanese company. At the same time, US groups Bristol-Myers-Squibb and Celgene were joining forces. These consolidations distort the shaky health of the pharma industry, crippled by lack of innovation and the expiry of several key patents. Celgene has a portfolio of promising drugs to be used in oncology, whereas Shire specialises in rare diseases.

__24%__

The percentage of online sales in South Korea; the highest percentage in the world, exceeding that of China (23.7%) and the United States (13.7%).
The CleanseBot is a small, round white robot. It can fit in a pocket and be taken on trips. Equipped with ultraviolet lights, a system commonly used to purify air and water, it can disinfect a table, the top of a bed, or a light switch. These surfaces are often overrun with bacteria and viruses, especially in hotels and restaurants. The device only weighs 220 grammes and a single charge yields three hours of battery life. With all-terrain wheels and smart sensors, it can move on its own. It can also be hand-held if users wish to clean a particular object such as a smartphone screen. The CleanseBot is also for those who wish to clean household bacteria without using chemical cleaning products.

“Regarding what the new guy should look like? I hope he looks like me”

Ivan Glasenberg, CEO of Glencore, who recently began the search for his replacement.

Lindt & Sprüngli wants to increase its favour among millennials and its Asian clientele. To attract millennials, it launched a series of low-cost products priced at less than 10 Swiss francs. Among them include Lindor truffle balls sold individually or in mini packages. The Zurich-based chocolatier also created flavours that would appeal to Asian palates, such as matcha, mint and pistachio Lindor truffles. Lindt also increased its presence in airports to reach a wider range of clients, and now has more than 500 airport stores.

In the United States, Amazon promises its Prime members a two-day maximum delivery. To keep this promise, the e-commerce giant had to establish its own fleet of aeroplanes. Dubbed “Amazon Air”, the freight company created in 2016 has just acquired 10 additional planes. The fleet is now up to 50. It currently operates out of 20 different airports. Amazon plans to open new aerial hubs in Wilmington (Ohio), Fort Worth (Texas) and at Cincinnati/Northern Kentucky Airport (Kentucky). FedEx and DHL, whose revenue significantly depends on Amazon, are the primary losers in this expansion.

ABB will sell off its power grids division to Hitachi for $6.4 billion. This division, which builds transformers as well as transmission and electricity storage solutions, is the Swiss group’s least profitable entity. Over the first nine months of 2018, it generated $7.1 billion with a margin of 9.8%. In selling off this division, ABB will reduce its footprint by one-fourth. This will allow the company to focus on robotics and automation systems, which are more dynamic sectors, as called for by activist investor Cevian Capital AB, which became one of ABB’s main shareholders in 2015.

The decrease in the number of plastic bags distributed by the seven largest supermarkets in England since the start of a 5-pence bag tax in 2015. Each of their customers now uses 19 bags per year, compared to 140 before the tax was introduced. The tax is expected to increase to 10 pence per bag starting in 2020.

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UBS AND COMPANY LAUNCH A LOW-COST EXCHANGE

UBS joined a collective of nine banks, including Morgan Stanley, Bank of America and Fidelity, to launch a low-cost stock exchange. Dubbed MEMX or “Members Exchange”, it will provide simplified brokerage services at a reduced price. It is targeted at individuals and institutional clients, with the goal of competing with the three companies that now hold more than 60% of the volume of stock transactions in the United States: Nasdaq, the Chicago Board Options Exchange (CBOE) and the Intercontinental Exchange, which owns the New York Stock Exchange (NYSE).

NEW ACQUISITIONS IN THE CANNABIS INDUSTRY

The value of transactions that went through online payment service PayPal in 2018, which is four times higher than in 2012. Comparatively, purchases made with Visa credit cards total $11 billion yearly.

A RIVER OF OAT MILK

Plant-based milks continue to be popular, driven by the increase in the number of people allergic to dairy products and environmental concerns from consumers. Oat milk is the most successful. In the United States: sales increased 50% between July 2017 and July 2018, compared to 9% for the segment overall, according to Nielsen. This has piqued the interest of the major food companies. Pepsico is preparing to launch a range of oat milk. In late 2018, Nestlé launched two coffee smoothies that included the plant-based milk.

THE FLOP

Victoria’s Secret angels lose their wings

Not long ago, Victoria’s Secret dominated the lingerie market, with its daring lacy undergarments. Its annual fashion show was considered one of the industry’s biggest events. But the brand’s popularity has slumped recently. In the United States, its market share dropped from 33% to 24% between 2016 and 2018. Sales fell 9% annually during this period. And share prices of its parent company L Brands max out at $30, compared to $100 three years ago. This downturn is the result of a series of brands, often sold exclusively online, that focus on comfort and unisex undergarments, such as Aerie, ThirdLove and LIVELY. It’s a strong message in the #MeToo era that is at odds with the skinny models and excessive femininity of Victoria’s Secret.

NEW ACQUISITIONS IN THE CANNABIS INDUSTRY

The amount that Dutch company Takeaway.com will pay to acquire the operations of rival Delivery Hero in Germany. This transaction is the end of a costly battle between the two groups to dominate the food delivery market in Germany.

Europe

“The we’re a very different company today than we were in 2016. We’ve fundamentally altered our DNA to focus more on preventing harmbin all our services”

Mark Zuckerberg, CEO of Facebook, on data use scandals that affected the social network in 2018.

GEOPOLITICS

EUROPEAN COMPANIES ABANDON IRAN

By re-imposing sanctions on Iran, US president Donald Trump sparked the exodus of many European groups that rushed to the country when it opened in 2015, following the signing of an agreement meant to end its nuclear programme. Airlines Air France-KLM Group and British Airways announced they would no longer fly to Tehran. Total gave up operations at a gigantic gas field, leaving it open for Chinese company CNPC. Auto groups PSA from France and Siemens from Germany will also leave the country.

Alcohol and cigarettes are no longer profitable, as young people are increasingly turning away from these toxic substances. But cannabis is booming. This trend convinced Atrizia Group – a tobacco giant that markets Marlboro cigarettes in the US – to purchase a 45% share of Cronos Group, a Canadian vendor of marijuana-based products. The transaction, completed in December last year, came in at $1.8 billion. Constellation Brands, which owns several beer brands, purchased a 38% share in Canopy Growth, another Canadian cannabis company, for $4 billion.

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In 2013, Dell delisted from the New York Stock Exchange. At the time, the PC maker’s revenue was in freefall, defeated by smartphones and cheaper competitors from Asia. Under the watchful eye of its shareholders, the company has reinvented itself. It invested $13.6 billion in R&D and has become a digital services provider. This change was facilitated by the 2016 acquisition of EMC, a cloud computing expert, for $6.7 billion. As a result, its cashflow went from $2.4 billion for the financial year ending in February 2017 to $7.7 billion for the year ending in November 2018. It was time to hit the NYSE once again. To do so, Dell completed a sort of inverse merger, by transforming shares of VMware – a software manufacturer in which Dell holds a majority stake – into Dell shares. In late December, shares went public at $46, valuing the company at $16 billion.

French group Vinci acquired a majority stake in Gatwick Airport for €2.9 billion (3.6 billion Swiss francs). This acquisition completes a portfolio that already includes 35 airport infrastructures around the world. It competes with a handful of companies originally associated with a single airport that have specialised in airport hub management, such as the German Fraport and the French Groupe ADP, which both operate 26. Zurich Airport also adopted this model. In 2017, it acquired airports in Florianopolis, Brazil and Iquique, Chile.

“Many people talk about gas like it is a bridging fuel. I don’t take that view. I think it will be here to stay for a long, long time. I think it is the cleanest fossil fuel that we have.”

Wan Zulkiflee, CEO of Petronas.

The increase in the price of uranium between April and December 2018. This growth is spurred by the demand for nuclear energy.

+41%
The smartphone of the future will be foldable

Mobile flip phones are making a huge comeback, but in a version adapted to the smartphone era. Several brands are preparing to unveil devices with a foldable screen. It can be folded up when using the phone for smaller tasks, or unfolded for a bigger screen similar to a tablet. In the larger version, two windows can be displayed side by side, just like on a computer screen. The Samsung X or F – the name hasn’t been officially announced yet – is built to be foldable. It is expected to be released in spring 2019. The Motorola Razr V4 is also expected to have a foldable screen. LG, Apple and Huawei are also working on developing this technology. Google has announced that Android could soon function on a flexible screen.

The biggest challenge for smartphone makers is to develop a flexible screen that can be folded and unfolded thousands of times without becoming damaged.

The Celtic tiger finds its fight once again

Before the 2008 economic crisis, Ireland was nicknamed the Celtic tiger due to its spectacular growth. But this country was one of the hardest hit by the recession that battered Europe 10 years ago. In particular, its real estate bubble burst, bringing Ireland to its knees. Nevertheless, the country of nearly five million residents began to make a comeback in 2013; an ambitious tax policy attracted corporate giants such as Google, Microsoft and Pfizer to build their European headquarters in Ireland. Growth was expected to reach 7.8% in 2018 and 4.5% in 2019, which is more than double the growth expected in the Eurozone (1.9%), according to an estimate from the European Commission. And Brexit will make Ireland even more attractive: many companies currently based in London will undoubtedly choose Dublin to maintain their presence in the European Union. But this dependence on foreign firms also renders the Irish economy fragile. The EU is leading an intense campaign to pressure multinationals that optimise their taxes by placing their headquarters in countries such as Ireland. This past autumn, Apple had to pay the Irish government $14.3 billion in back taxes following an EU decision.
SIG sets out to conquer the packaging market

The discreet company from Schaffhouse has just come back onto the Swiss stock exchange, aiming to overtake market leader Tetra Pak. We take a look.

BY MARIE MAURISSE

The Swiss stock exchange welcomed a new arrival last autumn. SIG Combibloc successfully made one of the largest IPOs of the year on 28 September 2018, raising 3.8 billion Swiss francs. But this isn’t the first IPO for the firm, based in Neuhausen in the canton of Schaffhouse. Until 2007, it was listed on the SMI. It went private that year when it was acquired by New Zealand magnate Graeme Hart, who sold the company in 2014 to investment firm Onex for €3.75 billion.

Founded in Switzerland in 1853, SIG Combibloc started by manufacturing railway materials and then firearms, before gradually specialising in packaging. In 2000, it decided to focus on producing aseptic packaging, which can preserve solid or liquid foods for approximately 12 months without refrigeration. The brand isn’t flashy: it uses little marketing and has a discreet logo. But SIG is very present in the daily lives of millions of consumers, as it packages orange juice, flavoured water, and packs of milk, soup, biscuits, etc.

The numbers reflect this: between 2007 and 2017, the Swiss company’s revenues increased by 40% at a stable rate of 4% per year. Gross operating profit rose from €236 million in 2007 to €455 million in 2017. But in the current more sluggish market environment, its net profit fell 5% in Q3 2018 to 27 million Swiss francs. The growth outlook for 2018 remains unchanged, however, at between 4% and 6% at constant exchange rates.

This curve was predictable, so why did the company decide to raise funds on the Swiss stock exchange? Not satisfied with just posting good earnings, SIG wants to compete with Tetra Pak, the market leader. To go further and higher. As Morgan Stanley said in its latest November 2018 analysis, SIG has high expectations for 2018–2019 and is aiming for a 29% profit margin. The group should reach or exceed this target, according to analysts.

To do so, SIG is not counting on sales of its packaging machines, which generate only 10% of its revenues. For its customers, the company mainly supplies the raw material, aseptic carton, to produce packaging. Customer contracts are signed for several years, guaranteeing the continuation of SIG’s business model. The maintenance service is also very sophisticated, almost customised. “Our cash flow is very stable and predictable, which means we can pay out attractive dividends,” says Andreas Hildenbrand, the group’s spokesman.

Of SIG’s total 5,000 employees, only 230 work in the Neuhausen headquarters, primarily in finance and purchasing. The other employees are spread across the globe, to be closer to its customers. The machines are produced in Linnich, Germany, and Suzhou, China, and the carton production plants are located in Germany, Austria, Brazil, Saudi Arabia, China and Thailand.

Its 270 customers worldwide include giants Nestlé, Pepsico and Unilever. They receive assistance from 550 field engineers who install, and maintain the 3,150 machines that SIG has high expectations for 2018–2019 and is aiming for a 29% profit margin

IN FIGURES
1,150 Number of machines in use around the world
270 Number of customer firms
35 billion Number of cartons produced per year
5,000 Number of employees
1.7 billion 2017 revenue in euros
currently in operation. Traditionally, the target markets for the Swiss firm were Europe, the Middle East and Africa (EMEA). But gradually it has successfully moved into China, North America, Brazil and Argentina. “Today, EMEA countries generate 45% of our revenues, compared with 75% ten years ago,” says Hildenbrand. “Asia now accounts for one-third of our revenues and the Americas 20%. These two regions are driving our growth at present.”

In these markets, hundreds of millions of people are gradually becoming part of the middle class, and have greater purchasing power. They now consume a wider variety of processed food products. In the streets of Sao Paulo and Mumbai, customers can buy juice to go, just like in New York. Emerging markets also have the weakest competition: in India, Tetra Pak sold 7 billion packages in 2017, but SIG is gradually catching up with more than 2 billion packages sold, already accounting for 17% of the market. In these countries, SIG is also testing new technologies, such as a chip that can trace its products in Brazil.

But there could be future trouble brewing for both SIG and Tetra Pak: packaging creates pollution and has consequences for climate change, which is an increasingly hot-button issue. Packaging manufacturers are under fire. SIG recently launched its “Signature” line, produced with 100% recyclable polymer materials. But so far this only accounts for a small fraction of the company’s revenues. In Europe, currently 45% of SIG’s packaging is recycled. This percentage is significantly lower in developing countries which lack recycling infrastructure.

The global decrease in milk consumption, particularly in Europe, could also hamper SIG’s growth, according to Morgan Stanley, whose experts set a medium-term price target of 12.40 Swiss francs. #SIG
As many nuclear power plants are being shut down around the world, the plant decommissioning market will take off, but not without some serious challenges.

BY BERTRAND BEAUTÉ

The Mühleberg power plant, located in the northwest region of the canton of Berne, is splitting its last atoms. On 20 December 2019, the facility, which has provided electricity to Swiss residents since 1972, will close for good. This is the first plant closure in Switzerland, which will set off an entirely different course of events. This is because once a plant is shut down, a new, less impressive process is just beginning. The now-defunct radioactive plant needs to be decommissioned, which is an extremely lengthy and complex process.

According to energy firm BKW – which runs the plant and will foot the bill for the dismantling – the process will take 15 years and generate 200,000 tonnes of waste, 8% of which will be radioactive. The total cost for decommissioning amounts to 927 million Swiss francs, with an additional 1.43 billion francs for waste management. Companies which specialise in this industry are understandably thrilled.

“We’re positioning ourselves in every country that has nuclear plants reaching the end of their lifespan,” said Alain Vandercruyssen, director of the Dismantling and Services business unit at Orano, formerly Areva. Other companies are doing the same, such as Mitsubishi Heavy Industries in Japan, Westinghouse (a subsidiary of Toshiba) in the US and EDF in France. EDF is striving to become “the leading European player for nuclear power plant de-commissioning”. Rosatom in Russia and CNNC in China could also offer their services at a record low price, thanks to financial assistance from their respective governments.

Of course, Switzerland is certainly not the only country facing the tricky question of nuclear legacy. Globally, approximately 100 reactors are no longer operating and 200 more are expected to close in the next 15 years, which adds up to a €200 billion market by 2030. Decommissioning one reactor costs €500 to €750 million, according to figures from Orano. “With approximately a dozen reactors already out of service, the United States has very strong potential,” said Vandercruyssen. “Germany and Japan are in the same situation. Other markets will follow, such as the European Union, South Korea and Taiwan.”

At Orano, the dismantling business employs 4,000, which is 25% of the company’s workforce

At Orano, the dismantling business employs 4,000, which is 25% of the company’s workforce. “We were involved with Fukushima, where we launched a mini submarine to map and decontaminate the area,” said Vandercruyssen. “In 2019, we’re going to cut the tanks at the Vermont Yankee plant in the United States and the Brunsbüttel plant in Germany.” In 2018, French electric utility EDF began decommissioning the Vandellòs 1 power plant in Spain and US group Westinghouse is working in Sweden and Germany.

SLOWLY SHUTTING DOWN

While prospects seem quite attractive, various dismantling players are wary of seeming too enthusiastic. “After the accident at Fukushima and after several countries decided to phase out nuclear energy, we were hoping that these decommissioning projects would begin on a large scale,” said Damien Orcel, head of development at Ginger Deleo, an engineering firm specialised in dismantling. “But it turns out the market is increasingly slower than expected, because the industry is particularly sluggish.”

A good example of this is Fessenheim, France’s oldest nuclear plant.
CLOSING THE FACILITY

Closing the plant – one of François Hollande’s campaign promises in 2012 – was debated, studied and planned several times, then pushed back. The closure date is now set for 2022, barring another reversal. “Current French politics is geared more towards extending the operation of nuclear plants rather than decommissioning them,” said Orcel.

The same situation is playing out in Germany: after a deliberate nuclear divestment policy was put in place, the government now plans to further stagger closing its nine reactors that are still operating. All nine were initially slated to close by 2022. In Switzerland, despite the 2017 vote that planned to end nuclear power, Axpo intends to continue running Bezau – the oldest operating nuclear plant in the world – until at least 2030. “By definition, decommissioning is a market that shifts over time, since operating a plant brings in money whereas decommissioning costs money,” said an industry specialist. “So operators have every reason to prolong a plant’s lifespan for as long as possible.”

But even once a plant is closed, decommissioning down its necessarily right begin right away. In Italy, the former Garigliano plant (160 km south of Rome) closed in 1978, but decommissioning didn’t start until 2035, nearly 60 years after the plant ceased operations. Comparatively, Germany, which has been decommissioning the Greifswald plant in Pomerania since 1995, believes that its timely intervention has reduced decommissioning costs by 20%.

Another obstacle: nuclear plants that are currently being decommissioned are intrinsically old facilities, sometimes dating as far back as the 1950s. “That complicates the task because at that time no one was thinking about the end of the life cycle for these plants,” said Muriel Frion, head of restoration-decommissioning work at the French Alternative Energies and Atomic Energy Commission (CEA). Especially because the industry is experiencing a loss of knowledge. “People who worked in these plants and know them well have retired,” said Orcel. “This creates a real problem, particularly in Germany.”

THE EMBARRASSING QUESTION OF RADIOACTIVE WASTE

According to BKW, decommissioning the Mühleberg plant will generate 200,000 tonnes of waste, 8% of which will be radioactive. But the vast majority of materials will only be weakly active and can be decontaminated. In the end, only 2% of the waste will not be available to use or returned to a radioactive environment.

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Once eyed with distrust, shares of Chinese companies are now of growing interest to investors as China opens up to foreign capital.

China began its economic transformation just 40 years ago in December 1978. Under the impulse of Deng Xiaoping, the country quickly converted to a market economy, beginning an open policy that would transform China into a full-fledged “factory for the world”. Today, this openness continues.

On 1 June 2018, certain A-shares, denominated in yuan on the Shanghai and Shenzhen exchanges, were listed on the leading index for emerging markets, the MSCI EM. For foreign investors, this type of IPO promises easier purchasing of Chinese equities. But is this market worth the risk? Swissquote Magazine explains in five points.
A market that has become vital

No serious investor could ignore China. As the second-largest economy in the world with the second-largest stock market in the world (including Hong Kong), China is a giant that has public companies in all industries. The most well-known, such as Alibaba and Tencent, are on the New York and Hong Kong exchanges. But the Shanghai and Shenzhen exchanges are also home to gems that would be a shame to overlook, such as video game maker Youzu Interactive and insurer China Life Insurance (see company profiles on p. 30-31). “Chinese stocks have gained credibility and deserve a spot on p. 30-37). “Chinese stocks have gained credibility and deserve a spot on p. 30-37). “Chinese stocks have gained credibility and deserve a spot on p. 30-37). “Chinese stocks have gained credibility and deserve a spot on p. 30-37). “Chinese stocks have gained credibility and deserve a spot on p. 30-37). “Chinese stocks have gained credibility and deserve a spot on p. 30-37)

For a long time, Western investors didn’t trust the Chinese market, as it seemed unreliable. According to figures by the journal Les Echos, foreign investors only held 2% of the local capitalisation, compared to 12% in Malaysia, 14% in the Philippines and 21% in India. To reverse this trend, Beijing has ramped up its initiatives hoping to open its financial markets. Including A-shares into the MSCI index on 1 June 2018 is a first step in this direction. According to estimates from investment bank JP Morgan, this inclusion will attract $40 billion to Chinese markets in the coming months. And that’s just the beginning. After the MSCI, another stock index provider FTSE Russell announced in September 2018 that it would also include stocks from continental China in its benchmark indices starting in June 2019. According to FTSE Russell, this could attract $10 billion in net cash flow to Chinese stocks. This influx of foreign funds should mechanically raise the Shanghai and Shenzhen exchanges. But one should take heed. “The Chinese stock market is risky,” warned Meng Shen, director of investment bank Chanson & Co. “It’s possible to find great opportunities to make money, but the performance of the main indices remains disappointing. There could be stocks with a 1,000% return over one year, but it’s a gamble.”

A calamitous 2018 will likely go down as one of the worst years in the history of the Chinese stock market. Weakened by trade tensions with the United States, the markets collapsed. During the 2018 calendar year, the Shanghai composite index lost 25%, the Shenzhen exchange fell 33% and the Hong Kong exchange was down 14% (see infographic on p. 43). That same year, the flagship index of the US markets, the S&P 500, only fell 5%. For many analysts, low Chinese stocks are a good point of entry into this market. “The recent downturn could be seen as an opportunity to purchase shares of the most solid companies,” said Longhini, CEO of Private Banking, Union Bancaire Privée, in an article in the Swiss daily Le Temps. “The market is currently undervalued,” said Lu Li, analyst at Daxue Consulting. “The current valuation demonstrates the pessimism of investors. But there isn’t much room for more of a drop. I think we will reach the bottom in the third or fourth quarter of 2019. But we can’t predict when the rebound will occur.” This perspective is tempered by Meng Shen, director of Chanson & Co. “I don’t think that Chinese A-shares will recover their entire value in 2019. We might see a slight recovery starting in March.”

This caution can be explained by the uncertainty surrounding relations between China and the United States. After months of a trade war, the two countries declared a three-month truce in early December 2018, ending the mutually-established tariffs’ increase. While markets responded positively to this pause, the future is still hazy. If in three months, no agreement is reached between Beijing and Washington on topics such as “forced” transfers of technology, intellectual property and cyber espionage, Washington has warned that import tariffs will be increased to 25%. The problem: “A complete trade agreement cannot be made in only 90 days,” said Shen. “I think that the two countries will establish a step-by-step agreement or a framework agreement that will be followed by many negotiations.” In other words, the hatchet won’t be definitively buried in late March. “The United States and China are playing a dangerous game, because the trade war isn’t good for anyone,” said Shen. “But in this fight, Beijing has less bargaining chips than Washington. The United States is the main export market for Chinese manufacturing companies, so the customs tariff is a massive weapon of destruction against the Chinese economy. If the issue isn’t resolved, pressure on Beijing will increase even more.”

THE NEW SILK ROAD

Launched in 2013 by President Xi Jinping, the Silk Road Economic Belt (Belt and Road Initiative) is an infrastructure project estimated at $800 billion, which is unprecedented. This project aims to physically connect China, Southeast Asia, Central Asia, Europe and Africa via roadways, railways and maritime routes. According to a report from UNCTAD (United Nations Conference on Trade and Development), the economic belt envisioned by Beijing is a gigantic market of 68 countries, with a total population of approximately 4.5 billion (62% of the global population) and a total GDP of around $23 trillion, or one-third of the global economy. This immense project could have a considerable impact on markets, benefiting the transport of raw materials and goods in particular. “The new silk roads are probably the biggest initiative that you’re not paying attention to,” said Robert Friedland, executive co-chairman of mining group Ivanhoe Mines, at the FT Global Commodities Summit.
China’s growth slowed throughout 2018, reaching its lowest point in 28 years. According to the Chinese national statistics bureau (BNS), the GDP increased “only” 6.6% last year—a number that many Western economies would envy, but far from China’s standards, as the country is accustomed to seeing double-digit growth annually. For Beijing, the cause of this slowdown is external: “Everyone is worried about the international situation,” said Ning Jizhe, director of the BNS. “There are many variables and uncertainties at play, and that has an impact on our economy.”

Analysts also say China’s internal weaknesses are to blame. Long buoyed by its gigantic local market, with more than 1.4 billion residents, consumption is down slightly. Car and mobile telephone sales, as well as shopping mall purchases, fell in 2018, which could have significant consequences for the country. This was a catastrophe for makers such as Tencent, which lost one-third of its value during that time, as well as Youku Interactive. While the ban ended in December 2018, this type of abrupt decision isn’t something that reassures investors. Many other companies could be sanctioned as well. In 2017, the three most popular social networks in China – WeChat messaging, microblogging site Weibo and search engine Baidu – were under attack from the government because they allegedly posted “illicit content” that “put national security at risk.”

The 10 key industries in the “Made in China 2025” plan

1. New information technologies
2. Automated machine tools and robotics
3. Aerospace and aeronautical equipment
4. Ocean engineering equipment
5. Self-driving and green vehicles
6. Electrical equipment
7. Agricultural machinery
8. New materials
9. Biopharma and new medical products
10. New materials
30 winning companies

Many Chinese companies, often unknown giants, make a major impact in all industries. We feature some of the best.

BY BERTRAND BEAUTÉ, LUDOVIC CHAPPEX AND MARTIN LONGET

ALIBABA The e-commerce giant

In 2014, Alibaba’s debut on the New York Stock Exchange (NYSE) broke all records, valuing the Chinese e-commerce giant at nearly $170 billion. Five years later, the group is expanding internationally, with an announcement in November 2018 that it is building a major logistics hub in Liège, Belgium, in order to expand its presence in Europe. Most analysts recommend purchasing shares.

AUTOHOME The car seller

With its two sites che168.com and autohome.com.cn, Autohome is an online car sales platform that is very popular in China. Used by both private sellers and dealers alike, Autohome has an impressive collection of more than 22,000 vehicles and around 10 different applications for Android and iPhone.

BAIDU The other search engine

Nicknamed the “Chinese Google”, internet giant Baidu, which is listed in New York, exceeded the symbolic threshold of 100 billion yuan in revenue in 2018 (€12.67 billion) – a record performance. But analysts are split – some recommend purchasing shares, while others are more prudent and say to hold off. Baidu, which holds a quasi-monopoly in China, is up against the authorities, which ordered the giant to suspend some of its services in January 2019 because of content deemed “vulgar”. Furthermore, Google could eventually return to the Chinese market with its Dragonfly project. This would be a threat to Baidu’s future growth.

BAOZUN The e-commerce intermediary

In Western countries, Baozun isn’t a household name. But in the next few years, the company could have the same status as a giant like Alibaba. Listed on the Nasdaq, Baozun provides e-commerce solutions. Many international companies such as Nike, Microsoft and Zara use this intermediary in order to avoid pitfalls specific to the Chinese market. Analysts recommend purchasing shares in Baozun, as the price has dropped by half since August 2018 and can only go up, they say.

BEIJING KINGEE The jewel of Beijing

Listed on the Shenzhen exchange, Beijing Kingee Culture Development specialises in designing, producing and distributing objects made of precious metals, primarily pure gold and silver. Its flagship products are jewellery, gold bars for investments and white jade goods. Beijing Kingee is expected to benefit from the expansion of the middle class in China.

CHINA LIFE Comprehensive insurance

According to a Swiss Re study from November 2018, China and emerging Asian countries will be the primary source of insurance demand in the coming years. With its counterpart Ping An, China Life Insurance, which is listed in New York and Shanghai, is expected to benefit from this boom. But the company, which posted $95 billion in revenue in 2017, has to compete with Western groups such as Axa and Allianz, which are growing their presence in China.
China Mobile

The telephone operator

With 922 million customers reported in November 2018, China Mobile is the largest mobile telephone operator in the world in terms of number of subscribers. In 2017, the group generated $117 billion in revenue, up by 4.5% in a year. And China Mobile, listed in New York and Hong Kong, isn’t stopping there: with Huawei, it’s actively preparing for the arrival of 5G in China.

Glencore’s rival

This company, publicly listed on the Hong Kong exchange, is battling Glencore for dominance of cobalt in the Congo. It is the second-biggest global producer of the metal, but also one of the main producers of tungsten, niobium, copper and, true to its name, molybdenum. Most analysts recommend purchasing shares.

China Mobile’s main rival

The rare earth expert

Listed in Shanghai, the discreet consortium China Northern Rare Earth is the top rare earth miner in the world, producing 60,000 tonnes per year – over one-third of the world’s estimated annual production of 160,000 tonnes. Consumption of these metals, which are used in electric vehicles and electronics, among other sectors, is expected to continue growing in the coming years.

Geely

Racing ahead

This auto manufacturer strikes fear into the hearts of Western brands. Founded in 1986 in Taizhou, the company used to make refrigerators. It wasn’t until 1998 that it began producing cars. But the real shift was in 2010. In the midst of a full-blown crisis, the Chinese group, listed in Hong Kong, acquired Swedish brand Volvo. Then in 2017, it acquired iconic English race car company Lotus, followed by US start-up Terrafugia, which designs flying cars. February 2018 saw a big new development: Geely acquired a 9.6% stake in German auto giant Daimler, becoming its primary shareholder. The goal of these acquisitions was to acquire technologies in order to break into Western markets. In 2017, Geely sold more than 800,000 vehicles in its domestic market.

Inner Mongolia

The milk producer

Public company Inner Mongolia Yili Industrial Group is the largest dairy company in China. Listed in Shanghai, it also produces ice cream, frozen foods and noodles.

iQiyi

The Chinese Netflix

It was one of the most highly anticipated IPOs of 2018. In March, video platform iQiyi, a subsidiary of Baidu, went public on the Nasdaq, raising nearly $2.3 billion in the process. The site offers a mix of free content, funded by advertisements, and original series for subscribers, making it a combination of YouTube and Netflix. iQiyi, which has 65 million subscribers – half as many as Netflix – has two sizeable rivals in China: Tencent’s video service and Youku Tudou, Alibaba’s platform.

JinkoSolar

The solar energy expert

JinkoSolar is one of the world leaders in the photovoltaic solar energy industry. The company has offices around the world, including in Zug (Switzerland) and San Francisco (United States). Listed in New York, the company generated $4.5 billion in revenue in 2017. It faces fierce competition from other Chinese public companies, such as Sungrow Power, GCL-Poly and Xinyi Solar, in an industry where a wave of concentration seems inevitable.

JD.com

The other Alibaba

It’s almost Alibaba’s unknown little brother. But with more than 300 million active users and $55 billion in revenue in 2017, JD.com is one of the largest e-commerce platforms in the world. Chinese giant Tencent holds a 20% stake in the company, which specialises in high-tech products, electronics and drone delivery using one of the largest drone fleets in the world. Share prices are currently at a historic low, so many analysts believe it’s a good time to purchase shares.

NetEase

The Chinese Blizzard

Ever since it was founded in 1997, NetEase has specialised in massively multiplayer online role-playing games (MMORPGs), such as Fantasy Westward Journey. With mail.163.com, 126.com and yeah.net, NetEase is also the largest email provider in China. Like other Chinese web companies, NetEase had a difficult 2018: listed on the Nasdaq, its share price lost approximately 25% of its value over one year. But most analysts recommend purchasing shares. Barclays is targeting a price of $300 compared to approximately $250 as of late January this year.
The teacher

Founded in 1993 by an English teacher to prepare students for the TOEFL and GRE exams, New Oriental Education quickly diversified to become the biggest private education company in China. Its services encompass the entire education sector, including textbook printing, online courses and pre- and post-school training. Most analysts recommend purchasing shares of this company listed in New York, believing it to be currently listed below its real value.

The insurance giant

With revenue of 975 billion yuan ($145 billion) in 2017, Ping An is the largest insurer in the world. Listed in Hong Kong and Shanghai, the company is also active in banking and finance.

The fallen oil king

Who remembers when, in 2007, more than 10 years before Apple and Amazon, PetroChina was the first company in the world to exceed the mythical threshold of $1 trillion in market capitalisation? Since then, the oil giant has fallen into a market abyss, losing more than $800 billion. Listed on exchanges in New York, Shanghai and Hong Kong, the group nevertheless had a promising 2018. In the first nine months of the year, revenue increased 17.3% compared to 2017, reaching 482 billion yuan ($71 billion).

The information portal

Founded in 1998 and listed on the Nasdaq since 2000, Sina.com is the largest Chinese-language information and entertainment portal. It is also the parent company (and primary shareholder with Alibaba) of microblogging site Sina Weibo, considered the “Chinese Twitter”. In 2017, Sina.com generated $1.6 billion in revenue.

The unknown refiner

As the leading oil refiner in the world, Sinopec (also known under the name China Petroleum and Chemical Corporation) generated more than 2,360 billion yuan ($348 billion) in revenue in 2017, which is more than giants like ExxonMobil ($237 billion) and Shell ($305 billion). While refining and chemicals are Sinopec’s main activities, the group’s revenue has been bolstered by solid Chinese demand in these sectors. Listed in Hong Kong, London, New York and Shanghai, this unknown giant is also benefiting from the accelerated transition from carbon to natural gas implemented by Beijing to reduce pollution.

Big pharma

With revenue exceeding $40 billion in 2017, SinoPharm is the largest pharmaceutical company in China. Listed on the Hong Kong exchange since 2009, the firm has its own research and development labs, as well as a distribution network that extends across the country.

The Chinese Twitter

In China, people don’t use Twitter. They use Weibo. This microblogging social network has more than 440 million active users per month, mostly from China, compared to 330 million users for its US-based rival. In its market, Weibo competes with Tencent (Tencent Weibo) and NetEase (Wangyi Weibo), which also have their own microblogging sites. Like other Chinese brands, Weibo – which is listed on the Nasdaq – is now eyeing international markets and is planning to launch services in various languages. But this ambition could be halted by Western concerns about surveillance and Beijing-mandated censorship for social networks. Most analysts recommend purchasing shares nonetheless.
V

TEN

The new video games king

L

The surveillance pro

B

Simplifying access to loans

I

The major player

8

Classified adverts and more

Y

Successful fast food

AND ALSO...

IFLYTEK

Specialising in speech recognition and voice synthesis software, iFlytek is working with juggernauts such as Alibaba and Huawei to develop Siri’s (Apple) doppelgangers.

SUGON

Active in the cloud computing industry, Sugon builds supercalculators.

at more than $17 billion – was rejected in late August. This is one to keep an eye on.

Chun

The art of express delivery

In May 2018, Chinese online commerce giant Alibaba acquired 10% of the capital of logistics company ZTO Express – and the reason is that to deliver its packages across China and around the world, Alibaba needs a strong partner. The investment, valued at $3.38 billion, will allow ZTO to improve its warehouse management and cross-border logistics thanks to innovative solutions based on new technologies. Most analysts recommend purchasing shares on the New York exchange.

YRD

The smartphone manufacturer

Announced as one of the biggest events of 2018, Xiaomi’s IPO on the Hong Kong exchange was a disappointment. The Chinese smartphone manufacturer only raised the equivalent of $4.7 billion, valuing the group at $50 billion, far below the ambitious target of $100 billion set before the IPO. Since then, the share price has gradually decreased, despite increased sales. In 2017, Xiaomi sold more than 90 million smartphones around the world, making it the fourth-largest global manufacturer behind Samsung, Huawei and Apple.

TEN

The new video games king

Y

Value at more than $400 billion, Tencent is a major internet services player. Listed in Hong Kong, the company offers online payment solutions, instant messaging and social media. But Tencent owes part of its dominance to its video games division. Gaming brought in $18 billion in revenue in 2017 – an increase of 50% over one year. Above all, this figure is significantly higher than the results posted by Sony – in 2017 – an increase of 50% over one year. Above all, this figure is significantly higher than the results posted by Sony.

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TEN

The new video games king

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After a long career in the United States dedicated to researching viral diseases, Wu Jinzi decided to go back to his native China to launch biotech firm Ascletis, listed on the Hong Kong exchange since July 2018. For Swissquote Magazine, he describes his surprising career path and the incredible potential of the Chinese healthcare market.

**Why did you decide to leave the United States and come back to China in 2011?**

At the time, I was vice president of HIV research at GlaxoSmithKline (GSK) in the United States. With my many years of experience in viral diseases, I knew that China had the largest population in the world affected by hepatitis C, for which there is no vaccine. There was a significant medical need that wasn’t being met, as well as a vast market: 25 million people have hepatitis C in China! So I decided to leave my job at GSK to create Ascletis and find a solution to this problem.

**And did you succeed?**

In June 2018, we put our first treatment, Danoprevir, on the market. It can cure 97% of people suffering from hepatitis C in 12 weeks. Comparatively, existing treatments have a success rate of 60% and take 12 to 18 months to take effect. So with Danoprevir we’ve made incredible progress. We’ve also just submitted an approval application to the Chinese government for another treatment for hepatitis C, and the cure rate is 99%.

**In the medium term, we’re also testing an antibody called PDL1. The idea is that if we can find a solution to this problem.**

**Who are your main competitors in this promising market?**

US-based Gilead Science has several treatments for hepatitis B and C on the market or in development. But Danoprevir costs 30% less than Solvadi, a similar product that Gilead put on the market in November 2017. AbbVie, Merck and Roche are also researching hepatitis treatments. But we’re the only ones conducting clinical trials for this disease in China.

**Do you have any advantages over your competitors?**

Chinese patients gain access to new treatments years after patients in Western countries. The reason for this is simple: to approve a foreign drug in China, until very recently you had to redo all the clinical trials from phase I to phase III in China. The government didn’t recognise results obtained elsewhere due to ethnic differences. This procedure could take anywhere from five to 10 years. This policy ended in July, but approving a foreign drug in China still takes quite a long time. Since we’re conducting all our research here, we don’t have to deal with that obstacle.

**Does the government support the pharmaceutical industry?**

The “Made in China 2025” policy, announced in 2015, highlighted 10 particularly innovative sectors that get priority support from the government. Biotech is one of the 10. But as far as Ascletis is concerned, we haven’t received any subsidies. Our research is funded entirely by investors. However, we benefit from measures put in place by the government to accelerate the approval of clinical trials and drugs. Several biological drugs (“biologics”) were added to the list of treatments reimbursed by the state starting in 2015, and we benefit from that as well.

**What are the main challenges for a biotech company targeting the Chinese market?**

The population’s average income is still relatively low. That forces companies to set the market price rather low for their drugs. This is an issue because biologics like ours are extremely costly to develop. Fortunately, clinical trials are much less expensive to run in China compared to the Western world. That helps us keep our costs under control. We’re 30% cheaper than our Western competition.

**You decided to go public on the Hong Kong exchange in July last year. Why didn’t you choose an exchange located in continental China?**

Hong Kong has the advantage of being focused on the Chinese market while also keeping an international perspective, which guarantees access to foreign investors. The exchange also went through an ambitious reform in April 2018 to allow innovative pharmaceutical companies to go public, even if they had no revenue (see also p. 40). We were the first company to benefit from this new reform.

**How’s your share price doing?**

Not too well, unfortunately! It’s been going up and down these past few months. But that’s not out of the ordinary for a biotech company.

**ASCLETIS TARGETS HEPATITIS**

Founded in 2011 in Hangzhou, the city where Alibaba began, Ascletis develops several innovative treatments for hepatitis B and C, diseases that particularly affect people from China. Goldman Sachs, Chinese pharmaceutical company Tasly Pharmaceutical and billionaire Qi Jinxing, who made his fortune in real estate, are some of its initial investors. In 2018, Ascletis went public on the Hong Kong exchange, raising $400 million. (See also p. 40).
On 27 October 2017, the very best of the city’s finance pros met in the illustrious glass tower of the Stock Exchange of Hong Kong Limited (HKEX). Wearing the red jackets traditionally worn by floor traders, hundreds of locals in the fields of business and politics held a closing ceremony for the historical trading floor, which had been made obsolete by the rise in electronic trading. The ceremony was a happy ending to the 126 years of trading that took place there.

The legendary Hong Kong Stock Exchange (HKEX) trading room is now a thing of the past.

Hong Kong’s stock exchange grants Chinese companies access to international capital, and in April 2018 it passed an ambitious reform to attract tech giants.

The HKEX owes the bulk of its success to Chinese firms. The exchange has a number of major companies in its ranks that were created in China, such as Tencent, Lenovo, PetroChina, China Mobile and the insurer Ping An as well as banking establishments ICBC and CCB. “Of the top 20 IPOs in Hong Kong, all except one (editor’s note: Hong Kong insurer AIA) were Chinese companies,” reports an HKEX spokesperson. Chinese firms account for half of the 2,285 companies listed on the HKEX today and over two-thirds of its market capitalisation.

Why the boom? “Chinese companies choose to be listed on the HKEX because they can access a pool of international investors and capital while taking advantage of the cultural and geographic proximity of China,” says David Cheng, a local lawyer who specialises in the stock market. They also enjoy conducting business in a system in which the rules are transparent and based on the rule of law, because according to Cheng, that’s not always the case in China.

What’s more, the HKEX is now putting the connections it made in 2014 with the Shanghai and Shenzhen stock exchanges to good use. New regulations authorise investors from each stock exchange to purchase shares on the others. This reform has removed barriers for Chinese traders who were looking to invest in firms listed on the HKEX, further expanding its reach. Additionally, procedures take effect much faster in Hong Kong. “IPOs in Hong Kong rarely take longer than six months, versus two to three years in continental China,” explains Peihao Huang, head of equity capital markets for Asia at UBS. It is worth noting that UBS, a Swiss bank that is particularly active in Asia, has sponsored 10% of HKEX.

The Hong Kong Stock Exchange (HKEX) trading room is now a thing of the past.
the companies listed on the HKEX over the past 10 years.

**ALIBABA’S LOW BLOW**

However, the former British colony is experiencing increasingly intense competition from the thriving Shanghai and Shenzhen exchanges, as well as from long-standing marketplaces such as those in New York and London. “Companies know they can get higher valuations if they are listed in China” (editor’s note: see p. 44),” reveals Cheng. “Tech firms prefer the NASDAQ – a platform which is dedicated exclusively to them.”

However, the HKEX was hit the hardest back in 2014 when Chinese e-commerce giant Alibaba decided to launch its IPO on the NYSE instead, cutting Hong Kong’s exchange out of the biggest IPO in history. Tech groups may also look to the Shanghai composite index or to the Hang Seng (Hong Kong) index, but the Nikkei and the SMI in Switzerland saw much more than their Western counterparts.

Despite a difficult 2018 full of tensions with the United States, the world’s second-largest economic power continues to grow, supported in particular by its immense domestic market. A TERRIBLE YEAR FOR FINANCIAL MARKETS

Chinese markets fell dramatically in 2018, much more than their Western counterparts.

**CHINA’S INCREDIBLE GDP SURGE**

While no Chinese company was one of the biggest capitalisations in 2016, Alibaba and Tencent have now entered the top 10.

**KEY FIGURES**

The number of dollar millionaires in China in 2018, including 338 billionaires.

3,430,000

China

USA

**TOP 10 LARGEST GLOBAL CAPITALISATIONS**

While no Chinese company was one of the biggest capitalisations in 2016, Alibaba and Tencent have now entered the top 10.

**Fraud and Misconduct**

Despite its wild success, the HKEX has a unique problem: backdoor listings. “That’s when speculators create and list entities that are hardly more than an empty shell, and then sell them to companies that didn’t qualify for listings on the Hong Kong exchange either because they fell short of the profit threshold or because they didn’t want to wait to register three years of profitability like Hong Kong’s rules require,” explains David Cheng, a lawyer specialising in stock markets. Cheng reports that these shell companies are sold for up to HKD 500–600 million (CHF 64–76 million).

The banks in charge of checking the information submitted by companies looking to list on the HKEX have also slackened on their due diligence at times. In the autumn of 2017, China’s market watchdog singled out 15 financial establishments, investigating them for committing fraud and misconduct.

The reform also allows biotech companies to list on the HKEX even if they aren’t generating income yet. “This benefits companies with a number of promising products in the pipeline which haven’t been able to market them yet,” says Cheng. HIV treatment manufacturer Ascletis Pharma and biosimilar specialist Innocent Biologics were among those to take advantage of the opportunity to list on the HKEX in light of its newly relaxed rules.
In China, the government regularly intervenes to support the markets. It aims to avoid a crash, by any means possible, that could lead to political instability. Here are a few examples.

**FINANCE under Beijing’s watch**

Spring 2015: markets in China are booming. Share prices went up 150% over one year. In the two previous years, the government did everything it could to motivate small investors to purchase stocks. More than 30 million new trading accounts were opened during the first five months of 2015. The boom was such that some individuals quit their jobs, sold their homes or borrowed heavily to be able to invest. "Interest rates were lowered to facilitate loans, and brokerage firms were encouraged to offer margin financing to their clients," said Tomasz Bielinski, a researcher at University of Gdansk who studied the Chinese bubble.

At the height of the crisis, there was as much as 2 billion yuan (1286 billion Swiss francs) in loans, four times higher than the previous year. But on 12 June 2015, the euphoria came to a brutal end. The Chinese exchanges fell drastically. In early July, the Shanghai exchange lost 30% of its value. On 24 August 2015, it dropped 8.5% in a single day. The catastrophe would lead to one of the most significant state interventions ever attempted for a stock market.

A group of state companies, nick-named the "national team", was quickly established. "Their mission was to purchase shares from the 200 or 300 struggling companies that dominated the exchanges," said Thomas Gatley, expert in Chinese markets at research institute Gavekal Dragonomics. "Between June and July 2015, this state team spent nearly $300 billion." During that same period, big investors – those holding more than a 5% market share in a company – were forbidden to sell their shares for six months and listing were suspended. "To top it off, the state declared a moratorium on trading for 1,300 companies, which is equivalent to 45% of the market," said Bielinski.

Furthermore, some 200 people were arrested in the following months, including short-sellers, journalists covering the bubble bursting and a hedge fund manager, Xu Xiang, who was accused of contributing to market volatility by betting on forward stocks.

**TRANSACTIONS UNDER SURVEILLANCE**

Recently, Beijing intervened twice more. In October 2017, leading up to a crucial congress for the Communist Party, China began to monitor all transactions exceeding one million yuan (143,000 Swiss francs). The goal was to avoid any market volatility during the Communist Party congress, as the government wanted to project a stable image. Investors who were making risky ventures received warnings from the government. An investor based in the province of Guangdong received such a warning since he purchased $325,000 worth of shares in a chain of shopping centres. A client of Haitong Securities, a brokerage firm based in Shanghai, received a 24-hour trading suspension after selling $1 million in shares of a large bank.

**In October of last year, Beijing became involved in the markets yet again**

In China, the government chose to create local units in charge of making funds available to support struggling companies, explained Gatley. Comprising institutional players affiliated with the government, these units are currently operating in Beijing and Shenzhen. China has a tendency to intervene to such an extent in the markets because it is terrified that they will fail. Approximately 85% of investors are individuals, who have often invested their life savings in the markets.

"The government wants to make sure that these people don’t lose too much money, since that could lead to political instability," said Bing-Xuan Lin, finance professor at the University of Rhode Island. A decline in prices could also affect the real economy, creating even more uncertainty for the Communist Party.

But this type of government activism does come with consequences. "This situation leads to distortions and unhealthy speculation: if you’re an investor and you know that the state will always bail out struggling companies, then you’re betting not only on the companies that will likely create value, but also on government interventions," said Lin. Listed companies will develop risky behaviour, such as taking on excessive debt, since they know that the government will always be there to save them.

And when the markets are virtually suspended, like in summer 2015, the companies that should pull out of the markets cannot, and those that should go public are unable to do so. Shareholders, who are told to sell their shares, end up losing confidence in the markets. "In the future, investors will no doubt put their money elsewhere," said Bielinski.
FLAMBOYANT leaders

The best Chinese CEOs are rivals in talent, tenacity and charisma. We take a look at some key figures.

BY ANGÉLIQUE MOUNIER-KUHN

JACK MA
(Alibaba)
Emperor of e-commerce

“Triumph without pain brings no glory.” This quote from the playwright Corneille’s Le Cid could not easily come from Jack Ma himself. He has already displayed a mastery of aphorism in addition to his entrepreneurial genius. The proud chairman of Alibaba sums up his business philosophy in these words: “Today is difficult; tomorrow will be even more so. But the day after will be wonderful; most people don’t think far enough ahead to the day after.”

With an extroverted personality, equally at ease among heroes of state and while dancing to a Michael Jackson song in front of his employees at Alibaba’s annual party, Jack Ma, 54, is as equally at ease among heads of state and while dancing to a Michael Jackson song in front of his employees at Alibaba’s annual party, Jack Ma, 54, is as easily come from Jack Ma himself.

We thought we knew everything about Jack Ma – as Pony Ma – as his name means horse in Chinese – struggles to remain hidden. The co-founder and CEO of Tencent was recently named the best CEO in China by Forbes China. With a personal fortune estimated at $35 billion, the forty-something was considered last year, by the same magazine, to be the richest man in China. He’s also become one of the most prestigious philanthropists.

Born in 1971 in Guangdong province, Pony Ma, a prodigal engineer, created Tencent with a few friends in 1998. The “T” of the “BATX” – the quartet with Baidu, Alibaba and Xiaomi which is the Chinese equivalent of the US GAFA companies – was smart to get involved in daily life in China by multiplying its online services: messaging (WeChat has more than 600 million active users), games, music, videos, online payments and e-commerce.

Ma Huateng
(Tencent)
Internet prodigy

He prefers to stay out of the spotlight. But Ma Huateng, known as Pony Ma – as his name means horse in Chinese – struggles to remain hidden. The co-founder and CEO of Tencent was recently named the best CEO in China by Forbes China. With a personal fortune estimated at $35 billion, the forty-something was considered last year, by the same magazine, to be the richest man in China. He’s also become one of the most prestigious philanthropists.

DONG MINGZHU
(Gree Electric)
Iron Lady

Sexagenarian Dong Mingzhu is an icon in China. Since 2001, she has been the head of Gree, the largest air conditioner manufacturer in the world. “Sister Dong” is the incarnation of female perseverance. Name the most powerful businesswoman in China by Forbes magazine in 2017, the “iron lady” has already written two autobiographies about her career at the prosperous state company.

Gree was only a local SME in Zhuhai in Guangdong province when Dong began working there as a salesperson in 1990. Originally from Nanjing, Dong raised her son alone after the death of her husband. As her mother took care of the child, Dong put her heart and soul into the business, climbing the corporate ladder. She was promoted to sales director in the following year.

Dong Mingzhu
(Gree Electric)

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Under her leadership, Gree multiplied its commercial network and sales skyrocketed. Dong is well-known for her asceticism and rigour: she hasn’t taken a single day off during her career and is revered by her 80,000 employees. She came up with Gree’s road-map-like slogan: “Made in China. Loved by the World.”
REN ZHENGFEI
Veteran of Chinese capitalism

Usually distant with the press, Ren Zhengfei, founder of equipment manufacturer Huawei, was the subject of much media coverage in 2018. But it actually his daughters who captured all the international attention. The oldest, Meng Wanzhou, 46 and financial director of Huawei, was arrested in December 2018 in Vancouver at the request of the United States, which accused the company of violating sanctions against Iran. The youngest, Anabell Yao, 31 and a student at Harvard, made a name for herself at the famous debutante ball in Paris.

Born in 1944, Ren is one of the creators of China’s economic modernisation. An engineer by training, he joined the People’s Liberation Army in the middle of the cultural revolution before founding Huawei in 1987 in Shenzhen, the epicentre of liberal reformism inspired by Deng Xiaoping.

Jean Liu isn’t exactly a self-made woman. The entrepreneurial talents of the CEO of Didi Chuxing, China’s primary ride-share platform, are nonetheless just as highly praised in tech circles. This award-winning leader is part of the new generation of Chinese “disruptors”, a relentless worker, brilliant and daring, she’s also another mother of three children and fought breast cancer in the public eye.

Born in 1978, Liu comes from a business family; her father, Liu Chuanzhi, is none other than the founder of IT giant Lenovo. With degrees in computer science from Peking University and Harvard, she became the chief operating officer of Didi Dache in 2014, after about 10 years at Goldman Sachs.

A year later, she successfully led the merger with competitor Kuadi Dache. As the head of the new company renamed Didi Chuxing, she ran many successful fundraising efforts alongside prestigious partners such as Alibaba, Tencent and Apple. In 2016, she crafted a deal to merge with Uber’s Chinese operations. Valued at nearly $3.400 billion in assets, the establishment founded in 1994 and based in Beijing is the second largest bank in the world, according to Standard & Poor’s.

Wang, who holds a degree in economics from the University of Tunis and has been a member of the Communist Party of China since 1985, worked at the China Development Bank before joining the government administration of Jilin province in north-east China. He was the vice governor there from 2008 to 2012, before becoming co-president of the China Insurance Regulatory Commission and finally becoming co-chairman of the CCB. Wang is a sexagenarian who has been the subject of much media coverage in 2018, “regardless of the challenges in our way.”

WANG ZUJI
Banker from the old boy’s club

In 2018, Forbes magazine ranked Wang Ziju the third best CEO in China. The list evaluates CEOs based on the market performance of their company, profit developments, and rate of return on assets. This is an honour for the sexagenarian who has been the head of China Construction Bank (CCB) since 2015. To lead one of the “big four” companies in the banking industry under state control in China, he had to be part of the old boy’s club. With the equivalent of $3.100 billion in assets, the establishment founded in 1954 and based in Beijing is the second largest bank in the world, according to Standard & Poor’s.

The goal is to increase development and domestic production of high-value added components to 40% by 2020 and 70% by 2025. Target industries include robotics, biopharma, autonomous cars, aerospace, and new materials. Chinese firms’ decreasing reliance on imports should allow them to challenge Western tech giants. This is a clear and clever strategy from the Chinese government, and one that is also frustrating for other countries, as illustrated by the current trade tensions with the United States.

Even should the initiative get slightly revamped to accommodate protectionist concerns from the US, the government drive to support China’s modernisation will continue.

CHINA 2025
INCREASING POWER

Supported by the Chinese government, 10 innovative economic sectors aim to free the country from its dependence on foreign imports. Swissquote analysts have created a certificate dedicated to this theme.

MANUFACTURING, INNOVATION, AND TECHNOLOGY

CHINA 2025

1. New information technologies, including artificial intelligence and quantum computing
2. Numerical control tools and robotics
3. Aerospace and aeronautical equipment
4. Ocean engineering equipment and high-tech shipping
5. Modern railway transport
6. Autonomous and green vehicles
7. Electrical equipment
8. Agricultural machinery
9. New materials
10. Biopharma and new medical products
Jeff Bezos is a self-described "congenital optimist". During the course of one day on 26 November 2018, the richest man in the world saw his fortune – made up primarily of Amazon shares – increase by $6.3 billion, according to Bloomberg. That Cyber Monday, a marketing ploy that began 15 years ago to promote the e-commerce boom, shattered all forecasts in the United States. Sales were up 19% compared to the previous year, reaching nearly $8 billion (source: Adobe Analytics). Amazon, which makes up half of all online retail sales in the US, won the lion’s share of these record sales.

In a sign of the times, another US retail giant declared bankruptcy a few weeks earlier: Sears was weighed down by years of strategic misguidance and losses. The news caused the media to wax poetic for yesteryear. The death of this department store veteran, which opened in Chicago at the end of the 19th century, is proof of the consumption habit revolution that has hit traditional retailers hard – first large department stores and now supermarkets. According to the US Department of Commerce, online sales already make up 13.5% of total retail sales in the United States, compared to 4% in 2010 – and this inexorable growth is causing brick-and-mortar shops to close in waves as a result.

Rather than call this an apocalypse – the preferred term used by US commentators to describe the constant bankruptcies and the desertification of big retail stores – Dominique Locher likens it to a tsunami. “The first wave was for...”
The flexibility of online shopping could do their shopping. Customers could do their shopping. “Previous, consumers were stuck in a process dictated by brands and distributors,” says the digital entrepreneur and investor. “With flyers and expert in business marketing. The advent of television didn’t kill the video rental industry. But that doesn’t mean the traditional supermarket chains could lose between $200 and $700 billion in revenue (equivalent to 12% to 40% of their current profits) to discount brands, online sales and non-food players. As McKinsey notes, “When the dust settles, half of all traditional retailers could disappear,” such as the US regional brands that are closing one by one, or the 243 former Dia shops that Carrefour liquidated in France.

**WALMART SETS AN EXAMPLE**
Albeit with a delayed start, most large retail stores have actually already begun to prepare a response. “Culture, process, IT systems, supply chains and data analysis – everything needs to be reworked. But that doesn’t mean the traditional players are doomed to disappear. The advent of television didn’t kill the video rental industry. But that doesn’t mean the traditional supermarket chains could lose between $200 and $700 billion in revenue (equivalent to 12% to 40% of their current profits) to discount brands, online sales and non-food players. As McKinsey notes, “When the dust settles, half of all traditional retailers could disappear,” such as the US regional brands that are closing one by one, or the 243 former Dia shops that Carrefour liquidated in France.

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The Seattle giant’s ambitions in the food sector exemplify traditional supermarket brands’ fears, but in reality, these supermarkets are up against quite a number of obstacles. A recent McKinsey study showed that the industry was caught unawares by the magnitude of transformations over the last 10 years, in both the United States and Europe: in addition to changes in consumer habits and the surge in new technologies, price competition has become increasingly fierce. As a result, organic growth has slumped, margins are under pressure in an industry where they’re already low, and share prices of public companies are in freefall. For example, French brand Casino’s complex structure has become an easy target for short-sellers. And the worst is possibly yet to come, warns the consulting firm. According to McKinsey, unless there is a forceful pushback, by 2026, supermarket chains would lose between $200 and $700 billion in revenue (equivalent to 12% to 40% of their current profits) to discount brands, online sales and non-food players. As McKinsey notes, “When the dust settles, half of all traditional retailers could disappear,” such as the US regional brands that are closing one by one, or the 243 former Dia shops that Carrefour liquidated in France.

The US brand has become the perfect example of an “omni-channel” retailer, which is the most coveted concept in the industry. Customers can decide if they want to purchase online or in shops, have their goods delivered to their door or pick them up in the shop. This pick-up strategy aims to increase physical traffic in the supermarket. And what’s more, the shop has to offer a “customer service” that meets regulars’ expectations. “Practical and efficient services, such as Jet.com (a discount start-up targeted at millennials) in 2016, the Arkansas-based retailer has become the third-largest e-commerce retailer in the US, with a market share of almost 5% and sales up more than 40% year on year. And Walmart’s strategic transformation is happening around the globe. In India, Walmart acquired e-commerce giant Flipkart, whereas in the United Kingdom, its subsidiary Asda merged with Sainsbury’s in the hopes of dethroning Tesco, the number one retailer in the region. The US brand has become the perfect example of an “omni-channel” retailer, which is the most coveted concept in the industry. Customers can decide if they want to purchase online or in shops, have their goods delivered to their door or pick them up in the shop. This pick-up strategy aims to increase physical traffic in the supermarket. And what’s more, the shop has to offer a “customer service” that meets regulars’ expectations. “Practical and efficient services, such as Jet.com (a discount start-up targeted at millennials) in 2016, the Arkansas-based retailer has become the third-largest e-commerce retailer in the US, with a market share of almost 5% and sales up more than 40% year on year. And Walmart’s strategic transformation is happening around the globe. In India, Walmart acquired e-commerce giant Flipkart, whereas in the United Kingdom, its subsidiary Asda merged with Sainsbury’s in the hopes of dethroning Tesco, the number one retailer in the region. The US brand has become the perfect example of an “omni-channel” retailer, which is the most coveted concept in the industry. Customers can decide if they want to purchase online or in shops, have their goods delivered to their door or pick them up in the shop. This pick-up strategy aims to increase physical traffic in the supermarket. And what’s more, the shop has to offer a “customer service” that meets regulars’ expectations. “Practical and efficient services, such as Jet.com (a discount start-up targeted at millennials) in 2016, the Arkansas-based retailer has become the third-largest e-commerce retailer in the US, with a market share of almost 5% and sales up more than 40% year on year.
said Frank Rosenthal. Dutch chain Jumbo, which is preparing to open in Belgium, is doing extremely well with its “Foodmarkt”, which combines retail shopping with restaurants, as well as with its Jumbo City convenience stores, which devote much of their space to ready meals.

While it has no physical brick-and-mortar shop in the country, UK online supermarket Ocado excels in customer service thanks to its top-notch entirely automated logistics. Abroad, the company has partnerships with US giant Kroger, Sobeys in Canada and Casino in France – all brands eager to take advantage of Ocado’s tech expertise to boost online sales.

The food transition and the shift to eating well are also increasingly inspiring retailers. As part of its transformation plan launched in early 2018, Carrefour increased its investments in digital technologies and is targeting consumers with its “Act for Food” campaign.

“Practical shopping will increasingly be done online. Going to an actual shop will be for more fun purchases.”

Frank Rosenthal, Paris-based consultant and expert in business marketing.

Active in all the countries in which the brand operates, the campaign has 10 initiatives, including an affordable 100% French organic offering, reducing food waste, banning about 100 controversial substances and selling forgotten varieties of fruit and vegetables. "It’s a way to capitalise on all the current trends while preparing for the long-term future, since the change in food habits is here to stay rather than being an ephemeral shift," says Rosenthal.

While these initiatives are all a prerequisite for the survival of their brands, it is hard to imagine that just one or another of these strategies will be enough to compete with Amazon’s goal of hegemony. Some analysts are already predicting that Amazon will double its market capitalisation, reaching $2 trillion by 2024. Jeff Bezos has reason to remain optimistic.
The genetic revolution is underway

Genome editing technologies will transform many industries, including healthcare, agriculture and livestock farming. Making these technologies available on an industrial scale raises concern, since they have the ability to change the face of humanity.

“Revolutionary.” This word is often abused when discussing new technologies. But not this time. With the advent of genome editing tools that can modify DNA, the life sciences industry is on the brink of an unprecedented transformation. It is a shift to a new world, of which we’re already seeing the early stages. Cows without horns, muscular sheep, and harmless mosquitoes are just a few of the creatures that are the fruits of this dizzying scientific advance.

“We’re living a revolution that has only just begun,” said Hervé Ronin, partner at investment bank Bryan, Garnier & Co. “These technologies have already completely transformed the research sector. Now, they’re taking over industries. There is enormous potential.”

When the results of the first clinical trials come in, the capitalisation of these companies will go way up if the trials are successful.”

Hervé Ronin, of the investment bank Bryan, Garnier & Co

How can such enthusiasm be explained? Imagine that human DNA is a book containing 3.2 billion letters. One spelling error could make an entire sentence incomprehensible, which could potentially induce a cancer or a genetic disease. “Genetic editing tools work kind of like an editor proofreading a manuscript,” said Denis Duboule, geneticist at the University of Geneva (UNIGE) and Ecole polytechnique fédérale de Lausanne (EPFL). “The tools can edit DNA however they want, such as removing one word or replacing it with another without touching the rest of the sentence.”

Obviously, this technology sparks a lot of hope in the medical field, as it could cure certain genetic diseases and cancers, as well as the HIV virus and other retroviruses. Several public biotech companies such as Cellectis, CRISPR Therapeutics and Sangamo have begun clinical trials (see company profiles starting on p. 59). “Preliminary results of the first clinical trials...”

BY BERTRAND BEAULIE
inary results are very promising,” said Hervé Chneiweiss, research director at CNRS, the French National Centre for Scientific Research. “Perhaps I am too optimistic, but I believe the future potential of these new treatments is huge,” said Ronin. “When the results of the first clinical trials come in, the capitalisation of these companies will go way up if the trials are successful. I recommend monitoring and following CRISPR Therapeutics in particular. For the time being, these two companies stand out. They are a few months ahead of the competition.”

Less advanced, US-based biotechs such as eGenesis and Revivicor have used this technology to “humanise” pig foetuses. The goal is to produce pigs whose organs can be transplant-ed into humans without a risk of rejection or illness.

“The most advanced and best known”

Released in 1997, the somatic gene editing tool, called ZFNs, allowed researchers to test a world in which it became possible to change the genetic code of a child’s cells. It was a promise that was not yet made possible.

But genome editing isn’t limited to just the medical industry. “Since DNA is present in all organisms, including plants and animals, there are many applications for this technology, particularly for livestock farming and seed growing,” said Chneiweiss. “It’s not a niche market; in fact, it’s worth hundreds of billions of dollars.”

Recombinetics, a US-based biotech, created a variety of cows without horns in order to reduce the potential for injuries when raising the animals. Calyxt develops genetically-modified soy oil that contains less saturated fatty acids (which raise cholesterol) and more oleic acids that are good for heart health (read our interview with the founder of Calyxt on p. 62). While they are a little behind, companies such as eGenesis and Revivicor have discovered that genome editing techniques aren’t as precise as they were claimed to be. Let’s go back to our book analogy: “If you want to change one word in a Microsoft Word document, the easiest way to do so would be to run a character search, then copy and paste,” said Chneiweiss. “But if you search for the word ‘to have’ in a book, you’ll get thousands of results and possibly make the change somewhere you shouldn’t have.” In July 2018, a study published by scientific journal Nature demonstrated that there were many more unintended modifications—a known as “off target” modifications—than expected, which could lead to cancers.

Following this news, the stock of CRISPR Therapeutics, for example, fell 20%. “After the euphoria that followed the results of animal testing, the Nature article slightly put off investors. But since then, share prices are back up,” said Anne Moore, the founder of Calyxt. “It’s not a niche market; in fact, it’s worth hundreds of billions of dollars.”

CRISPR Therapeutics focuses on developing treatments for serious illnesses by using its genetic editing technology CRISPR-Cas9. The company has a promising outlook. In December 2018, the company signed a partnership with German giant Merck. Following this success, the company received a new investment from Woodstock Ventures.

CRISPR Therapeutics has two drug candidates in its pipeline. Editas Medicine, which uses the CRISPR tool, has a robust portfolio. Moreover, it was the first company active in the field to launch a clinical trial in 2017 with its EDIT-101 treatment for a rare form of genetic blindness. But a delay was anticipated in 2018 due to “production problems.” The trial could finally begin this year.

Recombinetics, a US-based biotech, experimented with modifying certain yeasts to produce biofuel. That’s the good news, however there’s a “but.” Several, in fact. From a medical standpoint, researchers have discovered that genome editing techniques aren’t as precise as they were claimed to be. Let’s go back to our book analogy: “If you want to change one word in a Microsoft Word document, the easiest way to do so would be to run a character search, then copy and paste,” said Chneiweiss. “But if you search for the word ‘to have’ in a book, you’ll get thousands of results and possibly make the change somewhere you shouldn’t have.” In July 2018, a study published by scientific journal Nature demonstrated that there were many more unintended modifications—a known as “off target” modifications—than expected, which could lead to cancers.

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In another sector, scientists are experimenting with modifying certain yeasts to produce biofuel. That’s the good news, however there’s a “but.” Several, in fact. From a medical standpoint, researchers have discovered that genome editing techniques aren’t as precise as they were claimed to be. Let’s go back to our book analogy: “If you want to change one word in a Microsoft Word document, the easiest way to do so would be to run a character search, then copy and paste,” said Chneiweiss. “But if you search for the word ‘to have’ in a book, you’ll get thousands of results and possibly make the change somewhere you shouldn’t have.”

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BUSINESS VERSUS PRECAUTIONS: THE BATTLE OF “NEW GMOS”

Are the "new GMOs" just regular GMOs? The question is quite divisive. On 28 March 2018, US Secretary of Agriculture Sonny Perdue announced that the USDA (US Department of Agriculture) would not regulate new varieties of plants developed with genome editing technologies. The varieties will be considered natural foods and consumers will have no way to distinguish them from a wild plant. The European Court of Justice (ECJ) took the opposite position. In July 2018, it decided that the "new GMOs" will be regulated just like the older ones.

Little known to the general public because they’re not yet on the market, new GMOs are organisms whose genome has been changed by controlled gene modification using a genome editing technique. This is different from inserting an external gene into the genome, as in traditional GMOs.

For the industry, the regulatory framework is essential. If these new types of plants are considered to be just like the “old GMOs”, they must undergo a long and costly market authorization process. So companies must convince governments to take a welcoming stance. “The seed industry is doing some intense lobbying,” said Yves Bertheau, researcher director at the French National Museum of Natural History in Paris and specialist on the subject. “For example, the industry no longer uses the term ‘genetic modification’ as it has negative connotations, but rather ‘editing’ or ‘correcting’ the genome. That suggests that the DNA of plants is imperfect and must be improved upon.”

An internal seed lobby document, titled “How to talk about plant breeding innovation” and read by Swissquote Magazine, describes the strategy industry players use to convince governments. Example: “By 2050, there will be 9.7 billion people living on the planet and not enough food to feed them all.” Or another: “These methods are based on the same principles that farmers and botanists have used for thousands of years.”

These arguments don’t convince Bertheau, who believes that the ECJ made a wise decision: “I’m not saying that those new GMOs are toxic, but we don’t have enough perspective. When in doubt, it seems to me that genetic modifications, which are fast, radical and often irreversible, must be considered with caution.”
“Genome editing will transform our lives”

A pioneer of genetic reprogramming, researcher André Choulika founded Cellectis, a public company that develops revolutionary cancer treatments. He also founded agriculture biotech firm Calyxt, which develops modified food products via genome editing. We interview this serial entrepreneur.

BY BERTRAND BEAUTÉ

AN INGENIOUS MAN

In 2016, Vanity Fair ranked André Choulika the 22nd most influential French citizen in the world. That’s quite an extraordinary honour for a scientist. Born in Lebanon in 1965, Choulika left Beirut as an adolescent when the country was in the middle of a civil war. He began a new life in France, where he was a brilliant student. A science baccalaureate followed by a master’s thesis in the laboratory of François Jacob (winner of a Nobel Prize and the father of genetic research) led him to a post-doc at Harvard in the United States. In 1989, he founded Collectis – where he is still the CEO – which was a pioneer in emerging genome editing technologies. A decade on, in 2010, he founded Calyxt, which specialises in agricultural biotechnologies. He is currently the chairman of the board of directors.

Genome editing is often presented as a revolution. Do you think that’s an exaggeration, given the unfulfilled promises of gene therapy? Absolutely not. These tools are a real technological revolution for the entire planet that will keep us busy until the end of the 21st century. In the next 30 to 50 years, half of all the food that humans eat will be made from genetically modified seeds. There will be a wide range of genetic treatments in medicine. And synthetic products will replace materials such as wood and textiles. The tidal wave is coming.

There was an international outcry in November 2018, when a Chinese researcher announced that babies were born with genomes modified by the CRISPR-Cas9 technique. Does that temper your enthusiasm at all? The CRISPR-Cas9 technology has been the subject of incredible media hype, which is what resulted in this abuse of technology. Some people want their few minutes of fame, as Andy Warhol said. But this researcher’s work doesn’t serve any purpose, and I’m not concerned about his foolishness. When Dolly the sheep was born in 1996, everyone was scared clones would suddenly multiply. In the end, nothing went wrong because creating a clone doesn’t do anything. That’s exactly what happened with this researcher.

But what does worry me are all the self-proclaimed experts in genome editing that are speaking to the media. They make promises they are unable to keep, saying that this technology will be able to cure all genetic diseases. There are patients that are waiting and hoping for these cures. Sadly, my fear is that patients will once again be disappointed by these promises because, let’s be honest, we’re not going to cure celiac disease or cystic fibrosis in the immediate future. One day, probably, but it will take time.

What are the first treatments that Cellectis is putting on the market? Likely a treatment for a type of childhood leukaemia. The product is called UCART19 and Servier has acquired the exclusive licence. It genetically modifies immune cells from healthy donors, T lymphocytes, so that the modified cells recognise the patient’s cancerous cells and destroy them. The first patient, a girl from the UK, was treated in June 2015 on compassionate use grounds. At the time, her life expectancy was only a few weeks. Now, she’s starting school and the phase I clinical trial should finish up soon. The drug could be on the market by 2022.

You’re the chairman of Calyxt, which is developing genetically modified seeds. How are these different from GMOs? GMOs are made by adding foreign DNA to a plant. Essentially, we take a gene from one species, for example a bacterium, and transfer it to corn. When we edit the genome, we’re specifically modifying an existing gene in order to improve the plant’s nutritional qualities. This process exists in nature. We’re just helping it along, in order to speed up the selection of plants that offer the best nutritional qualities for consumers.

Once again, Europe has shot itself in the foot

But the European Court of Justice decided that these “new GMOs” should be treated like the old ones, that is, subject to the same regulations…

Once again, Europe has shot itself in the foot. For agriculture biotechnologists, the Commission took a stance that is as restrictive as it is incomprensensible, and it will delay innovation. That’s why I founded Calyxt in the United States. More than half of all planted land area around the world is planted with GMOs. No side effects have been found. So how dangerous can it be? The only problem with current GMOs is that they’re not offering anything to consumers. Big companies like Monsanto have developed a Nespresso-type system – they’re selling GMO seeds to sell their pesticides. That doesn’t benefit consumers or the environment at all. Calyxt is here to change that paradigm. Starting this year, we will be the first to market an ingredient modified by genetic editing. It’s a soy oil rich in good fatty acids that has no trans fats. This is an example of actually offering something to consumers, because this could potentially reduce the risk of developing cardiovascular diseases.

Aren’t you afraid that industry giants will react and compete with your products?

In the pharma industry, all the big pharmaes have genome editing in their portfolios through patents or agreements with biotech firms that do it. Novartis, for example, works with Intellia, and Servier has been partnered with Collectis for nearly five years. The biotech agriculture industry, however, is floundering a bit. But Calyxt, we’re moving a lot faster than other companies. It’s a sector that has never had its economic model disrupted. The same companies – Bayer, BASF, Monsanto and Dupont – have dominated the market for a century. It’s time for a new player to come in and break the paradigm like Tesla did for the auto industry. I think that new player will be Calyxt.
CEO salaries: forever in the spotlight

In the United States, CEO pay keeps climbing higher and higher, but in Switzerland, compensation for leaders of publicly listed companies has stabilised since the 2008 crisis.

BY ANGÉLIQUE MOUNIER-KUHN

CEO salaries are a never-ending source of debate. The controversy was perhaps at its peak during the 2008 crisis, when the “packages” for Daniel Vasella, CEO of Novartis, and Marcel Ospel, head of UBS, were stupefying. Sky-high salaries were said to have encouraged short-term positions and excessive risk-taking among CEOs, as well as accelerated the crisis, according to incensed shareholders. This led to the implementation of regulations in several countries; in Switzerland, the Minder initiative of 2013 bans “excessive compensation.”

One of the most well-known CEOs, Carlos Ghosn, was jailed in Tokyo, accused of under-declaring his revenue as CEO of Nissan. This led to a new round of questions: what mysterious motivation causes the wealthiest CEOs to always want more money? What is real and what is fake in this ultra-competitive international CEO market that forces companies to overbid for the biggest names? It’s difficult to understand the secretive, complicated world of base salaries, bonuses, stock incentive plans and other perks.

Carlos Ghosn himself didn’t hesitate to mention that he was paid less than many of his counterparts, with an annual salary of approximately €15 million as CEO of Renault-Nissan that always angered participants at the general meetings. But what were his criteria for compensation? Indeed, General Motors CEO Mary Barra made $22 million in 2017. But it must be said that since the omnipotent Ghosn became CEO of Renault in April 2005, the share price has dropped 14% (-1.1% yearly, or +1.86% including dividends). Over the same period, BMW shares were up 112% (+9.57% yearly including dividends), while CEO Harald Krueger, who has held the position since 2015, made “only” €9 million in 2017.

Management salaries don’t guarantee good performance for the company

“For us, as we represent retirement funds, CEO salaries are a key element of the alignment between the interests of management and that of shareholders,” said Vincent Kaufmann, director of Ethos, Swiss foundation for sustainable development. But academic research shows that management salaries don’t guarantee good performance for the company. Far from it, in fact. One of the studies, published by researchers from the University of Utah, Purdue and Cambridge in 2016, stirred up quite a bit of controversy. “CEOs that are confident and are paid more than their counterparts tend to get involved in activities such as over-investment and value-destroying mergers, which lead to considerable losses for shareholders,” according to the study. In 2017, the head of corporate governance research at MSCI bluntly observed that “in more than 60% of the 423 companies of MSCI USA, the effective cumulative salary of the CEO from 2006 to 2015 is not in line with the total shareholder return (TSR).”

This iconoclastic researcher titled his report “Out of Control”, which resonates yet again in today’s world. Indeed, in 2018, the United States implemented a measure as part of the post-crisis Dodd-Frank regulation that requires public companies to publish the ratio between CEO salary and median salary. Thrill-seekers will enjoy this: Equilar, the company that compiled this data, revealed that Frank Bisignano, CEO of First Data, a payment terminal management company, makes...
over $100 million, which is 2,028 times more than the median salary for employees. Douglas McMillon, CEO of Walmart, pockets $22 million annually, which is 1,188 times the median salary. Douglas McMillon, CEO of Walmart, makes 2,028 times more than the median salary.

Margaret Georgiadis, who resigned after just over a year as CEO of struggling toy manufacturer Mattel, made 4,987 times more than the median salary of an employee.

This pace of growth doesn’t seem to be slowing down any time soon. Last summer, think tank Economic Policy Institute stated that the overall salaries for CEOs of the 350 largest US companies had increased by 17.6% over a year in 2017. Salaries have increased 71.7% since 2009.

“With the end of the bull market, it will be interesting to see how salaries will change.”

Vincent Kaufmann, director of Ethos

Comparatively, Swiss companies seem like paragons of moderation: top management salaries are only a few hundred times more than median salaries. They are stable, and sometimes even declining: according to the PwC annual study, the total median compensation for CEOs on the SMI fell 29.5% to 5.5 million francs in 2017, compared to the previous year. “This one-year decline is due mostly to technical factors. But salaries have remained largely unchanged since 2009. And certainly there are no longer salaries exceeding 20 million Swiss francs like before,” said Remo Schmid, Partner in People & organisation at PwC. The Minder legislation is indeed in effect. “In many countries, salaries are subject to a vote at the general meetings. But Switzerland and France are the only countries in which shareholders have a say regarding the salaries of top management,” said Kaufmann. Even just the fact that this regulation exists is a deterrent: in 2017, a few days before the general meeting, rather than incur a shareholder veto, management at Credit Suisse decided to reduce the planned bonus by 40%, since there were heavy losses the year before in 2016.

However, Schmid believes that Swiss CEO pay won’t remain low over the long term. He believes that beyond the amount of the salary itself, the composition of that pay is an issue.

The fixed portion usually only makes up 30% at most. “In most Swiss companies, the pay system is too complex. It’s not sufficiently aligned with the interests of shareholders and not aligned much at all with strategic interests, which doesn’t bode well for long-term corporate success,” said Schmid.

In 2017, Norway’s central bank, which oversees the most powerful sovereign fund in the world, required companies to get rid of complex salary structures and implement a simpler compensation system. The fund has already made waves during general meetings, voting against increases for the CEOs of Tesla, Disney, Peugeot and Vinci. Managements everywhere are taking notice: Norges Bank holds shares in more than 9,000 companies around the world.

Your automated money manager.

Swissquote’s Robo-Advisor platform ushers in a new era of asset management. Simplicity, efficiency, customisation and 24/7 optimisation. Invest with the pioneer.

swissquote.com/robo-advisor
Massive fraud spread to the highest echelons of the government. A prime example was former Vice President Joe Biden’s official visit to a laboratory fabricated for the occasion. This is the mind-boggling story of Theranos, a biotech start-up in Silicon Valley. Its charismatic CEO Elizabeth Holmes was dubbed the “female Steve Jobs” and Theranos was slated to revolutionise the medical industry by replacing blood tests with a simple pinprick. Valued at $10 billion in 2014, the company ceased operations on 31 August 2018.

In this book, Carreyrou of the Wall Street Journal – who began the investigation into the scandal – brilliantly recounts the wilful blindness surrounding Theranos.

FASTER, MORE SECURE SURFING
Every connection to a distant server needs to link a human address, such as google.com, to an IP address, by consulting an internet directory. That is called a DNS request. Simple but effective, Cloudflare’s 1.1.1.1 app does only one thing: replace the internet provider’s DNS server with its own service. This results in faster, encrypted searches that don’t leave a history log.

HEIMDALL PARENTAL CONTROL
PROTECTING THE KIDS
Heimdall is a very advanced parental control app that can block children from visiting certain sites, installing or using certain apps and calling or messaging after a specified time. The paid version offers even more features, such as device geolocalisation.

ENDEL
CUSTOMISE YOUR MUSIC
A new productivity app, Endel stands out among competitors thanks to complex algorithms that create personalised music for users to improve their concentration and well-being. Based on neuroscience research, the app promises a 6.3x concentration increase and a 3.6x anxiety decrease, based on real figures.

SWISS SNOW REPORT
SKI WITH PEACE OF MIND
The go-to seasonal app Swiss Snow Report provides accurate, real-time information about Swiss ski resorts: snow cover, hours of sunlight, opening hours and prices, as well as local webcams for a fantastic view of the ski areas. All information is presented in a modern, elegant format.
Montevideo, the capital of days gone by

With 3,460,000 inhabitants, Uruguay is the smallest Hispanic country in South America. Saved from mass tourism thanks to the appeal of its vast neighbours Argentina, Peru and Brazil, it has long been a secret paradise for European retirees who value the quality of life it offers. Let’s take an old-fashioned stroll through a timeless capital.

BY SALOME KINER

Visitors often cross the Rio de la Plata and dock at the Uruguayan capital to escape the hustle and bustle of Buenos Aires. And rightly so. Montevideo is more discreet and laid-back than its colossal neighbour and is ranked as one of the safest cities in the world. Thanks to its political stability, the well-being of its inhabitants and its financial strategies, it has long carried the nickname “the Switzerland of the Americas”, and Uruguay also shares our country’s penchant for peacefulness. Montevideo might not have the same buzz as large megacities, but it does have an old-fashioned charm with colonial architecture, urban beaches, culinary curiosities and lush parks.

This charming splendour of days gone by is especially evident along the Avenida 18 de Julio. This long avenue stretches for three kilometres from the Plaza Independencia, which marks the boundary of the old town, up to the Obelisk of Montevideo.
on Artigas boulevard. Immediately bringing to mind the decorative gitz and glam of the 1920s, this avenue is home to the majority of the city’s historic buildings, such as the Palacio Municipal, Palacio Diaz, Palacio Salvo, Palacio Santos, the Cine Rex – a true gem in the city’s architectural and cultural crown – and the Café Montevideo. Legend has it that La Madrugada, one of the great tango songs, was composed on this terrace, once frequented by local politicians and artists. Although now interspersed with the buildings of big commercial brands, this artery – the backbone of the city – still has flashes of its Spanish heritage, from its tree-lined squares to its bookshops and antique stores.

Montevideo’s street food enthusiasts congregate at the Mercado del Puerto, recognisable by the white smoke released into the sky by its barbecue stands. Food lovers huddle around, impatiently waiting to enjoy marinated meat, seafood and breaded cod, a local speciality. This is also a great place to try a jesuita, a sweet empanada, the ultimate South American donut.

After mingling with this hungry crowd, our tour of Montevideo continues with a visit to the many municipal parks. The Parque del Prado, home to the Juan Manuel Blanes Fine Arts Museum and a large botanical garden, is the ideal place to understand what maté culture really means; every bench is buzzing with people chatting and passing around calabashes and metal straws known as “bombillas”.

Just a few steps away is the Los Yuyos bar, which describes itself as the oldest establishment in the city. Impeccably preserved with its wood decor and rustic feel, Los Yuyos is famous for its grilled food, but more so for its large menu of cañas, a drink made from sugarcane – to be consumed in moderation! The evening is a chance to let your taste buds sample another Montevideo institution: the Museo del Vino. This shop and bar is ideal for tasting local wines while listening to blues, jazz and tango concerts.

The perfect activity to match the city’s leisurely atmosphere is a stroll along the Rambla. This 22-kilometre avenue runs along the coast and the Rio de la Plata, with access to several beaches. The beaches in the city centre are too close to the port and therefore aren’t recommended for swimming. A bit further out is the beach of Carrasco, a former seaside resort and popular holiday destination of the local well-to-do. 

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### ESCAPE TO CABO POLONIO, THE VILLAGE THAT TIME FORGOT

Montevideo is 260 km from the Puerto del Polonio terminal, accessible by the Nunez bus or by hire car. Four-wheel drive vehicles leave the Puerto del Polonio terminal every hour. The eight-kilometre journey across the dunes lasts 30 minutes and costs around seven Swiss francs.

**GETTING THERE**

You can reach Cabo Polonio either by a day trip from Montevideo or by renting a car. From Montevideo, it’s 260 km to the port at Puerta del Polonio. Several companies offer minivans and minibuses up to 20 people. Núñez is the most popular. The journey takes around two hours. Alternatively, you can take the train, which leaves from Montevideo, stopping at Puerta del Polonio every hour. The bus is a pepper-pot between 11.30 pm and 1 am.

**PLACES TO STAY**

If you feel like staying in Cabo Polonio, it’s best to book in advance. The Almirante Cabo Polonio resort is ideal for Uruguayan high-society families, and the Alma Historica Boutique Hotel is home to 15 luxury rooms in an old family house.

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Despite its four wheels, it’s not a quad, because it tilts while turning like a scooter. But it’s not a scooter either, because it has four wheels. The Quadro Qooder – made by Swiss company Quadro Vehicles based in Vacallo (TI) – was introduced in late 2014 but was updated last year. Just as surprisingly, it’s the only vehicle with tilting wheels that can be operated with a motorcycle permit (starting with category A) or driving licence.

Like its counterparts with three tilting wheels – the Piaggio MP3, Peugeot Metropolis, Quadro Tre and Yamaha Tricity – the Qooder is designed to be safer than a classic two-wheel motorcycle and much less cumbersome than a car. It is ideal for city life and has no real competition, unless you count mini cars such as the Renault Twizy (see inset).

In all driving conditions, this bizarre two-seater was comfortable, safe and even fun! Stability is one of Qooder’s main advantages. In all driving conditions, this bizarre two-seater was comfortable, safe and even fun! You can tilt at your leisure while turning. If one wheel is in the air, there’s almost always at least one other still on the ground. The transmission has a differential motor, so there’s plenty of rear traction. It’s even possible to ride easily on unstable terrain, such as a gravel or dirt road leading up to a cottage.

On the motorway, the Qooder remains stable at the maximum speed allowed in Switzerland. If you need to go faster, it can be done with the powerful nearly 400 cc engine. Here is where you can feel a difference compared to the previous version, which was not as lively above 100 km/h. And since the disk brakes slow down all four wheels, decelerating is quite effective.

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Like the Quadro Qooder, this mini electric car also stands out due to its unique concept. It is an automatic two-seater with a small roof and seat belts. The cabin isn’t completely enclosed, unless you purchase the side windows that come separately. The advertised range is approximately 100 km with batteries charged at 100%. Renault stated that 1,400 vehicles were sold in Switzerland since the Twizy went on the market. Price ranges from CHF 9,900 to 18,200 Swiss francs depending on the model and selected accessories.

Yet the Qooder experience doesn’t end there. Quadro’s new CEO Paolo Gagliardo has already announced an electric version that will be available very soon.

**ENGINE:** 400 CC, 32.3 HP
**AVAILABLE:** RED, WHITE, BLACK, GREY AND BLUE
**WEIGHT:** 281 KG
**PRICE:** STARTING AT CHF 12,185

**URBAN AND PRACTICAL**
It also seems difficult to tip over the Qooder when stopped. Keeping pressure on the brake keeps the vehicle upright without having to put your feet down. The size makes it possible to weave in and out of urban traffic, although not as easy as with a classic scooter, it can be done. The Qooder doesn’t take up any more space than a large motorcycle when parked.

The two rear wheels mean that the storage space is less spacious. The storage space is just deep enough to hold a helmet with a chinstrap. There is also a compartment in the front and a USB port to recharge a smartphone or laptop. The 14-litre fuel tank is large enough to travel a little over 200 km on a full tank.

There’s only one area where the Qooder is slightly lacking: lighting. The front headlight, when dipped, seemed weak. We recommend changing the bulb.

In all driving conditions, this bizarre two-seater was comfortable, safe and even fun!
**A SCRAMBLER FOR CYCLISTS**

The latest from California brand Lithium Cycles, the Super 73 SG1 is joining the trend of all-terrain electric bicycles with a vintage motorcycle look. But the Super 73 adds lots of originality and fun! Designed like a scrambler, it has a top speed of 25 km/h and a range of 90 km. Its small-diameter wheels (20 inches) provide excellent handling and it is equipped with hydraulic brakes, mudguards, torque sensor and front and back LED lights.

super73fr
CHF 3,399.–

**FOR DIY LOVERS**

Basel-based manufacturer Wohngeist makes luxurious toolboxes out of solid wood from regional fruit trees (pear, walnut or plum). Each box holds everything you need for DIY: 24 tools – including a Swiss army knife and a set of screwdrivers – made from the same wood as the case and held in place by magnetic retainers.

wohngeist.ch
From CHF 2,600.–

**DIGITAL AND HANDMADE**

The Kiyola KF-10 digital piano is the result of a collaboration between Japanese instrument maker Roland and wood furniture designer Karimoku. Handmade from solid oak or hazel wood, the instrument boasts a refined minimalist style and the latest sound-modelling and touch detection technologies from Roland.

roland.com
From CHF 4,789.–

**POCKET SURVIVAL KIT**

A veteran of the US Army Special Forces, Jeff Kirkham has designed a survival kit the size of a credit card that can be kept in a wallet. Weighing only 12 grams, the Wilderness Survival Card contains nine fish hooks, one arrowhead, one awl, two sewing needles, four snare locks, one saw blade and a pair of tweezers. Better safe than sorry...

readyman.com
CHF 12.90

**A VERY GREEN JUMPER OF THE FUTURE**

Start-up Hopaal has created the "jumper of the future", which only uses 50 litres of water to make rather than the average 7,000 litres for a regular jumper. No chemical products or pesticides are used and the jumper is made entirely from recycled materials. Available in grey or navy blue, it is made in France, as are all the products from this ethical brand.

hopaal.com
CHF 136.–

**BREITLING FOR AROUND TOWN**

Before the 1940s, Breitling mainly supplied watches for the military. But then it launched Premier, its first mainstream line of timepieces. Nearly 80 years later, this legendary collection is making a comeback with five new models, three chronographs and two automatics that echo the brand’s classic aesthetic standards. The Swiss watchmaker is known for its aviation and dive pieces, but the Premier line emphasises “everyday elegance”.

breitling.com
From CHF 4,200.–

**WELL DONE**

Say goodbye to overcooked, or for that matter undercooked, meat. Wireless thermometer Meat It is placed directly in the meat and saves you from culinary disasters. This smart kitchen tool is equipped with sensors, so all you need to do is select the desired cooking level using the app. Whether roasting, on the barbecue or cooking in a pan, Meat It guarantees that your meat will be perfectly done without having to watch it.

meat-it.co
CHF 99.–

**SWISSQUOTE MARCH 2019**

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**Connected Locks**

The Austrian brand Nuki has come up with its Smart Lock solution to let you lock your front door without touching a key. Connected to your smartphone via an app, the system is easily installed. No need to replace the original cylinder: Smart Lock is mounted over the section of the lock outside the door. It runs on batteries and replicates the movement of the key turning inside the lock. A lifesaver when your arms are loaded down. An add-on feature, Bridge, can be used to monitor lock activity remotely.

nuki.io
From CHF 259.-

**Augmented ear plugs**

Bose’s new Sleepbuds fit snugly into the ears to mask surrounding noise and keep sleepers sleeping. At 1.4 grams, these ultra lightweight wireless earbud-like plugs can also play soothing sounds that you can set to turn off or to wake up, as desired.

bose.com
From CHF 298.-
4DX technology wants to replace traditional cinema, promising fans they can experience films as if they were actually in them. As long as you like rain and bumper cars.

It’s a dream as old as cinema itself: viewers experiencing a film with all five senses, as if they were right there. After 3D cinema, the 4DX standard is on the way, expected to finally provide a technical solution to film-makers’ age-old ambitions. The South Korean technology is already nearly 10 years old, but it has only just started to become available in our cinemas. In fact, at the moment it’s only available in five locations in Switzerland. 4DX technology requires specially-equipped cinemas that can deliver multiple special effects: dynamic chairs, water and rain effects, fog, lightning and various smells.

At the time of our test, only Aquaman was available in 4DX in Romandy. It is a pure action film that lends itself well to this technology. The cinema was quite full and the majority of the audience was very young. On first glance, there are no stark differences between a 4DX and a regular cinema, besides the seats with footrests and light-up buttons. And the price, of course: it was around 15 Swiss francs more than a regular ticket if you also choose the 3D option, which we did.

Younger viewers loved it, whereas the few older ones seemed less convinced.

The room darkened and went silent.. and then we were suddenly hit in the back almost to the point of falling out of the seat, while a jet of cold water hit us in the face. Here we go! Smoke, fog and lightning were quickly added to the demonstration of effects, as the film starts off very intensely. As the name indicates, Aquaman is a feature film in which virtually all the action takes place either in or around water, so of course wetness was a particularly present effect throughout this spectacularly third-rate film. Unless, tired of being doused with frigid water, frozen spectators end up deactivating this feature by pressing a button on the seat.

The rest of the film is a series of blows to the back, the seat shaking wildly in every direction based on the action in the film and the very frequent fights that break out, with no regard to the protagonists: spectators feel hits to the bad guys as well as to the good guys. All of this is accompanied by a few lightning strikes and other smoke jets that sometimes cover the screen for a few seconds, but I don’t think we were missing anything, to be honest. Younger viewers loved it, whereas the few older ones seemed less convinced. We finished the film exhausted, as if we just got off a ghost train at a bad amusement park, but with fewer emotions.

In conclusion, 4DX is in essence a demonstration of wanting to physically immerse viewers in a film, since actually doing so is still a pipe dream, at least for the time being. Jets of freezing water and a moving seat don’t make the experience genuinely believable. It’s true that films aren’t yet designed with 4DX in mind, and there will certainly be improved special effects in the years to come, as film-makers become more aware of this technology.

swissquote.com/leader
L.U.C LUNAR ONE

The 43 mm-diameter L.U.C Lunar One is a perpetual calendar model with a big date and an orbital moonphase. This 355-part automatic L.U.C 96.13-L movement is powered by a micro-rotor. Proudly developed, produced and assembled in our Manufacture, it showcases the full range of watchmaking skills cultivated within the Maison Chopard.

Chopard

THE ARTISAN OF EMOTIONS - SINCE 1860