SWISSQUOTE

FINANCE AND TECHNOLOGY UNPACKED

NVIDIA
Silicon Valley's new
headliner

PROFILE Bobst's return to grace

FRANCE Trading through the presidential election



DOSSIER

SPORT FEVER

HOW COMPANIES
ARE CASHING IN

Ultra-competitive TV rights
Online betting's boom
The rise of "athleisure"





SKY SPORTS ▶ LIBERTY MEDIA ▶ NIKE ▶ ELECTRONIC ARTS ▶ LADBROKES ▶ PLAYTECH ▶ FITBI



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New Retro



Chopard

Sport on every screen



Marc Bürki, CEO of Swissquote

elevision channels know perfectly well the winning formula to achieve record audience numbers. All they have to do is air major sporting events, preferably those involving a round ball. Take any country on earth, and the best TV ratings by far go to sport competitions. This is true of Switzerland, where the national football team, or "Nati", is a household ubiquity when going head on in an important match, not to mention the country's superstar Roger Federer. The Switzerland-Honduras confrontation during the FIFA World Cup in Brazil, which propelled the Swiss national team into the last 16, was watched in its entirety by more than 70% of the country's TV viewers present in front of their screen. That's almost 2 million people. An all-time record. And FIFA estimates that more than 1 billion people worldwide watched the World Cup final.

On another continent with other customs but the same passion for sport entertainment, in the United States, one of the rare countries where soccer has only a modest impact, American football crushes ratings across the board with every Super Bowl. This year's game in February 2017 was viewed live by 111 million Americans, i.e. more than one-third of the population. That's three times more viewers than for the Oscars.

No doubt about it, people still go crazy for sport. As our report shows,

many listed companies are gaining from that momentum. The popularity of all things sport reverberates out to business sectors ranging from online betting, fashion, wearable technology and fitness.

What may come as a surprise is that major TV networks are now encountering turbulent times. The relentless battle over broadcasting rights forces them to spend what can escalate into ridiculous sums. Up to now, their business model worked. It was safe and predictable. But high-tech giants are trampling all over their monopoly. They want in. For example, Facebook is negotiating an agreement with American Major League Baseball to stream games live. Last year, Twitter signed a similar partnership deal with the prestigious American National Football League (NFL). Amazon just obtained livestream broadcasting rights for NFL Thursday Night Football games this year.

Understandably, sport federations and headline event organisers have every interest to form these new alliances. They enable these organisations to reach a wider and often younger audience that doesn't necessarily want to pay for cable television. And in some cases, they don't even have a TV! Sports mania is not about to subside, so just stick with the winning team.

Enjoy!

p. 32

DOSSIER





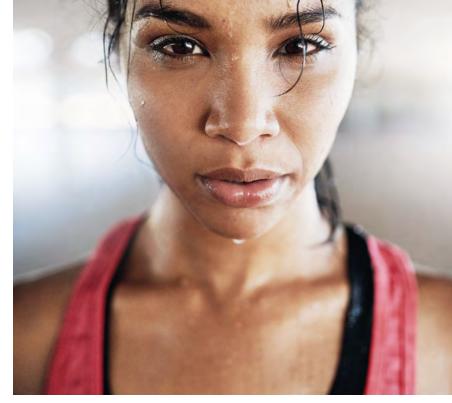


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Director of
economiesuisse

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SCANS

fashion

SEE NOW, BUY NOW: NEW TRENDS IN THE FASHION INDUSTRY



Fast fashion brands such as Zara and H&M have forced major names in the fashion world to reconsider their business models. Several luxury brands, such as Burberry, Ralph Lauren, Tom Ford and Tommy Hilfiger have begun to make collections available to the public at the same time as fashion shows,

rather than wait the traditional four months. This practice, dubbed "see now, buy now", has increased sales for Tommy Hilfiger by 4% in the quarter that followed last autumn's fashion weeks. The brand's website saw a 900% increase in traffic and several pieces were sold out within 24 hours. — RERBY — RL



"I didn't think
we were ready
to come to
Italy. I am so
respectful of
the Italian
coffee heritage
and I think we
had to earn
that respect."

Howard Schultz,

CEO of Starbucks, announcing the opening of its first store in Milanin 2018.



29%

The percentage of electric or hybrid cars among new cars sold in 2016 in Norway. The Scandinavian country is expected to have 400,000 of these vehicles on the roads by 2020. Norway is now the world leader in electric vehicles.

digital CLOVA, ASIA'S VIRTUAL ASSISTANT





1,000

The number of women (of those who temporarily left the work market) that UK company Vodafone aims to recruit over the next three years. Globally, 96 million women aged 30 to 54 have put their careers on hold, which is a huge loss of expertise.

____ VOD

pharma

ACTELION FOUNDERS LAUNCH A START-UP

Jean-Paul and Martine Clozel have sold Actelion, the Basel-based biotech firm they founded 20 years ago, to Johnson & Johnson for \$30 million. But they're not going to retire. Instead, the two doctors are launching a new start-up that will continue the research they began at Actelion for neurological diseases, lupus and insomnia. The start-up aims to develop new medications to treat these diseases. It will be listed on the Swiss stock exchange and will have \$1 million in initial capital. Johnson & Johnson will hold a 16% stake in the start-up.

construction

IMPLENIA ON THE RIGHT TRACK



Swiss construction giant Implenia is making moves in Northern Europe. It just signed a contract in Sweden worth 80 million Swiss francs to build a bypass road in Stockholm. It will also carry out work on a trunk road connecting Bergen and Trondheim on Norway's west coast for 38.2 million

Swiss francs. The Zurich-based company made 64.4 million Swiss francs in profits in 2016, an increase of 24%. It also purchased its German competitor, Bilfinger Construction, at the beginning of March. This acquisition will give Implenia greater access to the construction market in Germany.

RANKING

THE TOP FIVE RENEWABLE ENERGIES THAT EMPLOY THE MOST WORKERS IN THE WORLD

- 1. SOLAR ENERGY
- 2,772,000
- 2. BIOFUEL
- 1,678,000
- 3. WIND ENERGY
- 1,081,000
- 4. SOLAR HEATING
- 939,000
- 5. BIOMASS
- 822,000

Source: Renewable Energy Policy Network REN21

THE FIVE SECTORS THAT ARE THE MOST THREATENED BY AUTOMATION IN THE WORLD

(number of jobs due to disappear)

- 1. AGRICULTURE, FORESTRY, HUNTING, FISHING
- 328.9 MILLION
- 2. MANUFACTURING
- 237.4 MILLION
- 3. RETAIL TRADE
- 187.4 MILLION
- 4. CONSTRUCTION
- 82.2 MILLION
- 5. ADMINISTRATION 63.2 MILLION

- Source: McKinsey

THE FIVE MOST UNPOPULAR STOCKS ON THE NYSE

(based on the number of stocks sold in a short sale)

- 1. PFIZER
- 137.2 MILLION
- 2. CHESAPEAKE ENERGY
- 119.47 MILLION
- 3 SPRINT
- 119.3 MILLION
- 4. WEATHERFORD
- 118.1 MILLION
- 5. ALIBABA GROUP
- 113.7 MILLION

Source: 24/7 Wall St



-1%

Twitter's decline in advertising revenue last quarter, averaging at \$638 million. The social network is struggling to host video advertisements, which are more profitable.

Video advertising is more prevalent on competitor networks Facebook and YouTube.



raw materials MINING GIANTS ARE SMILING AGAIN

After a catastrophic 2015 when the price of raw materials dropped significantly, big mining groups saw income improvements in 2016. BHP Billiton made \$3.2 billion in the second half of the year, compared to the \$5.7 billion it lost the year before.

Anglo American made \$1.6 billion in 2016, a vast improvement from the \$5.6 billion deficit in 2015. Glencore is no longer in the red, making \$1.4 billion in profit in 2016, compared to the \$5 billion it lost a year before. —> BLT —> AAL —> GLEN





"I must fundamentally change as a leader and grow up"

Travis Kalanick,

CEO of Uber, following a series of verbal and sexual harassment scandals towards employees and drivers.



food SODA FOR ADULTS

SCANS

The target demographic for soda is traditionally children and adolescents, which is reflected in the ingredients and marketing of the bubbly drinks. Now, several brands have decided to market soda to adults. The new sodas have less sugar and are more bitter. Thomas & Evans, a new brand marketed by UK-based Britvic, will have notes of elderflower, green fruits and oak. Another soda brand, Fever-Tree, advertises ingredients such as lemons from Sicily and green ginger from the Ivory Coast. Fever-Tree's stock price almost doubled in 2016.

digital LOGITECH TARGETS GAMERS

In September, Logitech announced its desire to re-establish itself as a market leader in webcams. It has done just that with the Brio, a camera that can film in 4K Ultra HD. The Brio is now the camera with the best resolution on the market. The \$199 price tag is also quite competitive. The Vaud-based company aims to target the gaming community with the new camera. It also plans to build on the success of streaming platform Twitch, which broadcasts videos of gamers playing various games and e-sport competitions (see also p. 42).





KICKSTARTER



SELFLY

The selfie stick of the future

Selfly is a smartphone case with a propeller and camera. When folded, it measures no more than 9 mm thick and can slide into a pocket. Once it detaches from your smartphone, the Selfly's four mini propellers send it soaring into the air to film or photograph the scene below. Users control the engine via an app downloaded beforehand. Images filmed by this pocket drone are sent to the smartphone controlling it and can be shared instantly on social media. Selfly will be on sale for \$139 (only \$99 for those who supported the campaign on Kickstarter). Currently it is compatible with iPhone 6 and 7 Plus, Samsung Galaxy S6 and S7 and Motorola Nexus 6. Your selfie stick will be a thing of the past.

FUNDS RAISED \$1,048,262

AVAILABILITY
JUNE 2017

SCANS



"We are prepared to supply our materials to all types of infrastructure projects in the United States"

ric Olsen

head of French-Swiss cement manufacturer LafargeHolcim, questioned by AFP about the possible participation of the group in the construction of the wall on the Mexican border.

healthcare

SCANS

FRENCH-SPEAKING SWITZERLAND'S HEALTH VALLEY IS ATTRACTING INVESTORS

French-speaking Switzerland, driven by the Swiss Federal Institute of Technology in Lausanne (EPFL), is now home to more than 900 companies active in life sciences. That makes it one of the world's most important regions in the industry. These companies brought in 550 million Swiss francs in financing last year, according to startupticker.ch. The past few weeks in the region have been packed with a solid series of IPOs and fund-raising rounds. The Geneva-based start-up ObsEva announced in early March that it had landed 97 million Swiss francs on the Nasdag since January. The biopharmaceutical company AC Immune in the canton of Vaud said that it has drawn in 70 million Swiss francs since it began trading on the Nasdaq in September 2016. At the end of March, the heart valve specialist Symetis, which operates out of Lausanne, launched its IPO on the Paris stock exchange, increasing its share capital by €50 million.

____ OBSV ____ ACIU ____ SYMS



aviation SWISS IS MAKING MOVES IN EUROPE



DREWEBANNER

The monthly cost of YouTube's new streaming service in the United States. Subscribers have access to more than 40 television channels. In comparison, cable TV costs an average of \$100 a month in the US.

\$35





\$49.4 bn

The amount British
American Tobacco
spent to acquire
its rival Reynolds,
which sells the
brands Camel,
Newport and Vuse.
The transaction
creates the largest
cigarette company
in the world and will
enable the British
company to expand
its vaporiser offer.

____ BATS

FLOP

The drone that couldn't fly

Drones have one job: to stay in the air. Unfortunately, Karma, the newest GoPro model, didn't fly so well. During its highly publicised launch last summer, the California-based company announced a drone that could fly silently and was easy to transport. But a problem with the battery latch disrupted the power

to the device, and as a result, some drones fell from the sky. One of them crashed into a window of an apartment on the 27th floor of a skyscraper in New York. The defective drones were recalled, the manufacturing error was repaired, and a new version of the Karma was available for sale in early 2017. — GPRO

food MARS DIVERSIFIES

Faced with declining sales in the confectionary market, Mars has decided to enter the booming domestic animals market. The US group just acquired the veterinary hospitals chain VCA for \$7.7 billion. It already owns rival companies Banfield and BluePearl. This acquisition extends Mars' portfolio in animal clinics, a market that is worth \$4 billion per year, with 1,700 locations. In 2014, Mars acquired the animal food division of Procter & Gamble. It holds a market share of 25%, estimated at \$72 billion globally.

automobile PEUGEOT GAINS GROUND IN EUROPE



French group Peugeot PSA acquired the Opel and Vauxhall brands from US-based General Motors for €2 billion. This transaction completely changes the automobile market. General Motors, based in Detroit, has effectively given up its presence in Europe, where it has lost more than \$15 billion since 2000 and was never profitable. GM's French competitor Peugeot is gaining ground, becoming the second-largest auto group in Europe with a 16% market share, behind BMW and ahead of Renault-Nissan. —

SCANS



"I have this vision that in the next five to 10 years the air fares on Ryanair will be free, in which case we will be making our money out of getting a share of the shopping and the retail revenues at airports"

Michael O'Leary, CEO of Ryanair.

banking GET CASH USING YOUR SMARTPHONE

In the United States, several banks are rolling out ATMs that identify users via the RFID chip in their smartphone or a QR code they receive through an app. JP Morgan Chase tested this technology on a few hundred ATMs in Miami and San Francisco and is preparing to extend it to 6,000 other machines. Bank of America and Wells Fargo have similar projects in the works. Some banks are going even further. In Brazil, Banco Bradesco customers can take out cash by tapping the palm of their hand on a scanner. Citibank has developed an ATM that scans its customers' irises as proof of identification.

IPO

SNAP MAKES A NAME FOR ITSELF IN NEW YORK

Snap, parent company of social media network Snapchat in which messages disappear right after they are read, had the most anticipated IPO after Twitter's in 2013. It did not disappoint: the share price began at \$24 on the New York stock market, well above its offering price of \$17. As a result, the California company raised \$3.4 billion. Most analysts, however, believe that Snap

shares are overpriced. In 2016, Snap lost \$515 million. It began sharing adverts on its "Stories and Discover" feed and offering sponsored photo filters, but neither generated much money. It does have a sizeable advantage, though: Snapchat is the preferred app among millennials, the most targeted demographic. In the United States, 41% of millennials aged 18–34 use Snapchat daily. — SNAP



Powerful, fluid contours and a characteristic waveform shoulder line make the new A5 Sportback a true design icon. Its standard Audi LED headlights provide daylight-like illumination of the road for your safety. For more information contact your Audi dealer.

audi.ch

TRENDS



Exxon Mobil's new kingpin fits the bill

President Trump's appointment of Rex Tillerson as US Secretary of State left an opening for CEO of Exxon Mobil. This position was filled by Darren Woods, who took the helm of the oil giant in early 2017. The Kansas-born leader joined the Texas-based company in 1992 as a planning analyst, and was made vice president of ExxonMobil Chemical Company in 2005. In 2008, he moved to Brussels to work at ExxonMobil Refining and Supply Company as the director of re-

Position CEO of Exxon Mobil

Age 52 years old

Nationality American fining for Europe, Africa and the Middle East. He returned stateside in 2010, quickly becoming vice president and then president of Exxon Mobil Corporation in 2016. His arrival coincided with a critical moment for Exxon Mobil: last year the group's profits plummeted and its share price is currently dragging its feet due to its overexposure to natural gas and shale gas, which entail significant extraction costs.

____XOM



A China-reliant economy

Population 24.4 million

GDP per capita \$54,708

Growth in 2015 2.4%

Main
economic
sectors
Mining,
agriculture,
services

When the Australian economy shrank 0.5% in 03 2016, the population was stunned. In all its 7.7 million square kilometres, this gargantuan country hasn't seen a recession in 25 years. A few months later they heaved a sigh of relief when the economy started to pick up again, growing 2.4% overall in 2016. Australia owes its resilience to its biggest export market, China, whose impressive growth over the past 10 years has boosted the Australian mining sector, particularly

for iron and coal extraction. Australia also exports beef and milk products to the Chinese. In 2016, exports of these commodities to the Asian industrial giant were worth 86 billion Australian dollars (65.5 billion Swiss francs), or 27.5% of total exports. But this heavy reliance is a weak point for the Australian economy, as is the volatility in commodities markets. Should iron or steel prices drop or the Chinese construction market experience a slowdown, the blow would be fatal.



One wearable to predict your every need

The American group Carnival
Corporation has invented the first
truly smart cruise. When the 3,560
passengers come aboard the Regal
Princess, one of Carnival's ships,
they will each receive a smart bracelet called the Ocean Medallion. The
innovative medallion analyses your
every move and slightest gesture
using 7,000 sensors connected to
the Ocean Compass – a network of
4,000 high resolution screens located

throughout the ship – to make your trip as pleasant as possible. For example, as you approach your room, you will find the door unlocked, the light on and the air-conditioning running. If you decide to take a stroll on deck, the screens within your field of vision will suggest activities you might enjoy. A passenger who played sports for three days might be invited to play basketball. Someone who spent the majority of their time poolside

might be offered a margarita. The purpose of the Ocean Medallion, which was developed by those who invented

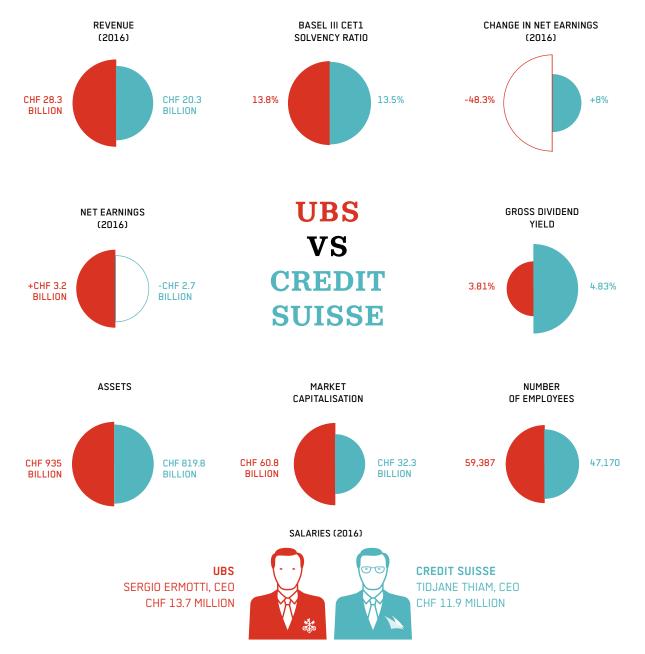
the Magic Band used in Disney theme parks, is to predict the every whim of passengers while also selling them more services and saving a buck or two on the electricity bill.

Company Carnival Corp

Launch November 2017

Estimated
cost
A few hundred
million (\$)

THE MATCH



BY BENJAMIN KELLER

Credit Suisse remains in the red. But Switzerland's second-largest bank is slowly picking up. The deficit was reduced to 2.7 billion Swiss francs in 2016, compared with 2.9 billion the year before. The remaining amount is due in large part to the \$5.3-billion fine imposed by the US government to end the subprime lending crisis. A provision

of more than \$2 billion was put in place in Q4 2016 for this purpose. The bank continues its restructuring, with 5,500 layoffs expected in 2017, following 7,250 layoffs the year before. Reducing the workforce increased capital beyond expectations. When the yearly results were released on 14 February, Credit Suisse's stock went up 2.3%. UBS stock,

however, fell 4.5% when the company's 2016 earnings were released on 27 January. Profits dropped by nearly half, affected by litigation, regulation and other fees (693 million Swiss francs) as well as restructuring costs (1.46 billion Swiss francs). In 2016, however, UBS made a comeback in North American wealth management. — CS — UBSN







Bobst: mission accomplished

Weighed down by the strong Swiss franc, the Vaud-based company has modernized beyond all expectations. Bobst is reaping the fruits of its labour and the packaging-machine manufacturer has become a leading force in the market.

BY MARIE MAURISSE



BY THE NUMBERS

53%

The percentage of packaging (cardboard, plastic containers, etc.) in the world manufactured by Bobst machines.

1.447

billion. Bobst's 2016 revenue in Swiss francs, up 8.7% versus 2015. 5,055

The number of Bobst employees, 1,800 of whom are in Switzerland. 17

BST

Swiss franc. The dividend paid out to Bobst shareholders. 19.9%

The return on capital employed (ROCE), nearly 4 points higher than in 2015.



t's barely daybreak in Mex. In this small town in the Vaud countryside, the Bobst factory is a hum of activity in the middle of fields. The clock reads 6.30 am, but employees are already working hard. It's Thursday 2 March 2017, and the world leader in packaging and labelling machine manufacturing must publish its annual report for 2016. In treasurer Guiseppe Santoro's office, the stress level is palpable but no one is worried. The company's performance is once again miraculously good this year, despite the economic conditions. Revenue was up 8.7% versus 2015, and net profits rose 25.6% to 84.3 million Swiss francs.

There are more than 20,000 Bobst machines in use on the market, and their owners can pay for new services

But don't let the numbers fool you; the group has made a huge comeback. Founded in 1890 in Lausanne by Joseph Bobst, the family company grew at a healthy rate and slowly gained an excellent reputation for quality machinery and reliability. From the outset, the Swiss manufacturer always wanted to expand operations around the world and >

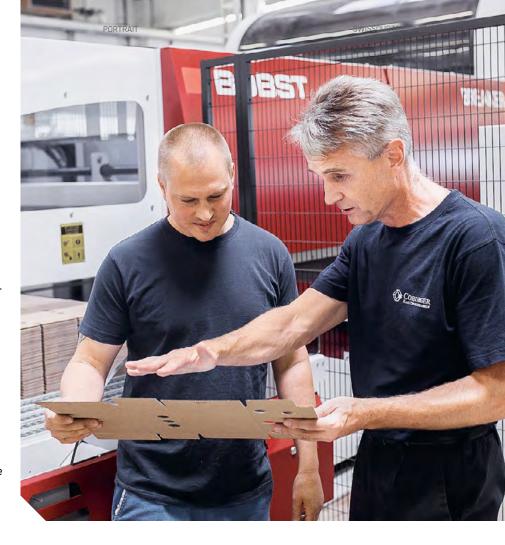
regularly opened subsidiaries across the globe, beginning in France. In 1978, Bobst went public. Its future followed the path of globalisation, and business was booming. The company always sold more machines that produce cardboard boxes, glass bottles, wood crates and plastic bags, particularly for the agri-food and textile sectors.

Difficulties arose as a result of the 2008 economic crisis and the sudden rise in the Swiss franc, which weighed on the company's competitive position. In 2009, Bobst lost 161 million Swiss francs for the first time in its history. It was time for a transformation.

Paradoxically, that was also the moment shareholders decided to bring the family heir into the business. Jean-Pascal Bobst was named CEO in May 2009 and decided to roll up his sleeves and get to work, as the outlook was rather alarming. The first order of business was to reduce costs to free up cash and reduce debt. Bobst sold the Prilly location and all activity was moved to the new factory in Mex, inaugurated in 2013. Then, the number of stocks was reduced by half, which freed up 250 million in cash. Since then, no packaging or labelling machine is manufactured in advance: production begins only once the client has signed off on the purchase.

No packaging or labelling machine is manufactured in advance: production begins only once the client has signed off on the purchase

This flexibility allows the company to save money, while also remaining extremely close to demand. Robin Seydoux, analyst at Research Partners in Zurich, is quite interest-



ed in Bobst. He recently visited the company's headquarters. "Business is less vertical than before. Only a small amount of production is done in Mex," he says. "The production chain is composed of three modules. Each part of the machine is made independently and then assembled at the end. That means various parts for different machines can be manufactured at the same time, reducing the number of employees needed for this process."

In total, 50 million was spent on modernising equipment at the Mex facility. The new production chain will also be implemented at the company's German and French factories this year.

To increase interest on the global market, Bobst also decided to delocalise most of its production. "Before, 70% of production took place in Switzerland. Now it's barely 30%," says Seydoux. The group has factories in Europe, China, Brazil and India. Last year, approximately half (45.7%) of sales were in Europe, and close to a third were on the American continent (29.5%). Sales increased in Asia (21.3%) and Africa (3.5%), two markets that are avenues for growth for the company.

THE END OF THE FAMILY DYNAMIC?

Cutting costs, however, meant that the company had to significantly reduce its workforce. More than 400 positions were cut since 2009, which was a huge shock in the canton of Vaud, where Bobst is an institution. Employees went on strike for the first time in April 2015, protesting against declining working conditions, particularly the decrease in certain





Bobst machinery used to manufacture packaging in Coburg, Germany.

were avoided. At the Mex location, there are close to 200 apprentices in training, and children of employees spend the day in the company nursery. But is the massive offshoring at odds with promoting Swiss expertise? The CEO, who cultivates discretion, declined an interview request from Swissquote Magazine.

Even though the financial results are in, Bobst hasn't yet completed its transformation. To generate profits, the company now offers clients digital services via the platform mybobst.com. Clients can log on to order spare parts and receive technical expertise. The digital services are already available in Switzerland and will be expanded to the international market in 2017, according to Seydoux. "Each year, Bobst manufactures 1,300 new machines, but that's not enough to generate large profits. However, there are more than 20,000 Bobst machines in use on the market, and their owners can pay for

new services. For Bobst, the digital after-sale service is the only way to stand out from its competition." Even though Bobst is the only company on the global market, it faces increased competition in certain key sectors. The German company KBA is neck-and-neck with Bobst in the cardboard-packaging market, while another German company, Windmöller & Hölscher, is right on Bobst's heels in the flexible-packaging market.

With figures in the black and an excellent outlook, Bobst has every reason to imagine a rosy future, even if 2017 will be "unpredictable", according to a cautious statement from the company. And more good news: Bobst will open its third factory in China in early 2018. So it makes sense that Alain Guttmann is expected to be re-elected as Chairman of the Board. Why change a winning team?

__✓ BOBNN

bonuses. Protesters missed the "family dynamic" that used to be so present at Bobst. It disappeared in favour of dividends for shareholders, as reported by the Vaud daily 24 heures.

It was a valid claim: from the very beginning, the Bobst "culture" was one in which the company paid particularly close attention to the well-being of its employees. Its code of conduct touts the importance of "moral values". A passage reads: "Today's society tends to forget that moral values exist and that they are universal. Our professional behaviour must reflect those moral values and display our commitment to them, in order to show that they are alive and well and that they are vital to our company." These moral values are particularly important to Jean-Pascal Bobst, who is known for his religious faith. Several layoffs

ANALYST'S OPINION

"WITH A REASONABLE SHARE PRICE AND EXCELLENT RESULTS, BOBST IS A SAFE INVESTMENT"

While Bobst is a legend in French-speaking Switzerland, it remains relatively unknown in German-speaking Switzerland. Remo Rosenau of Neue Helvetische Bank is one of the few analysts from the region who follows Bobst closely. "We've held Bobst shares in our portfolio for three years and have never removed them," says Rosenau. "The management has really done a great job and improved the company's profitability, despite the crisis. Their progress is also a result of the new production chain at the Mex location, which is a modular system similar to what's used in the automotive industry. If

the pattern continues, EBIT could exceed 8%." And the share price isn't too high, since Bobst has long been ignored by analysts and investors. The price is around 90 Swiss francs and rising, as interest is clearly increasing. The good financial results haven't kept Bobst from investing. The company has launched no fewer than 16 new models over the past two years. It's also working on manufacturing machines that are completely digital. "They're in the beta stage," says Rosenau, "but if Bobst manages to sell them, they will be the first company on the market to do so. It would be a revolution!"







The classic in a new light

USM Modular Furniture Haller now features revolutionary integral lighting: cable-free, dimmable, energy efficient. A true innovation – get inspired!

www.usm.com

ANALYSIS

THE VIEWPOINT OF SPECIALISTS

INVESTOR INTERVIEW

"AI has the power to revolutionise almost all industries"

Artificial intelligence is experiencing extraordinary growth and the internet giants Google and Facebook are at the forefront, according to Aditya Kaul, research director at Tractica.

BY SOPHIE GAITZSCH

In 2016, a machine beat the world champion of the Chinese game Go – a game renowned for its subtlety and complexity – for the first time. The victory by the AlphaGo programme, developed by Google DeepMind, has put artificial intelligence (AI) back into the spotlight. These interfaces, which are able to solve complex problems, are found increasingly in real-life situations. Driverless cars or voice-activated assistants are two of the most striking examples. Tractica, a US research and consultancy firm specialising in technology, is closely following developments in Al. Swissquote Magazine asked Aditya Kaul, research director at Tractica, to help us decipher this booming market.

Can the artificial intelligence market be quantified?

We estimate very strong growth across the global market in the next decade. Estimated to be worth \$643.7 million in 2016, the market should increase to \$38 billion by 2025, i.e. an increase of 50x the current figure. This growth should be mainly driven by the consumer goods, business services, advertising, finance, media and defence sectors. We also think that AI could be used by almost every industry and that this technology will have similar effects on the market as the IT revolution of the 1980s and the mobile revolution of the 2000s did. We are currently seeing significant development in the use of AI in the health sector, for analysing medical imaging for example, and also in the legal, insurance and sales sectors.

Who are the main players on the market?

Internet giants, such as Google, Facebook and Amazon, are at the forefront and are investing heavily in AI. They are followed by the automotive sector, with companies such as Google, Tesla, Toyota, Baidu and General Motors all competing to produce the first driverless car. And upstream there are the processor manufacturers, such as Nvidia, specialised in graphics processing units (GPU). The California-based company is taking off and has clearly become the leading supplier for the AI market (see company portrait on p. 26).

Are any of the major digital companies standing out from the crowd?

It's hard to pick a clear winner, but Google is definitely at the head of the pack. The company has made serious changes to its search engine: last year, AI elements were used to reply to a third of all search queries. In addition, artificial intelligence has enabled Google to reduce energy consumption at its data centres by 40%. Google also acquired DeepMind in 2014, a company that works on developing a strong AI system (editor's note: a machine that can apply intelligence to any problem). It was this program that beat the Go world champion last year. Facebook is also making significant progress. The social network has an enormous amount of data that it can use to train its algorithms. It has created an algorithm library for its engineers, in order to reduce the time required to develop new AI applications. With



South Korean Lee Sedol (on screen), a Go world champion, lost to Google's artificial intelligence (Seoul, 12 March 2016).

1,000 specialists working on its voice-activated assistant, Echo, Amazon finds itself in an interesting position. And this is before even taking into account the use of robots in its warehouses and drones for delivering its products.

What about the other Silicon Valley giants?

Apple appears to be on the back foot. The company is not saying much about AI or the extent of its AI research. We will have to wait for the release of the next iPhone to get a better idea, but the fact is that Siri, Apple's voice-activated assistant, is not very impressive in comparison to similar products from Amazon or Google. Microsoft is constantly telling us how dedicated it is to AI, but the company has yet to produce convincing results. IBM's Watson program, which helps businesses solve problems using AI, is not generating much income at this stage.

In terms of research, where are the main breakthroughs currently being made?

For roughly the last five years, we have seen a shift, with large companies now surpassing university laboratories in research and development. The academic world is fighting to keep its researchers. The big question now revolves around knowing what kind of an impact this will have and whether the current model – where the brightest and best minds are all working for Google and Facebook – is sustainable.

And what about start-ups?

Our research has identified more than 2,000 startups which are working in the field of artificial intelligence. We estimate that between 500 and 600 of these are credible. The majority are active in highly specialised niche sectors. Let's look at Edited, for example. This London-based company works in the fashion sector and analyses data to help stores optimise their product ranges and prices, and even identify the best time to launch a product. Another example is Captricity, a startup based in California that uses AI to digitise companies' paperwork.

What advice would you give to anyone thinking of investing in AI?

When considering the different types of AI, we should pay particular attention to deep learning, which has led to rapid progress in the field of voice and image recognition. It is also important to understand that AI is only useful if you have data. Investors need to ask themselves if the company that they are thinking of investing in has data, or the ability to obtain data. One final key point is about algorithms. The be st-positioned companies are those that are investing and innovating the most in this field. \checkmark



Aditya Kaul Research Director, Tractica Boulder, Colorado (US)

Silicon Valley's new headliner

Until 2016, Nvidia was an unfamiliar name to anyone outside the world of video games. But the California-based company now has Wall Street investors rubbing their hands together, just waiting to pounce on its promising position on the artificial intelligence market.

BY GENEVIÈVE RUIZ

he opening speech at the Consumer Electronics Show in Las Vegas, the must-go-to event for global high-techies, is typically given by superstars such as Bill Gates, or by industry giants like Samsung or Intel. In January 2017, the slot was filled by a figure relatively unknown to the masses, Jen-Hsun Huang, the 54-year old founder and CEO of Nvidia. "What used to be the stuff of science fiction will become reality in the years to come," he stated, poised and confident, dressed in his usual attire consisting of a leather jacket, polo shirt and black jeans. He used these words to refer to the recent boom in artificial intelligence (AI), an area where his company boasts ideal positioning. And that's precisely the industry that is now attracting the interest of the high-tech companies in attendance at the Consumer Electric Show, even though some televisions and tablets are still around.

Since it was founded in 1993, Nvidia has specialised in designing graphic processing units, or GPUs, for computers, game consoles and more recently smartphones. What drove this company operating out of Santa Clara, California, to explore artificial intelligence? It came about through a simple turn of events, a lucky coincidence. Everything changed in 2012 when academic researchers realised how the brand's graphic processing units could be used in developing artificial intelligence, as they can handle multiple tasks simultaneously. Nvidia's technology, which up to that point had mainly been used to enhance video games such as Call of Duty, became a valuable tool for AI, and more specifically for accelerating deep learning. Deep learning is a subset of machine learning techniques that makes it possible for computers to learn on their own, without having to go through the cumbersome algorithms of program- ▷





mers. And this has led to amazing advances in areas such as face and voice recognition.

Tesla now fit all its self-driving cars with Nvidia cards

The rest of the story is like a fast track to success. Operations that used to take several weeks or months can now be completed in a few hours or minutes. The company's sales took off with requests from customers including Google, Facebook, IBM and Amazon. These tech giants need Nvidia's technology for managing their huge data centres, search engines and digital assistants (such as Amazon's Alexa). One of the reasons Nyidia has dominated the market is that it doesn't cater exclusively to this category of customers. It provides a turnkey development kit and a set of deep learning algorithms. Partnerships have developed in many areas. Not only does the carmaker Tesla now fit all its self-driving cars with Nvidia cards, but universities and hospitals also use them to analyse medical imaging.

WALL STREET NOW **INVESTING IN AI**

"At no time in the history of our company have we been at the centre of such large markets," Jen-Hsun Huang told Forbes magazine at the end of 2016. More than 2,000 start-ups worldwide are currently active in Al. Whether specialised in online retail, drones and finance - they all use Nvidia graphics cards. Some analysts believe that Al will revolutionise every industry. That's why Wall Street is now investing in this technology and companies with the best positioning on the market. And that includes Nyidia, whose recent share performance has been, unsurprisingly, spectacular.



ANALYST'S OPINION

"2017 COULD BE ANOTHER RECORD YEAR"

"Nvidia's fundamentals are strong," says Sébastien Gatel, a market analyst at Zonebourse. "The company's strategy is coherent. A current consensus agrees that its long-term outlook is excellent. Everything points to go, for anyone who wants to invest." Nvidia's share tripled in value in 2016, and analysts predict a record year in 2017. Forecasts for the company's revenue growth are optimistic, expected to rise from \$6.9 billion in 2016 by \$1 billion in 2017 and could exceed \$8 billion in 2018.

The situation is not surprising, says Sébastien Gatel. "In artificial intelligence, and especially self-driving cars, Nvidia has carved out a strong position for itself in relation to its competitors such as Intel and AMD. The company has sealed partnerships with big names, including Audi,

Bosch, Amazon and Google." Alongside these growing sectors, Nvidia has maintained a strong performance in the video game market, where it applies its prime area of expertise and which has been its core business since it was founded. The Californian brand remains the world's leading supplier of graphics processing units. In addition to making its own hand-held game consoles, the Nvidia Shield, its devices also power the new Nintendo Switch.

The only drawback with Nvidia is in its meagre dividend payout strategy. Shareholders were paid \$0.40 per share in 2016 and are expected to receive \$0.09 more in 2017. "Nvidia's strategy remains cautious," Gatel says. "Competition is tough, and investment in research and development will be massive to stay at the top."

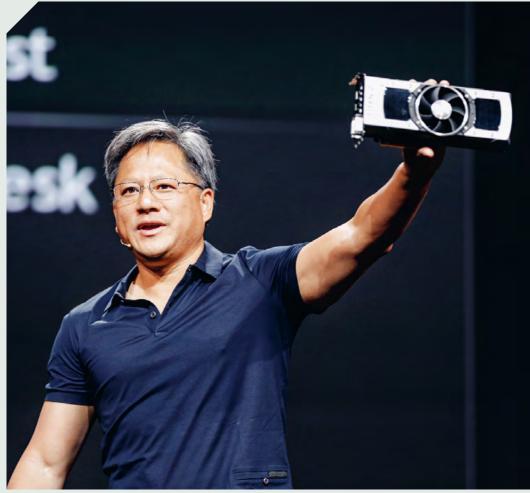
Since the spring of 2016, the California-based company has broken every record. Its share has tripled in value, by far the best performance in 2016 in the S&P 500 on Wall Street. Its revenue rose 38% in 2016 to \$6.9 billion, even climbing 55% in the fourth quarter compared with the same period in 2015. "Nvidia's success is based on a healthy mix of businesses of the future, such as artificial intelligence, and an older but growing core market, with its graphics chips and cards for video games," says Mark Hung, a top analyst at Gartner in California. "You have to remember that the gaming sector still accounts for over 60% of Nvidia's revenue. Its technology also powers the new Nintendo Switch console, which is enjoying comfortable retail orders."

INTEL ON THE PROWL

Unfortunately, this type of success story attracts the attention of competitors. And they're not ones to be trifled with. The main competitor, Intel, is much bigger than Nvidia, with 2016 revenue of about \$60 billion. Intel still dominates many markets, but its higher-ups don't want the artificial intelligence pie to fall entirely into the hands of Nvidia. The US tech giant, headquartered near Nvidia in Santa Clara, has recently bought several start-ups active in AI, such as the software developer Nervana Systems. In March 2017, Intel bought the Israeli autonomous driving specialist Mobileye for \$15 billion. AMD, Nvidia's main competitor in graphics cards designed for video games, managed to fit its hardware into the latest Xbox One and PlayStation 4. "Competition

is fierce in the industry, but that's nothing new," Hung says. "But I think Nvidia has a head start, at least in the artificial intelligence market, and it will keep that strong position for the year to come. After that, it'll depend on the quality of the products available from the competition."

Jen-Hsun Huang, now a billionaire, can now simply sit on his success. But that's not the style of this Taiwan native who moved to the United States at the age of 10. He's a fighter and still manages his company with the spirit of a start-upper, 24 years down the road. Huang recently said, "I always think we're 30 days from going out of business. That's never changed. It's not a fear of failure. It's really a fear of feeling complacent."



Jen-Hsun Huang, who has long served as the company's CEO, brandishing Nvidia's GeForce Titan, the top-of-theline graphics card for PC (GPU Technology Conference, 2014).

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LA LÉGENDE A GRANDI

LA NAVITIMER 46 mm

BREITLING BOUTIQUE

PLACE DES BERGUES



Feature by Ludovic Chappex, Benjamin Keller, Jean-Christophe Piot, Julie Zaugg DOSSIER

SPORT FEVER

HOW COMPANIES ARE CASHING IN

The excitement buzzing around champions and major sport events is rich with opportunities for companies. Merchandising, broadcasting rights, online betting, clothing lines, fitness – the sport economy is all around us.

BY LUDOVIC CHAPPEX

- 34. Infographic: growing sectors
- 36. The ultra-competitive world of TV rights
- 42. eSports in the big league
- 44. Sports betting: the game is on
- 48. Football: publicly traded clubs face tough equations
- 52. Triumph of the tracksuit
- 56. The fitness market flexes its muscles

he sport industry is booming, and experts believe it will continue to thrive for years to come. Given the sluggish growth weighing on many sectors, this global, broad-spectrum market – ranging from sport entertainment to everyday physical exercise and urban streetwear – deserves attention from investors.

On the front of major sport competitions, the media revolution has begun. The invasion of smartphones and wider accessibility of high-speed internet are changing consumer habits. This new normal is >

starting to attract high-tech heavyweights like Netflix, Facebook and Amazon, who want to get into the game. For all the upheaval, major sport television networks remain, for now, kings of their domain. But it takes massive investment to buy ever more costly exclusive broadcasting rights. Not everyone will come out of this battle unscathed. Even the US giant ESPN, owned by Disney, is beginning to feel the tremor in the firm ground underneath it.

It may come as no surprise that Asia - especially China - is driving industry growth. The recent rise in popularity of football in the country is reflected in the purchase of prestigious European clubs, including the legendary AC Milan, which was snatched up for €740 million, and of television rights to major championships such as the English Premier League. These competitions are fuelling another flourishing business: online betting. Users can place what are called "proposition bets" directly on aspects of the game that are not related to the final score. And it has revolutionised the practice. Several companies are shrewdly putting their money in this offshoot business.

But the sport economy goes beyond headline entertainment. It also draws on the widespread popularity of all forms of physical exercise. Fitness clubs and equipment manufacturers are enjoying good times, as are the brands that sell wearable technology to monitor performance. More than one in three sport enthusiasts is reported to use this type of device. Dress codes have also been swept up in the momentum, and not just in the shoe department. People everywhere are wearing Nike, Under Armour and Puma sportswear, including at cafés and at the office. The trend is most noticeable in China. These days, the sport industry certainly has the advantage on its side.

GROWING INDUSTRIES

MERCHANDISING

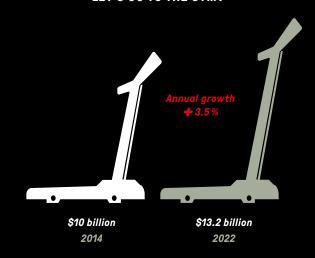
FANS ARE SPENDING MONEY



Global sports-related products

FITNESS

LET'S GO TO THE GYM!

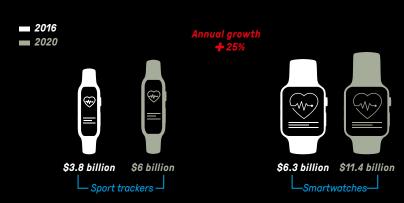


Global fitness machine market



WEARABLES

THE MONITORING CRAZE



Global revenue

E-SPORT

THE MARKET IS TAKING OFF

AN EVER-INCREASING AUDIENCE



\$194 million 2014



90 million 2014



\$463 million 2016



125 million 2016



\$1,072 million 2019

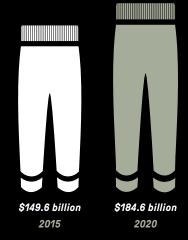


165 million 2019

Global cumulative value of media rights, merchandising and tickets, online publicity, Number of people who watch e-sports at least once a month in the world

SPORTSWEAR

DRESSED FROM HEAD TO TOE



Global sportswear market



\$80 billion 2015

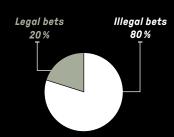
\$88.3 billion 2020

Global athletic footwear market

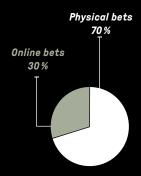
brand partnerships, etc.

SPORTS BETTING

A COLOSSAL INDUSTRY



Global sports betting market



\$205.6 billion 2015

\$253.3 billion 2020

THE ULTRA-COMPETITIVE WORLD OF TV RIGHTS

Sports broadcasting is becoming more and more expensive for TV networks, old and new alike. But is a bubble starting to form?

BY JEAN-CHRISTOPHE PIOT



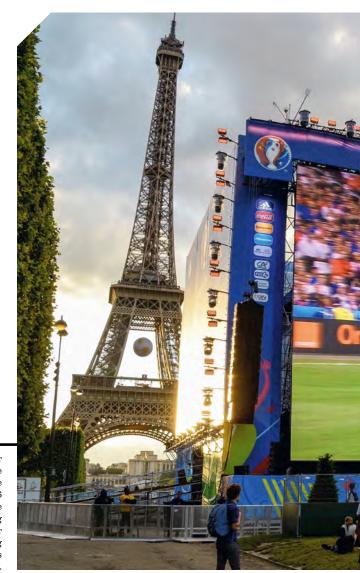
Such growth is due in large part to the renegotiation of rights for the major European football leagues, especially the UK's Premier League. Last year, the most popular football league in the world signed a three-year \$650-million contract with Chinese platform PPTV, beginning with the 2019–2020 season. It's the biggest contract ever signed between the Premier League and a foreign broadcaster. That's nothing, though, compared with the \$7.3 billion spent by UK networks between 2016 and 2019.

Football lovers gather en masse to watch the France/Albania game during Euro 2016 (15 June 2016). The cost of renegotiating TV rights for major games is driving broadcasting charges through the roof.

China's enthusiasm for UK football is just one of the country's sport-related investments. Wanda Group, a private conglomerate, purchased sports marketing company Infront Sports & Media for €1 billion in 2015. The company has a partnership with FIFA and holds broadcasting rights for the football World Cup and the Olympics. The same year, Wanda Group also acquired a 20% share of Atletico Madrid, a finalist in the most recent Champions League. Chinese companies have also bought other major clubs, such as Aston Villa and AC Milan, which was sold by Silvio Berlusconi for €740 million to the consortium Sino-Europe Sports.

Football dominates
the global market:
it alone makes up 85%
of sport television
broadcasting rights

But football enthusiasm in China and Asia in general is just a (big) drop in the ocean. True, football dominates the global market – it alone makes up 85% of sports television broadcasting rights – but American sports are also becoming incredibly popular. David Dellea, strategy and opera-





tions director at PwC Consulting in Zurich (see interview, p. 41) says, "In North America, the National Football League (NFL), Major League Baseball (MLB), National Basketball Association (NBA) and National Hockey League (NHL) enjoy far more media coverage than other popular sports." These four leagues account for 90% of broadcasting rights in North America. That's much more than other popular sports, such as NASCAR auto racing, and up-andcoming sports like soccer, which is slowly becoming more popular on the East Coast. Elsewhere in the world, "other sports could be very popular

in certain countries, such as skiing in Austria, but it's still an exception to the rule," says Dellea.

AUCTIONS

The overall explosion in the cost of TV rights is due notably to the increasingly effective strategy of right-holders. With the help of small armies of lawyers, leagues and federations have set up broadcasting-rights auctions that are becoming increasingly convoluted. For example, events are usually split up into packages. "The idea is to divide up each event in order to raise the price. A championship >

COMPANIES TO WATCH

THE WALT DISNEY COMPANY A worrying colossus

six years: a decline turned into a haemorrhage for ESPN, the jewel of the Media Networks division of Disney. This is due to increased competition, high subscription costs and the emergence of pirate streaming viewing. Is this cause for concern? "Yes, in the sense that ESPN has made up 26% to 29% of Disney's revenue over the last 10 years," says Christopher Ma, director of investment fund Roland George at Stetson University. While ESPN's revenue has fallen in Q1 (net profit down 14%, to \$2.5 billion), Disney maintains a strong base with other activities (film, theme parks, etc.). Just not with sport

HEADQUARTERS: BURBANK (US) WORKFORCE: 195,000 REVENUE (2016): \$55.6 BN

____ DIS

SUNING China's enthusiasm

giant Suning, the platform PPTV will broadcast Premier League matches for three years starting in 2019. The agreement is in addition to another sport contract, in place since 2015, between PPTV and the Spanish Liga. This is only one aspect of a long drawn-out strategy for Suning. In June 2016, it had already acquired 70% of Inter Milan for €270 million. In time, the conglomerate aims to build a global sport empire, combining club ownership, transfer and rights management and online sport broadcasts. Chinese President Xi Jinping approves, as he is a huge football fan

HEADQUARTERS: NIANJING (CN) WORKFORCE: 24,900 REVENUE (2016): \$21.6 BN

-√✓ SZSE



VIDEO GAMES: A LICENCE WAR

Do you prefer real or virtual sports? Video game publishers were among the first to bring virtual sports to life. It's no accident that Pong and Tennis for Two are two of the first video games in history. A few decades later, Electronic Arts and its brand EA Sports dominate the sport video game market, with 320 million players all over the world (see inset, p. 41) playing American football, basketball, golf, hockey and, of course, football. FIFA 17, the latest edition of the series, was the highest selling video game in 2016 and is light-years ahead of its Japanese competitor Pro Evolution Soccer (Konami).

The licence war is fiercely negotiated with each league. Konami holds the rights to the prestigious Champions League, but EA paid a hefty sum to various other leagues for the rights to show more

than 37 championships and use the name and likeness of 16,000 players. And that doesn't even include the 14 national women's teams. Making their debut in the 2015 edition, women's teams will very likely attract a new audience. Conversely, PES 2017 has only a few championships (including France's Ligue 1 and Ligue 2) under full official licence and has to make do with invented names for clubs and players.

Unsurprisingly, the divide is digital, as the digital world determines the sales and reputation of the two gaming companies. FIFA 17 has 4.54 million followers on Twitter, far beyond PES 2017's 259,000 followers. Long regarded by virtual football fans as subpar to its competitors, FIFA has ended up virtually destroying its competition...on the balance sheet, at least.

will be spread out over three days instead of just one, and broadcast during distinct time slots, from 2 pm to 9 pm, for example," says Jean-Pascal Gayant, economist at the Université du Maine and author of Économie du sport (2016). Instead of having to choose between one or two sporting events, viewers can spend the entire weekend on the couch watching television.

The second tactic is to sell both national and international events extremely far in advance. In France, broadcasting rights to Ligue 1 matches for the 2016–2020 season were sold in 2014. Many countries have already granted the rights for the 2022 and 2024 Olympics.

From the most highly anticipated events to the most low-key matches, all primary sports broadcasts are becoming increasingly expensive. And for good reason, according to Gayant: "Professional sport is one of the rare types of televised content that broadcasters get excited about, because watching sport is a highly emotional experience that can't be easily reproduced." Networks that hold the broadcasting rights to big events therefore have a real competitive advantage.

TV BEATS THE INTERNET

In terms of long-standing broadcasters, TV networks still dominate the market: 78% of viewers still watch matches and other sporting events on their TV, according to specialized consulting firm Nielsen Sports. But in addition to traditional private and public broadcasters, new competitors such as telecoms giants are entering the market. They are attracted by the prospect of rounding out their web and mobile offers with sport content for new subscribers. For some networks, the investment is expensive: France's SFR Group, a subsidiary of Altice (see inset, p. 41) pays €100 million a year for the rights to broadcast Premier League matches on its channels.

Other rivals of traditional broadcasters are new cable or internet television companies, such as the Qatari BelN Media Group. It already has a presence on five continents and in 34 countries with 60 channels. Another is the Russian network Match TV, owned by giant Gazprom. Many networks seek to obtain market share by investing in premium content and offering very low subscription rates - just €13 per month for BelN Sports, the French subsidiary of BelN Media Group, which already has three million subscribers. This inflicts serious damage on traditional networks such as Canal+, which is far more expensive (€49.90 for the sports package).

Last summer, Snapchat negotiated with NBC for the rights to use images of the Rio Olympic Games

BeIN Sports is a private company: its only limits are determined by its owner. "Nasser Ghanim Al-Khelaïfi has close ties to the Qatari government and sees sports as a tool of soft power," says Gayant. "For the time being, he has accepted to offset the group's losses, estimated at €250 million per year." This only feeds the extreme overbidding that is also rampant in the UK between Sky Sports and BT Sport.

DIGITAL GIANTS WAITING TO STRIKE

With the spread of high-speed internet, other influential companies (notably digital giants) have come to disrupt the market a bit more. Video is at the heart of the battle between the digital players who forever changed the dimensions of our screens. Their audience – 1.5 billion Facebook users, 1 billion YouTube subscribers, 320 million Twitter users – is such that right-holders have begun negotiating, sometimes exclusively, with these new players. Last summer, Snapchat

negotiated with NBC for the rights to use images of the Rio Olympic Games. In July, Amazon won the web and mobile rights for the German Bundesliga, right after Twitter spent \$10 million to broadcast 10 American football matches from the very popular Thursday Night Football series. And as this magazine was going to press, it was Amazon's turn to win the bidding war for the NFL 2017 season, securing the rights to stream 10 games for an estimated total of \$50 million.

So many promising trial balloons for digital heavyweights, but none has had a significant impact on their turnover. "For the time being, the money that digital companies have spent on broadcasting rights pales in comparison to what large networks pay. Big events will probably not be available exclusively on the web for several years," says Dellea. But the share of games acquired by these new platforms could very well increase, which would make competition even fiercer among broadcasters.

MONEY-WASTING INVESTMENTS

Will the sports broadcasting bubble burst? Maybe, since many broadcasters are losing money. Twitter was reportedly unable to turn a profit from its contract with the NFL, after spending \$1 million per match for games that CBS and NBC bought for around \$22 million. More worrying is the fact that this phenomenon also affects the silver screen. France hosted the most recent European football championship, but French channel M6 was unable to generate enough revenue from adverts to make up the €30 million it spent on broadcasting 11 of the 51 matches. This is worrying to Gayant. "It's an outright bidding war," he says. "Broadcasters spend too much on events they buy too early. They aren't able to judge what the popularity of these events will be like when they actually occur. In France, Canal+ and BeIN Sports spent €726.5 million ▷

LIBERTY MEDIA

The Olympics and Formula 1

Liberty Media has invested significantly in sport over the last few years, both directly and through its subsidiary Discovery, which now owns Eurosport. On top of that, Liberty Media has also acquired European broadcast rights for the 2022 and 2024 Olympic Games. The group, owned by billionaire John Malone, made big moves at the end of 2016 with its purchase of Formula 1 for \$8 billion. Talk about "capitalising on new opportunities in advertising, digital rights and social media," says Jason Bazinet, analyst at Citigroup. The transaction boosted Liberty Media stock by 50% in three months. Bazinet even revised his estimates upwards, increasing the target price from \$22 to \$22

HEADQUARTERS: ENGLEWOOD (US)
WORKFORCE: 3,546
REVENUE (2016): \$5.3 BN
LSXMA

SKY PLC

The Murdoch unknown

sky sports is the UK's primary sport network, with 25 million subscribers and 14 channels. It's been in a tough spot since December, however, when Rupert Murdoch announced his desire to take complete control of the network via 21st Century Fox for \$14.6 billion. The acquisition will still encounter some unknowns, such as a share price of £10.75, which many believe is undervalued. "The correct price is closer to £13.5," says Thomas Singlehurst of Citigroup. Sky Sports may also have to go before Ofcom, the UK's independent regulator and competition authority. It's a sword of Damocles, which explains why several analysts recommend against purchasing shares right now.

HEADQUARTERS: LONDON (UK)
WORKFORCE: 30,000
REVENUE (2016): €12 BN

____SKY

to broadcast Lique 1 matches between 2016 and 2020. Given what they purchased, I'm not sure it's worth the investment." The same phenomenon is occurring in the US. ESPN (see inset, p. 37) is a victim of its own power: the network is losing subscribers to offers that are less complete, but also less expensive, such as PS Vue and Sling TV. This is occurring right when ESPN is due to renegotiate the rights for all major sport events. In 2017, the cable channel is expected to spend \$7.3 billion to continue broadcasting its current programmes, close to \$2 billion of which is for the NFL and \$1.5 billion for the NBA. At the rate ESPN is losing

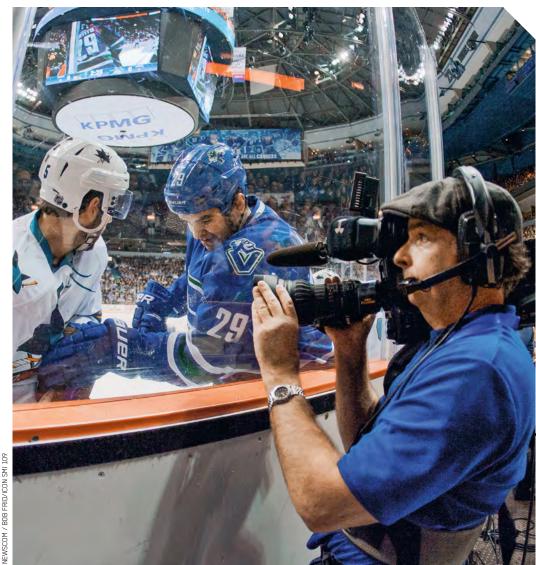
subscribers, it could suffer losses in the next five years.

PIRATE STREAMING

Here's the paradox: right-holders are licking their chops and broadcasters are on the decline, but demand from consumers is increasing. Competition is only just beginning between traditional players and newcomers, which contributes to broadcasting rights becoming even more fragmented.

This problem could hide another, more generational problem. Modes of consumption have changed.

The democratisation of high-speed internet guarantees a quality image, so some viewers are turning to pirate sites that are free and easy to access. Just as concerning is the fact that for younger generations, free content has become a new norm. The music and TV industries can bear witness to this large-scale shift. True, sport is mostly viewed live and is one of the only content left that persuades viewers to subscribe. Right-holders are still making far too much money with traditional broadcasters to propose the exclusive rights to social media networks. But how much longer will that last? 🗸



A cameraman at Rogers Arena, home of the Vancouver Canucks. NHL games are some of the most popular sporting events in the United States and are a veritable Canadian institution.

INTERVIEW

"SPORT IS THE ONLY CONTENT THAT WE STILL WATCH LIVE"



Director of strategy and operations at PwC Consulting in Zurich, David Dellea is an expert in the sport industry. He paints a picture of a market affected by big changes.

Around the world, the sport market is booming. Why?

It varies depending on the continent, but the industry is growing at a rate that is much higher than global growth. In Europe, it's due to renegotiating football rights, particularly for the UK's Premier League. In North America, the cost of broadcasting rights is expected to increase at an annual rate of 5.5% for a market that will go from \$16.3 billion in 2015 to \$21.3 billion in 2020. Asia is also investing heavily in sport, purchasing broadcasting rights to big leagues like the NBA and European football. It's also developing its own competitions and acquiring clubs.

Why have broadcasting rights skyrocketed?

Broadcasting channels have been springing up everywhere thanks to high-speed internet. Specific rights can be sold for various devices, no longer just for television. Additionally, regardless of the device, sport is the only content that we still watch almost exclusively live. All networks hope to attract this dedicated audience, including via

new media such as digital actors, who are also interested in sport due to the multiplying effect. While viewers watch a match, they also interact and discuss on their social media platforms and networks.

Aren't pirate streaming and the access to free content a threat to this model?

The threat is always there, but sport content plays by different rules than that of music or films, for example. For the most part, we don't consume music or film live. The value of a match or a sporting event is closely linked to the fact that it is live, to the point where a competition loses almost all of its economic value the moment it ends. Paying consumers continue to increase, especially since the major players are doing all they can to fight pirate streaming sites. However, a new trend is emerging, which could change the way we consume content. Many sport fans now only watch clips of a match without watching the entire thing. This way of watching sport is a new way to consume content, and we will have to keep an eye on it over time. 4

ALTICE

Mr Drahi's risky bets

Investing in media content to attract new telephony clients: that's the strategy businessman Patrick Drahi had in mind when he acquired broadcasting rights for the 2016–2019 seasons of the Premier League. Snatched from Canal+ for €120 million, the rights will show content on the thematic channels of Altice subsidiary SFR Group. It remains to be seen, however, whether this investment will be profitable. To make money, "SFR must stop its subscribers from leaving, invest heavily in infrastructure and reduce costs," says Simon Weeden of Citi Research. Economist Jean-Pascal Gayant is perplexed by this mad rush. Gayant believes that "the economic logic of Altice could end up being a fiasco in the long term."

HEADQUARTERS: WOERDEN (NL)
WORKFORCE: 38,000
REVENUE (2016): €23.5 BN

ELECTRONIC ARTS

It's in the game!

"It's in the game!" is the slogan that begins each sport match of US video game giant Electronic Arts. It's also symbolic of the growing power that the EA Sports division has in the company's profits. "Its three main products (FIFA Football, NBA Live and Madden NFL) now bring in \$800 million per year, or more than a sixth of the company's turnover," said Brian Nowak, analyst at Morgan Stanley. The Californian company is a recent example of a successful digitalisation strategy, as game downloads have increased 82%. "Compared with physical CDs, the download purchasing method can improve margins by 30%," says Nowak. Analysts recommend buying stock in the company.

HEADQUARTERS: REDWOOD CITY (US)
WORKFORCE: 8,500
REVENUE (2015–2016): \$4,4 BN

ESPORTS IN THE BIG LEAGUE

Video game competitions are drawing a fast-growing number of viewers, with big-name sponsors and traditional television networks falling in line.

BY LUDOVIC CHAPPEX -



SPORT FEVER

ideo game tournaments would never be considered actual sporting events. Or would they? Going by the increasingly sizeable audiences at eSports competitions, greater interest from sponsors and skyrocketing prize money, they sure look like the real deal. From there, whether the competitive use of a keyboard and mouse involves physical exercise, you be the judge. As - perhaps - a comparison, air pistol shooting became part of the Olympic Games in 1988.

The phenomenon of eSports - a misleading term that refers to any video game played competitively, not just multiplayer games – is exploding. The Dutch market intelligence firm Newzoo estimates that 125 million people watched an eSports tournament at least once a month in 2016.

Major competitions regularly sell out the stadiums and concert halls where they are held, even in Europe. The League of Legends World Championship final in October 2015 brought in 17,000 viewers in a sizzling atmosphere at the Mercedes-Benz Arena in Berlin, with more than 36 million people around the globe watching online. The record was beaten in 2016, as 43 million viewers were glued to their screen for the final in Los Angeles. The winning team from Korea took home a cheque for \$2.7 million.

Illustrious sponsors did not miss the opportunity. Unsurprisingly, leaders in gaming such as Microsoft and Logitech were in attendance, along with other prominent but more general retail brands, including Coca-Cola, Red Bull and Samsung. All that means that sector revenues, although still modest compared with mainstream sports such as football, are rising fast. Newzoo reported eSports revenues of \$463 million for 2016, up from \$194 million two years earlier. That annual growth of over 40% is not set to stop, with global revenue expected to reach \$1.1 billion in 2019.

"The entire eSports industry generated prize money of about \$80 million in 2016," says David Dellea, strategy and operations director at PwC Switzerland. "That gives an idea about how big the business has become. Comparatively, total bonuses awarded in cycling are no higher than €12 million."

That plush environment is luring large video game designers looking to take their share of the market. In 2016. Activision Blizzard (see opposite) paid \$46 million for Major League Gaming, an organisation that hosts most of the contests in North America. Electronic Arts, developer of the FIFA video game series (see also p. 38 and 41), even launched its own events through its EA Competitive Gaming Division to host competitions for its most popular games, including FIFA, Madden NFL and Battlefield.

Although online streaming remains the leading channel for watching eSports (see inset opposite on Twitch), a few major TV networks are conducting trial runs. For example, the BBC experimented a live broadcast of a season of League of Legends in 2015. In early January, ESPN.com set up a website dedicated to covering eSports competitions. Next round, eSports at the Olympic Games? 🗸

COMPANIES TO WATCH

ACTIVISION BLIZZARD

Success of "Overwatch" Known for its legendary games such as Starcraft and Call of Duty, the US video game designer is raising its profile in eSports with Overwatch. This multiplayer FPS game released in 2016 now has more than 25 million players worldwide. Activision Blizzard posted record revenues last year, which rose by more than 40%. Analysts recommend buying

____ ATVI

its shares.

TENCENT HOLDINGS

A weapon called "League of Legends"

Tencent Holdings owns Riot Games, developer of *League* of Legends, by far the most watched multiplayer game in eSports. At the final of the last League of Legends World Championship, the audience reached a peak of 14.7 million viewers. The company's revenues jumped 48% in 2016. Analysts strongly recommend buying its shares. NUMBER OF EMPLOYEES: 38,775 **REVENUE (2016):** \$21.9 BN ____/ TCEHY

TWITCH (AMAZON)

Web TV for gamers

Bought by Amazon for \$970 million in 2014, Twitch is the leading online video game streaming site. Its audience now exceeds 100 million visitors per month. That's still not enough to mark the earnings of a giant like Amazon, but the company's growth is impressive. ____ AMZN



ports betting is an exciting activity. Within the betting industry, this segment has the strongest growth:

+4.3% year over year from 2015 to 2020, according to the research firm Technavio. Operators' annual profits exceed \$50 billion.

The legal
industry has
become sharply
concentrated

Horse races are still a favourite among betters. This type of betting alone makes up 55% of bets in the world and is particularly popular in Japan, Hong Kong and the United States – where sports betting is legal only in Nevada and at racecourses. Soccer isn't far behind, posting growth rates close to 60% in certain countries, according to H2 Gambling Capital, an expert in market studies.

DISRUPTION

Growth in the sector currently comes from online betting. More than 20% of bets are already placed on mobile devices, and this percentage is expected to reach 45% by 2018, according to H2 Gambling Capital. The internet shook up the established order. Traditional players, who focused on physical networks in state-approved betting offices, are up against new competition that doesn't play by the same rules. Thousands of operators have established themselves in gaming paradises such as the Philippine province of Cagayan, offering their

services to betters all over the world, albeit with ever-decreasing margins and in defiance of national laws.

Online betting is very difficult to control, whether it occurs in places where betting is completely illegal, like the United States, or in places where betting is legal but not regulated, like the European Union. As a result, 80% of betting around the world takes place under illegal circumstances, according to the International Centre for Sport Security (ICSS), an independent non-profit based in Doha, Qatar.

Legal operators must follow the rules that are in force in the European Union. Online-only betting operators can establish themselves in lenient countries, such as Gibraltar, to take advantage of the mostly tax-related advantages. But actors on the physical market must comply with the regulations in the countries where they have set up shop.

CONCENTRATION

As a result of these changes, the legal industry has become sharply concentrated. In the UK, the most regulated market in the world, three bookies now control 87% of the physical market, which has taken a sharp dive in the last few years as it is overtaken by the web. The three are Ladbrokes Coral (41%), William Hill (27%) and Betfred (19%). These retail dinosaurs have all entered the online segment, which has become increasingly fragmented through acquisitions and partnerships. William Hill, for example, purchased online operator Sportingbet and entered into a joint venture with software ▷

COMPANIES TO WATCH

PLAYTECH

Enabling online betting

This is one of the companies that's riding online betting's wave of success. Playtech provides software for online gambling sites, including sports betting. The company made record profits in 2016, as their net earnings increased 42%. Their sportsbetting activity rose 82%. Analysts recommend buying Playtech stock.

HEADQUARTERS: DOUGLAS (ISLE OF MAN) WORKFORCE: 5,000

REVENUE (2016): €708.6 M

_____ PTEC

LADBROKES CORAL GROUP

The old-timer hangs on

UK bookmakers Ladbrokes and Gala Coral, founded in 1886 and 1926 respectively, have merged to remain competitive in the new environment. The new company, which ousted William Hill to take the top spot in the UK's physical betting market, also controls 9% of online betting in the country. Analysts believe the group will outperform the market.

HEADQUARTERS: LONDON (UK)
WORKFORCE: 29,000
REVENUE (2015): €2.1 BN

___ LCL

PADDY POWER BETFAIR

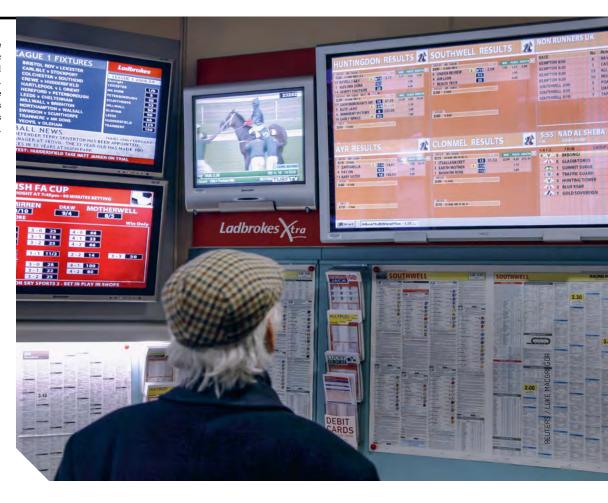
The British leader

Paddy Power Betfair is the top company in the UK online betting market, with a 27% market share. The company was founded as a result of a 2016 merger between Irish bookmaker Paddy Power and UK firm Betfair. The company posts strong growth, and analysts believe it will outperform the market.

HEADQUARTERS: DUBLIN (IE)
WORKFORCE: 7,200
REVENUE (2016): £1.5 BN

_∕√ PPB

A betting office of the historic Ladbrokes Coral Group in London. The wave of online betting challenges the English giant's business model.



provider Playtech, before eventually buying out the latter. William Hill, founded in 1934, now generates more than a third of its revenue from digital betting and controls 15% of the online betting market in the UK.

But William Hill's transformation is not yet complete. The group wants to distance itself from the UK market and its ever-increasing regulations. "Our strategy is to expand our diversification by increasing our revenue from online betting outside the UK," stated William Hill in its latest annual report. The UK operator, which had a catastrophic 2016 (see inset, p. 47), said that while there are opportunities to be had in the current environment, there are still many roadblocks: "Regulations will only become more strict. Costs are rising, owing to taxes and compliance-related expenses."

LEGALISATION

For a company like William Hill, which is now well-equipped against regulations, the ideal situation would be if more countries legalised sports betting. That way, legal betting would spread and the black market would shrink. The ICSS is in favour of large-scale legalisation with controls, as it is aware that illicit betting is closely linked to organised crime and corruption (approximately \$140 billion is laundered each year through illegal betting, according to the ICSS).

"A transparent, strictly monitored and well-regulated betting industry poses little threat to the integrity of sport," said Chris Eaton, director of the ICSS, in a recent opinion column on the organisation's website. "But the current system is the opposite: opaque, ignored and far from well-regulated." Others, however, believe that widespread legalisation is not the answer, according to Christian Kalb, an expert in sports betting and sport-governance issues at the French Institute for International and Strategic Affairs (IRIS) in Paris (see interview, p. 47).

The case of William Hill shows the difficulties that long-standing bookmakers face. At the same time, new actors are finding success in the current environment. These include software providers such as Playtech, founded in 1999 and based in the Isle of Man, as well as pure players such as Kindred (formerly Unibet), founded in 1997 and based in Malta. The game is on. Now's the time to place your bets on who will win. 4

"THERE ARE TWO CAMPS: THE EUROPEAN UNION AND THE REST OF THE WORLD"



Faced with strong competition and decreasing margins, sports-betting companies are trying to influence countries to open up the market. Christian Kalb, an expert from the French Institute for International and Strategic Affairs (IRIS) in Paris, explains the situation.

Swiss Parliament just voted in favour of blocking online gambling based in foreign countries, including sports betting. Users will be notified with a warning message when they access an illegal site. What's your take on this?

This is a very important development. It will allow Switzerland to relocalise a number of players who currently bet on uncontrolled foreign sites. Gambling has serious consequences. There is a risk of fraud, money laundering, corruption and addiction. It's a good thing that the market is regulated and has licensed operators.

What is the current trend in terms of regulations?

There are two camps: the European Union, which is not very regulated, and the rest of the world, which is highly regulated. Not a single country outside the EU has a licensing system, besides Mexico. There are also small gaming paradises, such as the Philippine province of Cagayan, and advantageous locations such as Curação and Belize in Central America. the Kahnawake reserve in Quebec, Gibraltar, Malta, and Jersey in Europe.

The Trump administration has entertained the possibility of opening up the betting market in the United States, where it is illegal except in Nevada.

It's hard to say at the moment. Outside the EU, I don't see any trends of the market opening up for the time being.

What impact do regulations have on official operators?

Operators don't like regulations, because they must do business in a market that is very difficult and extremely competitive, with decreasing margins. Their goal is to influence regulators and governments so that they loosen restrictions.

Is it really possible for states to control online bettina?

Someone who wants to cheat will always find a way. But this is not specific to gambling: for example, one cannot ensure that everyone respects speed limits. By adopting a minimum number of measures, including those foreseen in Switzerland, 90% of the problems are generally resolved.

WILLIAM HILL

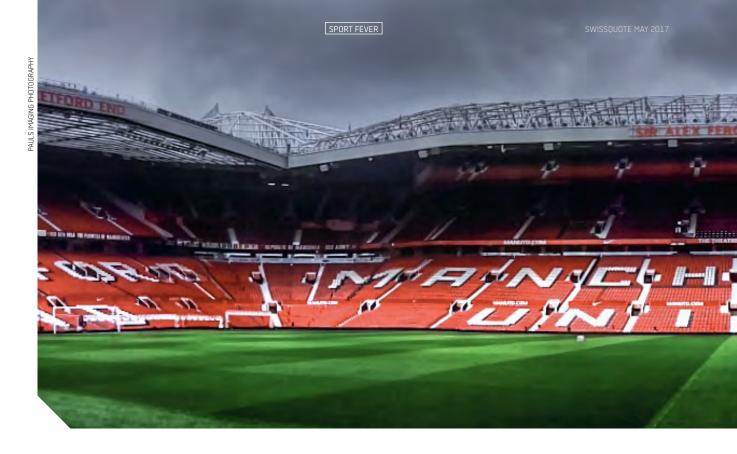
Without a CEO since July 2016 - when James Henderson was replaced by interim head Philip Bowcock - the second-largest player in the UK physical market had a terrible 2016. The online division is struggling and tighter regulations in the UK are weighing on profits. Analysts recommend holding this stock.

KINDRED

Kindred, a European leader in online betting, had record-breaking results in 2016: revenue increased 53% and profits were up 50%. More than two-thirds of the group's revenue is generated via mobile. Last year, sports-betting activity was up 45%, to €245.5 million. Analysts believe the company will outperform the market.

GVC HOLDINGS

In just over 10 years, GVC Holdings has come up as one of the major actors on the gambling and sports-betting market. offering both B2B and B2C services. The group acquired UK operator Sportingbet (with William Hill) in 2013 and Austrian company Bwin in 2016, posting solid performance ever since. Analysts recommend buying this stock.



FOOTBALL: PUBLICLY TRADED CLUBS FACE TOUGH EQUATIONS

Only a small number of football clubs are listed on the stock market. For the most part, their performance is dicey owing to underhanded competition between sponsors and unpredictable outcomes.

BY GENEVIÈVE RUIZ

Investors were never really interested in the market performance of football clubs," says
Patrick Rejaunier, market analyst at Zonebourse in Annecy, France.
That statement says it all – or almost.
Currently, there are 22 clubs in the Stoxx Europe Football index, including well-known teams such as Manchester United, Borussia Dortmund, Juventus, Benfica and Olympique Lyonnais. In 2002, there were

37 teams in the index, which goes to show that the market performance of football clubs is very unpredictable. Disastrous results led to several teams leaving the index and being bought by sponsors. That's what happened with Chelsea, which is now owned by Russian billionaire Roman Abramovitch.

"The Stoxx Europe Football is not reliable," says Rejaunier. "As of

now, it has not even reached its 2011 level, while most other sectors have moved well beyond their situation six years ago. Football clubs haven't really recovered from the 2008 financial crisis." Not surprising, considering the majority of the industry's shareholders are fans and not big institutional players. Why is its market performance so disappointing, considering that football is the second fastest grow-



ing industry in the world after the e-economy? According to the Football Money League ranking conducted by consulting firm Deloitte, revenue from the top 20 teams grew 12% in 2016, reaching €7.4 billion. According to the same ranking, last year even hit a new record high, with the revenue of the three richest clubs (Manchester United, FC Barcelona, Real Madrid) exceeding €600 million, seven times more than in 1997.

"In market terms, one lost match equals a loss of 1.1% of the share value"

Pierre Rondeau, professor at the Sport Management School in Paris

"The football economy is complex and particular," says Pierre Rondeau, professor at the Sport Management School in Paris. "It doesn't follow the same rules as traditional businesses." Only 5% of the 700 teams that compete in the European championship are publicly listed. And the best teams are usually not

publicly listed, with the exception of Manchester United, which has been listed on Wall Street since 2012. "The financial results of a club are strongly linked to its wins and losses." savs Rondeau. After a win, teams receive an inflow of cash in sponsorships and TV rights. Participating in the Champions League, for example, is equivalent to an inflow of €20 million. Therefore. a loss has catastrophic financial consequences for teams. It's even worse when relegation is involved. "Studies show that in market terms, one lost match equals a loss of 1.1% of the share value," says Rondeau. "A win increases share value by 0.88%. So one win doesn't make up for one loss!"

Another problem with listed clubs comes from underhanded competition from unlisted clubs. Most of the clubs that win championships are either non-profit companies (Real Madrid, FC Barcelona) or financed by sponsors (Chelsea, Paris-Saint Germain, etc.). "These clubs are financed by what we call 'sugar >

CLUBS TO FOLLOW

MANCHESTER UNITED The exception

The UK club Manchester United has won the most football championships of all time. Since 2016, it's also the wealthiest club in the world. The club has reached the top of the Football Money League (annual ranking from the consulting group Deloitte), replacing Real Madrid, who was ranked #1 for 11 years. Manchester United first went public from 1991 to 2005, and then again on Wall Street in 2012. Shares were issued at a unit price of \$14 and currently stand at \$17. Analysts consider ManU a solid club. Because of its brand and global reputation, it generates a lot of revenue through TV rights, sponsors and merchandising, which allows it to compensate for unpredictable sport outcomes.

HEADQUARTERS: MANCHESTER (UK)
WORKFORCE: 799
REVENUE (2016): £515.3 M

OLYMPIQUE LYONNAIS

Betting on infrastructure

Even though Olympique Lyonnais doesn't make Europe's top 10 teams in terms of budget, financial analysts are nevertheless interested in its market performance. It now has its own stadium and shopping centre, OL Land. OL went public in 2007 with shares at a unit price of €24. The club then had some difficulties, and the price fell to €2 in 2013. It went public because the stadium was being built, with some delays. During that time, the team was also losing frequently. But things improved considerably with the opening of the stadium, good team performance and proceeds from the sale of players.

HEADQUARTERS: LYON (FR)
WORKFORCE: 320
REVENUE (2015-2016): €218.1 M

✓ OLG

daddies' and can buy the best players regardless of price," says Wladimir Andreff, professor emeritus at Panthéon-Sorbonne University in Paris and president of France's Observatoire de l'économie du sport. "They don't need to turn a profit and have less budgetary constraints. How can listed clubs, whose goal is to generate dividends for its shareholders, compete with that?"

They can't. Their financial equilibrium is extremely precarious. In order to win matches, teams must invest massive sums of money to pay the salaries of good players. If a team loses, it no longer has the means to offer the same salaries. "The issue for listed clubs is that they do not have tangible assets, like a factory for example," says Andreff. "A football club makes lots of money mainly as a result of its players and its wins, but also from ticket sales, TV rights, merchandising and sponsoring. These are uncertain assets that fluctuate over time." To improve their bottom line, certain

clubs choose to invest in additional assets, such as a stadium, shopping centres or fitness clubs. "Some football clubs in Denmark and Turkey who are part of the Stoxx Europe Football index have opted for this strategy and it has worked well," said Andreff, "These are shares that have not suffered losses. There have even been cases where dividends were redistributed to shareholders. This makes them viable investments even though a club's performance may not be extraordinary. For its part, Olympique Lyonnais has started reaping the fruits of its stadium. These clubs have assets that help them compensate for the uncertainty of sport results."

"TOO BIG TO FAIL"

The solution here is diversification. The problem is that the majority of club management staff uses market funds not to diversify, but to purchase very expensive star players. "Most clubs are poorly managed from a market standpoint,"

confirms Andreff. "More than half of them are in the red. And for these clubs, the market doesn't have the same corrective effects in terms of good governance that it can have on traditional companies." Some studies show that the football industry suffers from structural weaknesses: insufficient professional management, no financial supervision, aberrations in the labour market and an abundance of unregulated intermediaries. Clubs could even be infiltrated by the mafia.

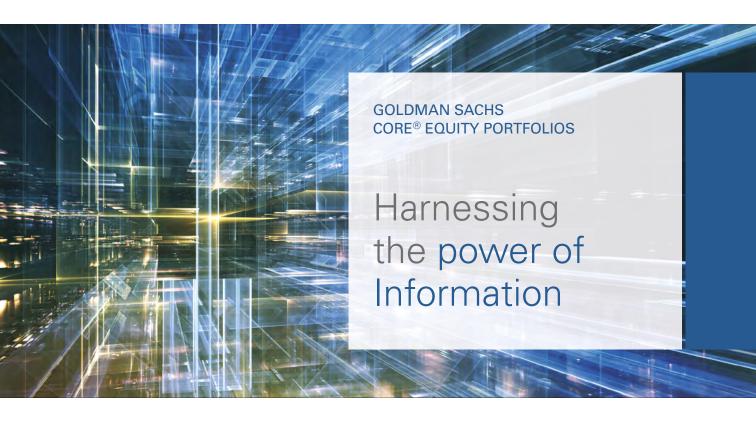
Last year, European clubs spent a record €3.3 billion to purchase a dozen plavers

"There's a mentality in football that goes 'we're in the red, but it's no big deal," says Rondeau. "Several clubs take the 'too big to fail' approach. Fortunately, there are still some good examples. The Bundesliga - Germany's national league - requires all teams to undergo a financial audit. Teams that do not pass the audit could be rejected from participating in the league. The UEFA now advocates for "financial fair play" to limit club losses. It even sanctions teams in some cases. The goal is to limit bailouts by sponsors and have greater control of club finances, much like the German model.

All hope is not lost for those wishing to invest profitably in football. Experts agree that it is possible to make money in football, but the money is probably not in the stock market. Rather, the annual players market – called the mercato – attracts increasingly absurd sums of money year after year. Last year, European clubs spent a record €3.3 billion to purchase a dozen players. Manchester United acquired French midfielder Paul Pogba from Juventus for €105 million, making him the most expensive player of all time. ▲







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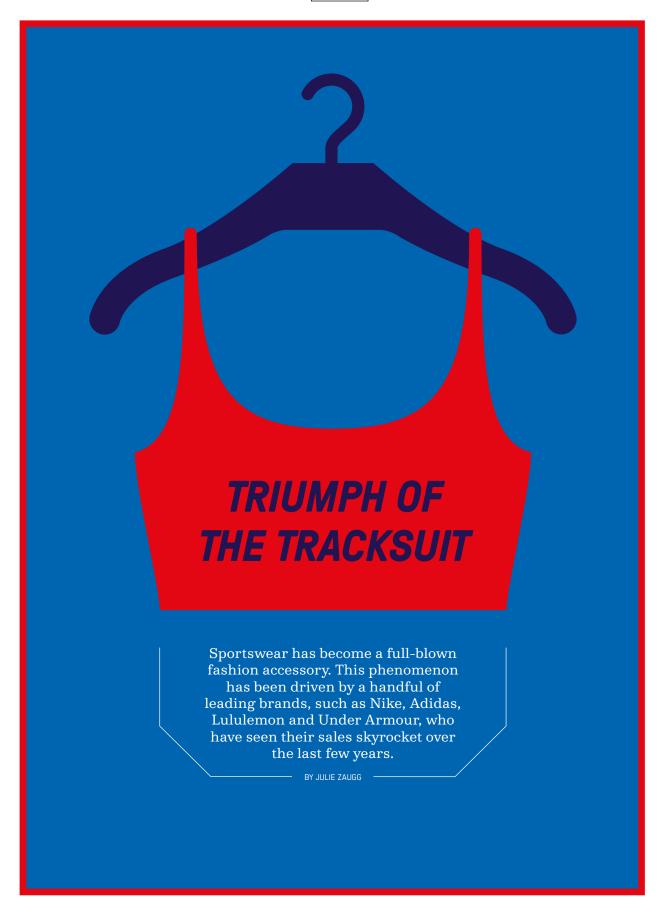
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portswear has come a long way since the tennis jerseys and skirts invented by Lacoste in the 1930s. Today, it is a huge market, which is worth 232 Swiss francs billion worldwide. And it is still growing. Between 2015 and 2019, market value should grow by an average of 5% every year, reaching €262 billion," estimates John Guy, analyst at Mainfirst. In 2016, the sportswear market grew by 7%. versus 3.8% for the fashion sector.

This trend, called "athleisure*", made* it acceptable to wear trainers, yoga pants and tracksuits in the street, at a restaurant or even to work

This remarkable performance is primarily due to the fact that the public - especially millennials and women - are more preoccupied with their health than previous generations and are taking part in more sporting activities. Running, biking, yoga and swimming are growing in popularity. In the US, the number of teens regularly taking part in a physical activity has risen from 25% to 35% since the 1980s.

What's more, sportswear has become more mainstream and not iust consigned to the avm. This trend, called "athleisure", made it acceptable to wear trainers, yoga pants and tracksuits in the street. at a restaurant or even to work. "Sportswear, especially trainers, are now fashion accessories that have become integral to daily life for their owners," says Andreas Inderst, analyst at Macquarie Securities.

The Canadian brand Lululemon, founded in 1998, has been the best at capitalising on this phenomenon, with its understated and comfortable yoga pants becoming a fixture on the streets of major cities, says Matt Powell, an analyst at NPD Group who specializes in the sports industry. The brand has also just launched a capsule collection inspired by New York and Vancouver and which is more like haute couture than sportswear.

And they are not the only company to do this. "Adidas and Puma have followed the trend by launching activewear lines linked to celebrities, such as Kanye West, Stella McCartney, Rihanna and Cara Delevingne, who are reputed for their fashion sense," says analyst John Guy. Similarly, Nike recently expanded its Jordan line, normally entirely composed of basketball shoes, to include a collection of city clothes. The brand has also teamed up with Givenchy designer Riccardo Tisci. The decision taken by Adidas to relaunch certain models of trainers with a retro look - such as ▷

COMPANIES TO WATCH

NIKE

The giant

With a 16% share of the global market and 21% in the US, according to the latest Euromonitor figures, Nike dominates the sportswear industry. "Revenues have more than doubled and profits have nearly tripled between 2006 and 2015," says John Guy, analyst at Mainfirst. He expects the group to grow 9% annually until 2020, primarily thanks to its supremacy on the US market, which is the most profitable, and the significant push that it has made in the European and Chinese markets. The company's profits are also excellent (24-26%) and are significantly higher than the rest of the industry (10-12%). HEADQUARTERS: BEAVERTON (US) WORKFORCE: 70,700 REVENUE (2015-2016): \$32.4 BN

____NKE

UNDER ARMOUR

The ambitious new kid on the block

This newcomer in sportswear has seen a dramatic increase in recent years. "Between 2009 and 2016, sales increased by 28% per year," noted John Guy, an analyst at Mainfirst. Under Armor even surpassed Adidas in the US market in 2014, to become number 2. "A success due in particular to its decision to invest in the sneaker market with a line inspired by the basketball player Stephen Curry. While the Baltimore-based company still generates the vast majority of its sales in North America (83%). it has major expansion projects. particularly in Europe, underway. HEADQUARTERS: BALTIMORE (US) WORKFORCE: 15,200 ___ UA

the Gazelle or the Stan Smith – that are popular with fashionistas falls under the same logic, highlights Jay Sole, analyst at Morgan Stanley.

But if sports clothing is selling so well, this is also because manufacturers have been innovative. "Under Armour has developed a range of special fabrics which protect against perspiration and the sun, are ultra-light and odour-resistant," explains Matt Powell. And the giants in the sector are not resting on their laurels either. Other examples of this innovative creativity are Nike's flexible and light material used in

their Flyknit trainers and the Adidas Boost sole, which is made from foam pellets and created in collaboration with German chemical group BASF. And these companies are becoming even more futuristic: Under Armour, Nike and Adidas have all launched clothes and trainers that are equipped with chips and enable the wearer to measure their heartbeat or the number of calories burnt. This information is then automatically uploaded to online platforms that have been developed by these same brands, where the information is analysed and can be shared across various social networks.



Model Heidi Klum, in yoga pants, out on the town in New York (14 June 2016).



Adidas on the catwalk at Fashion Week in Lisbon. According to analysts, the brand is a wise investment.

"The advantage of products using this kind of technology is that they can be sold at a higher price," says Volker Bosse, analyst at the investment bank Baader. "They can cost anywhere from 10% to 15% more."

This innovation also extends to the manufacturing processes

This innovation also extends to manufacturing processes. Adidas has created a factory in Ansbach (Germany) that is almost entirely automated. This enables them to manufacture trainers in record time with the form, material and colour all personalised to match customer

SPORT FEVER



tastes. The brand estimates that the factory will produce one million pairs of shoes every year. A second production centre of this kind will also be opened this year in Atlanta (US). The German brand has set itself an ambitious objective: by 2020, it aims to reduce the timescale from design to sale of its products, for half of its entire production, from 6-12 months to just 45 days.

ACTIVISM IN CHINA

The boom that the sportswear industry is experiencing is a real global phenomenon. The biggest growth has been seen in emerging markets, especially in China. "Manufacturers are profiting from the emergence of a middle class that has the financial means to purchase Western brands," explains Volker Bosse. This phenomenon has been helped

by state activism. China, which will host the 2022 Winter Olympics and dreams of holding the football World Cup, has invested heavily over the past few years in promoting public participation in football, skiing and running. "In 2015, China organised 134 marathons, compared with just 13 in 2010," says Bosse. By 2020, the sports market will have grown to \$500 billion.

The sportswear and equipment market is already worth 21 billion Swiss francs, i.e. 9% of the global total. Sports shops are everywhere in China. In the majority of medium-sized Chinese cities, the only Western brands you will see are Starbucks, Nike and Adidas. These two sports brands dominate sportswear sales in China, with a combined market share of 30.6%.

ADIDAS

The king of football

According to analysts, the world number two in sporting equipment is a safe bet in investment terms. "Football is the most popular sport in the world, and Adidas dominates the sector, primarily through sponsorship contracts for teams such as Manchester United and Real Madrid," explains Volker Bosse, analyst at Baader. This gives the company a quasi-monopoly on shirts sporting the names of the most famous players and a certain credibility in the eyes of the fans. The German group has also started to win market share in the US, where it has always been weak, with growth of 22% in 2016.

WORKFORCE: 60,617

____ ADS

PUMA

The comeback?

"Puma has started to reinvent itself by going back to its roots and concentrating on producing sports products centred around performance. And it's starting to pay off," explains Volker Bosse, analyst at Baader. For example, the German company has initiated partnerships with stars such as Rihanna and players from the Arsenal football club. But the company's profits are still unsatisfactory and a takeover by Kering Group, which already owns 86% of Puma, is looking like a strong possibility. WORKFORCE: 11,054 **REVENUE (2016):** €3.6 BN

_____ PUM

SPORT FEVER



NEWSCOM / GBOLL

THE FITNESS MARKET FLEXES ITS MUSCLES

Health clubs are springing up everywhere and are finding favour in urban areas, where people are looking for ways to work out that are both effective and original. Which is great news for fitness-equipment manufacturers.

BY JULIE ZAUGG

ordon Bergfor gave the world its first-ever exercise machine in 1932: a stationary bicycle that Bergfor – an engineer from New York – designed for his wife, who was battling a neuromuscular disorder. The "Exercycle" quickly became a hit, and even counted celebrities such as John Wayne and President Eisenhower among its users. In 1936, the entrepreneur Francois LaLanne launched the first health club chain in California, and before long other chains were cropping up all over the place.

Today the industry is worth \$81 billion, with 151.5 million members worldwide. More than a third of them are in the United States, where 17% of the population belongs to a health club. But there are also many in Brazil, Germany and Scandinavia. "These clubs have a simple business model: 70% to 80% of their revenue comes from subscriptions, and the rest comes from other services such as personal trainers and nutritional programmes," says Jim Thomas, a US consultant and industry expert. The fitness-equipment industry is also flourishing. It is expected to

grow 3.5% annually by 2022, says the market research firm Grand View Research, to reach \$13.2 billion versus \$10 billion in 2014. The United States will absorb about 40% market share, but the strongest growth will be seen in the Asia-Pacific region, particularly in India and China.

"Cardio equipment has become more popular than strength-training equipment in recent years, because people are focusing more on their health"

Frank Camma, analyst at Sidoti & Company

The most popular machines are the treadmills, stationary bikes and elliptical trainers. "Cardio equipment has become more popular than strength-training equipment in recent years, because people are focusing more on their health," says Frank Camma, analyst at Sidoti & Company. The market has two facets: some equipment is sold to health clubs, and some is sold to individuals for home use.

COMPANIES TO WATCH

BRUNSWICK

Health club supplier

This US conglomerate specialises in the sale of fitness equipment to health clubs, and grew 22.5% between 2010 and 2015. Its revenue was up 10% for Q4 2016 - with an increase of 24% for the fitness segment. "We're expecting revenue growth between 6% and 8% in 2017," says Nathan Yates, analyst at Forward View. He sees high growth potential for Brunswick's Cybex brand and SciFit, a line of rehabilitation equipment that could prove to be a big hit with hospitals. Given the company's sound performance, "Brunswick shares are trading at attractive prices," says Yates.

HEADQUARTERS: LAKE FOREST, ILLINOIS (US) WORKFORCE: 14,415 REVENUE (2016): \$4,5 PM

__/\/ BC

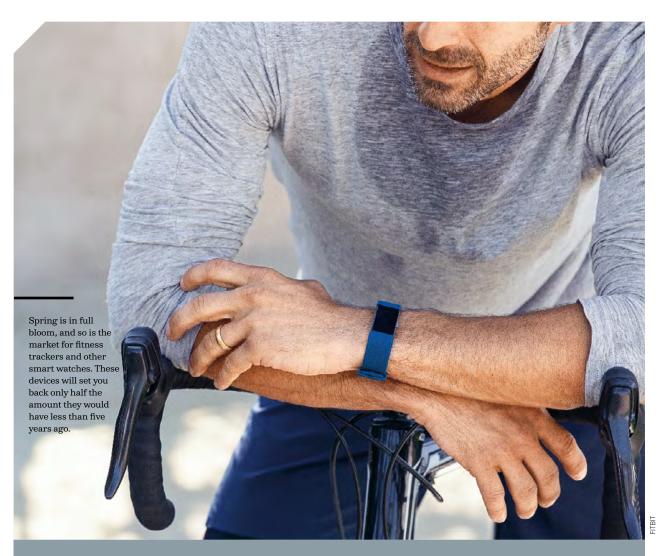
NAUTILUS

Home workout equipment

Nautilus generates most of its revenue selling fitness equipment to individuals. It owes its success to a handful of innovative machines "Ten years ago this company invented the Bowflex TreadClimber, a stair-stepper machine that quickly became a hit," says Frank Camma, analyst at Sidoti & Company. "And three years ago it came out with the Bowflex Max Trainer, which is perfect for short, intense workouts and which already generates 25% to 30% of the company's revenue." Nautilus' 2016 acquisition of the high-end equipment maker Octane Fitness and the launch this spring of a tower connected to an iPad—allowing Crossfit users to plan their workouts—should help Nautilus continue to grow.

HEADQUARTERS: VANCOUVER (US)
WORKFORCE: 469
REVENUE (2016): \$406 M

____/\/ NLS



A SPORTS COACH ON YOUR WRIST

The new generation of bracelets and other smart wearables goes beyond simply counting the number of steps you take in a day or the number of hours you sleep at night. Now, these devices such as Samsung's Gear Fit2, the TomTom Spark 3 and the Fitbit Charge 2 measure blood pressure, heart rate and number of sit-ups completed, among other things.

Some models are equipped with personal coaches that give instructions to optimise your fitness routine or improve your posture. Others can automatically detect the type of exercise you're doing to accurately count the number of calories burned.

The shape of these devices has also changed: now they can be headphones, such as the Jabra Sport Pulse, or used inside bike helmets, such as the LifeBeam devices. Oakley worked with Intel to produce a pair of sunglasses equipped with sensors, microphones and headphones that act as a sort of sport coach within the glasses.

The wearables market was worth \$28.7 billion at the end of 2016, according to Gartner, and is expected to grow 25% per year between 2016 and 2020, according to economic intelligence group Research and Markets. New features associated with augmented reality will feed this strong

growth. However, "if the number of wearables increases over four years, their value will therefore decrease since prices will drop," says Bradley Erickson, analyst at Pacific Crest Securities. In 2012, the average price of a wearable was \$800. Today, they are only around \$350-\$380, according to the research firm Technavio.

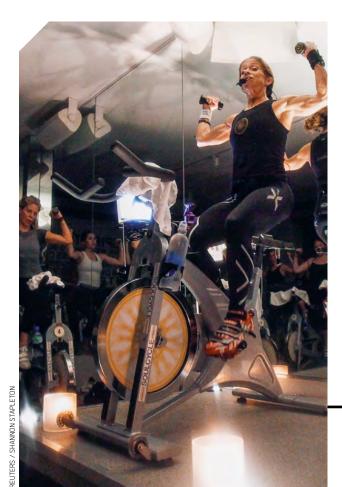
Richard Valera, analyst at
Needham & Co., believes that the
fitness wearables trend will slow
down. "They've reached their peak
'cool factor', and more and more
people are leaving them in a drawer to collect dust. However, smart
watches offer more functionality,
including fitness features, so that
market will continue to grow."

What's the secret of the industry's success? After really taking off in the '80s with chains like Bally Total Fitness and Gold's Gym, health clubs have undergone something of a renaissance in recent years and the market has been segmented into premium and low-cost categories. "We've seen the appearance of premium clubs promising fast results," says Jim Thomas. "Their customers are willing to shell out \$200 to \$300 per month."

The most posh clubs in the US include: SoulCycle, which offers cycling in a nightclub-like atmosphere; OrangeTheory, which offers workouts that alternate between high- and low-intensity phases allowing members to burn up to 1,000 calories per hour; Aquaphysical, which offers a modern take on water aerobics: and Row House.

which offers group rowing workouts. In the same vein, a membership to Crossfit – a chain launched 15 years ago by a personal trainer from California – costs over \$150 per month. Members have access to a sort of industrial garage – called the "box" – where they do exercises using their own body weight or pieces of assorted hardware, such as tyres and metal poles. Not very glam, but it does the trick.

At the other end of the spectrum, some clubs have adopted a low-cost approach. "Planet Fitness is a pioneer of this philosophy," says Jim Thomas. "They offer memberships starting at \$10 per month, in no-frills facilities with fewer personnel." And they have no scruples selling too many memberships, as they assume many of their members won't show up anyway. It's not rare >



A SoulCycle class at a Union Square studio in New York. The stationary bikes are some of the most popular machines.

AMER SPORTS

Fitness sensation in Asia

Amer Sports produces fitness equipment under the brand name Precor - one of the most well-known brands in the world. "Between 70% and 80% of those machines are sold to clubs, hotels and companies," says Jari Räisänen, analyst at Pohjola. The Finnish company has seen its sales grow 8% to 9% annually since 2010, achieving most of its growth in the Asia-Pacific region, though the United States is still its biggest market. "APEC countries accounted for only 8% of Precor's sales in 2009, versus 17% in the previous year," says Räisänen.

HEADQUARTERS: HELSINKI (FD WORKFORCE: 8,526 REVENUE (2016): 62,6 BN

FITBIT

Leader in wearables

The California company's multicoloured bracelets continue to dominate the fitness wearables market. "More than 20 million Fitbits were sold last year," says Bradley Erickson, analyst at Pacific Crest Securities. The company's brand is also very strong. "There are true Fitbit fans, who adore the brand and say they've lost weight and became healthier because of the device." But Fitbit sometimes struggles to attract new customers, especially among intense athletes looking for more sophisticated devices. It also competes with companies that offer cheaper products, such as China-based Xiaomi.

HEADQUARTERS: SAN FRANCISCO (US. WORKFORCE: 1,753 REVENUE (2016): \$2.2-BN

A / EIT

for a club to have 6,000 members and only enough space to welcome 300 at a time. In the United States, 67% of health club members never even make use of their membership! The UK chain Pure Gym and US chain Town Sports International, which has three locations in Switzerland, operate according to the same principle.

More and more hotels, companies and hospitals are also acquiring fitness rooms

Growth in exercise-machine sales has been driven by the rising number of clubs and by anti-obesity campaigns, which encourage people to buy equipment like stationary bikes and rowers. Population ageing also plays a role. "A country like Japan, which has a large elderly population with high purchasing power, is a very attractive market for fitness-equipment manufacturers," says Nathan Yates, analyst at Forward View. More and more hotels, companies and hospitals are also acquiring fitness rooms.

Equipment makers have also been very good at innovating. Italy's Technogym (TGYM) teamed up with the famous designer Antonio Citterio to produce sleek, stylish machines that are as much works of art as they are workout devices. Other brands have equipped their machines with internet-linked touchscreens that allow users to tweet, shop and follow virtual running paths on Google Maps. After nearly a century, it looks like the fitness market is still running at full tilt.

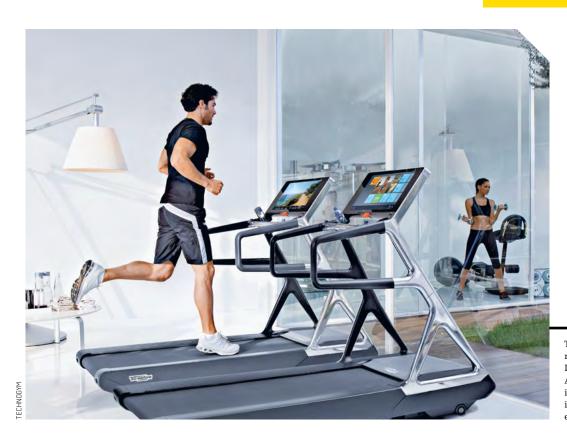
GARMIN

Elite athletes' favourite

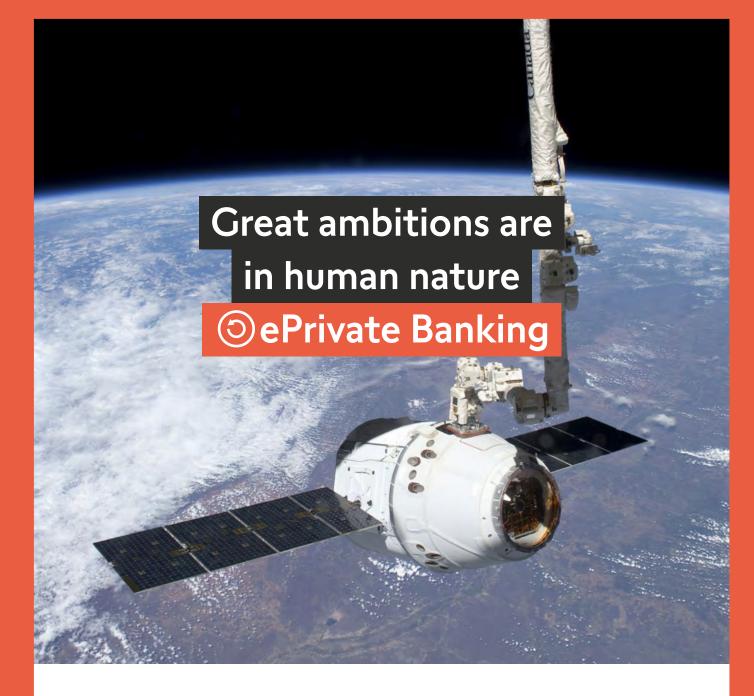
Much like its competitor Polar (which is not publicly listed), Garmin specialises in highend fitness trackers. "Garmin offers sophisticated smart watches, equipped with GPS and heart-rate monitors," said Richard Valera, analyst at Needham & Co. The company produces high-quality products: the battery used in the Vivofit has a lifespan of one year, compared with a few days for most other trackers. Valera expects that Garmin will post solid growth in the fitness wearables segment, which has increased 30% over the last two quarters. The company's only weakness is that the Garmin brand is not as well-known as Fitbit or Apple.

HEADOUARTERS: SCHAFFHOUSE (CH): WORKFORCE: 11,600

__/\/ GRMN



The treadmill, as reimagined by Italian designer Antonio Citterio, is becoming a trend in home fitness equipment.



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Shoot for the stars

More and more private projects are taking place in the field of space exploration. For investors, the opportunities seem endless. Some advice.

BY JULIE ZAUGG

pace, the ultimate frontier for Man, is attracting more and more private entrepreneurs. Five years ago there were only a hundred or so firms in the market, whereas now there are thousands. "In the United States alone, there are 3,780," noted Micah Walter-Range, director of research and analysis for the Space Foundation. The majority of these new players are start-ups, but a handful of large groups also seem very active in the sector. "Companies, such as Airbus (AIR) are constantly buying out start-ups," he added.

Currently, according to the Space Foundation, only 24% of the money invested in aerospace is publicly funded. The remaining 76% is from private sources. Lower equipment costs and technological advances have lowered entry barriers to the sector, thus encouraging the birth of more startups. "A few years ago, developing a computer to control a space shuttle

was extremely costly, while today a smartphone can perform the same task," explained Philip Metzger, a former NASA employee who studies the space market. The cost of satellites has also plummeted.

Only 24% of the money invested in aerospace is publicly funded

This climate has opened up many opportunities for investors. "Companies in the space industry are ideal for those looking to make long-term investments," indicated Simon Drake, managing director of Space Ventures Investors. "This is because developing, testing and selling a product often takes several years." Yet, for a patient investor who is ready to take a risk on new business models, the returns are often very high.

INTERSTELLAR FREIGHT



In 2013, the Falcon 9 rocket by SpaceX (a company created by Elon Musk, CEO of Tesla) was the first commercial rocket launched into orbit. This inexpensive, re-

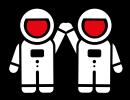
usable model, which can not only take goods into space but also bring them back down to Earth, revolutionised the sector. Orbital ATK (OA) and the Sierra Nevada Corporation very quickly joined the Californian group. Together they have been contracted by NASA to supply the International Space Station (ISS) with cargo until 2024.

The next step is flights to take astronauts into space. SpaceX, alongside Boeing (BA), is still calling the shots. "Its Starliner shuttle will start taking people to the ISS in 2018," announced Howard McCurdy, professor of public affairs at American University in Washington, DC. The NASA contract entrusted to SpaceX and Boeing is worth \$6.8 billion. But that's not all. "These companies will be able to provide NASA with four or five sites, and \$25 million will go to a country that cannot afford its own space programme," added the space policy expert.

In addition, a myriad of firms are coming up in the wake of rocket manufacturers. Aerojet Rocketdyne (AJRD) and Safran (SAF) provide propulsion systems. United Launch Alliance, a joint venture between Lockheed Martin (LMT) and Boeing, as well as the Japanese company Mitsubishi (7011), have specialised in boosters. Astrotech Corporation (ASTC), an incubator for space start-ups based in Texas, also stands out. An investor looking to enter the

market could invest in one of these popular companies. Orbital ATK, Aerojet Rocketdyne and Safran all reported a strong increase in turnover last year and, according to analysts, this trend should continue. Boeing, driven by its significant number of orders in aviation, is another safe bet. It is also possible to invest in SpaceX with mutual funds from Fidelity Investments, an American group that owns 10% of the company along with Google.

SPACE TOURISM



Many people dream of going to space. A handful of firms have set

themselves the goal of turning this dream into reality. The best-known among them is Virgin Galactic, founded by the owner of Virgin, Richard Branson. It aims to be the first company to offer suborbital space flights to tourists. "It is different in that it has developed a spaceship, SpaceShipTwo, which is launched into space from a giant plane in the sky as opposed to being launched from the ground," explained Micah Walter-Range. This plane, called WhiteKnightTwo, is the work of the group Scaled Composites.

Blue Origin, a company created by Amazon founder Jeff Bezos, is another influential player. New Shepard, its vertical rocket, has also been built with the aim of taking tourists into space. An even more ambitious project is that of Bigelow Aerospace, created by American hotelier Robert Bigelow, who plans to put inflatable housing units into orbit. Another venture is that of Russian company RSC

Energia (RKKE) which wants to organise a round-the-Moon tour starting in 2022. World View Enterprises is also developing a tourism programme: a hot-air balloon capable of climbing to 32,000 metres.

SpaceX also wants to join the space tourism party. Its CEO, Elon Musk, announced in late February that it had sold two tickets to the Moon. The passengers are set to take off in late 2018 for a week-long flight on board the Dragon 2 spacecraft. Experts are calling it a very optimistic mission.

The majority of initiatives in the space tourism sector are the work of unlisted companies. According to Simon Drake, "this sort of investment is more adapted to people prepared to bet on a start-up, people who can afford to give away millions in venture capital." A more reasonable solution is to invest in Northrop Grumman (NOC), the parent company of Scaled Composites, which manufactures carrier aircraft for Virgin Galactic.

AN ARMY OF MINI-SATELLITES



Satellites make up the most established sector of the space market (see Swissquote Magazine No.

6/2016). "Their business model is tried and tested and there is great demand for the services they offer, from satellite television to geolocalisation and telephone services, etc.," indicated Simon Drake. It's a market worth \$330 billion on an international scale. The dominating players in this sector are European companies Eutelsat (ETL), Inmarsat (ISAT), Thales Alenia Space, which belongs to Thales (HO) and Leonardo (ENC), and Airbus (EAD). But American

PORTRAIT SWISSQUOTE MAY 2017

companies Iridium (IRDM), Intelsat (I) and Loral Space & Communications (LORL) are not to be written off.

The sector is enjoying a resurgence. "Companies have started to sell fleets of mini-satellites or nano-satellites, weighing between one and 10 kilos, that are able to deliver images practically non-stop thanks to the sheer number of them," explained Chad Anderson, CEO of Space Angels Network. They are also infinitely cheaper: sending one of these satellites into space costs around \$110,000, compared to \$670 million for a classic satellite. American company Planet Labs is currently dominating this market. It has just launched 88 nano-satellites into orbit, making a total of 149 such models sent into space. Another start-up, OneWeb, wants to send up 648 in order to provide internet connection to the remotest areas of the planet.

Astrotech Space Operations and Rocket Lab are experts in launching satellites. "It's a hugely undersupplied market," says Chad Anderson. Last year, 160 to 170 satellites were ready for launch but only a hundred or so were deployed due to a lack of boosters – another reason to be sad about the bankruptcy of Swiss company S3 which offered precisely these services in this niche (see inset on this page).

Analysis of data generated by this armada of mini-satellites is also offering promising prospects. Philip Metzger thinks that "oil companies who want to know the status of their pipelines, or farmers wanting to keep a close watch on their crops, are naturally going to turn to this sort of service." In light of this, American company Digital-Globe (DGI), whose turnover rose by 3.3% to \$725 million in 2016, is an attractive investment opportunity. Betting on the boom in mini-satellites is also an option by investing in Intelsat and Inmarsat, which have projects in this field. An alternative is the boosters' markets by means of Lockheed Martin, who bought Astrotech Space Operations in 2014.

VISIONARY PROJECTS

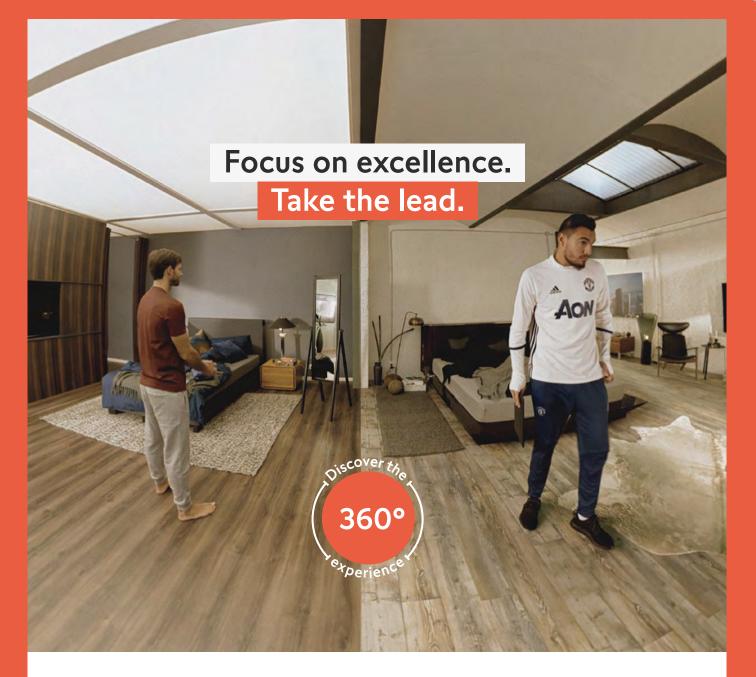


When all of Earth's resources have run out, why not go in search of more in space? This is the idea

developed by start-ups Planetary Resources, Deep Space Industries and TransAstra, which want to mine asteroids to extract precious metals, such as platinum, or even oil for rockets. "The project is actually more realistic than it might seem," said Philip Metzger. "Luxembourg just announced it's going to invest €200 million in this field."

Similarly, Texas-based Shackleton Energy Company has set itself the goal of producing energy from resources on the Moon, while the Californian company Made in Space has developed a 3D printer that can be used in space. "This will make it possible to manufacture – in this zero gravity universe – objects that cannot be produced on Earth, such as antennas that are several hundred metres long," explained Philip Metzger.

S3, THROWN OFF COURSE IN PAYERNE



Enter the 360° experience

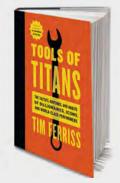
Discover how the lifestyle and attitude of a trader can closely mirror players of the Manchester United First Team squad including Wayne Rooney, Sergio Romero, Anthony Martial and Marcus Rashford.







TO READ, TO DOWNLOAD



From CHF 18.-

TOOLS OF TITANS

By Tim Ferriss (Houghton Mifflin Harcourt, 2016)

ADVICE FROM THE STARS

With a preface by Arnold Schwarzenegger and written by a self-help guru, this book is based on the concept that we should spend less time on activities and more time on reflection. The author references the routines and habits of billionaires, icons and performers and recommends that readers follow their example in order to prosper. The book is divided into three sections: "Healthy", "Wealthy" and "Wise", the three pillars of success. Each section is peppered with interviews from a multitude of celebrities giving advice. It seems to work!



THE UNDOING PROJECT

By Michael Lewis (W. W. Norton & Company, 2016)

CHOOSING REASON

The prolific author Michael Lewis, who brought us *The Big Short, Flash Boys*, and *Moneyball*, has struck again with this bestseller which tells the story of two friends, both psychologists, Amos Tversky and Daniel Kahneman. In 1969, these renowned experts came together and changed our understanding of human behaviour forever. Their work became extremely influential in the social sciences field. It is based on the major discovery that people have the bad habit of letting themselves be led by their emotions rather than reason. This book explains how to be a game-changer.



V FOR WIKIPEDIA

WIKIPEDIA EASE

CHF 5.Apple Store

search function, this app also has a special feature which provides news and articles about your location. It has an excellent interface with a carefully thought-out typography and layout. It has also been designed to make research easier, largely thanks to the main

screen that saves all your searches and

bookmarks articles you've already read.

As well as having a "normal" Wikipedia



Apple Store

WIFI PRIORITY

WIFI SORTING

With this tool it is possible to efficiently sort and select networks available in a given area. Once you have selected a network, WiFi Priority suggests blocking the other available networks to avoid automatically connecting to them another time, thus shortening the list of networks on your iPhone. No more going back and forth to your settings to get rid of unwanted networks.



Google Play

GREENIFY

SAVE BATTERY LIFE

Greenify optimises your battery life by putting energy-consuming apps that you use the least in hibernation mode. Rather than working quietly as background tasks, these apps stop using the processor and smartphone memory, using less power as a result. A "Hibernate all" shortcut allows you to put all apps in hibernation mode automatically.



CHF 1.-Apple Store, Google Play

FOLLOWUP SIMPLIFIED DIARY

This app will be extremely useful for those who have trouble keeping track of administrative tasks, be they meetings, phone calls or work commitments. It sends reminders and creates bookmarks to increase productivity and avoid wasting time. By bringing contacts and conversations together, keeping track is easy and efficient.



TRADING THROUGH THE PRESIDENTIAL ELECTION

Swissquote provides exclusive coverage of the French presidential election on its website, with a detailed breakdown of views expressed on social media, analyst insights and investment offers.

WWW.SWISSQUOTE.COM/FRENCH-ELECTION



MAN

What impact can the French presidential election have on stock and currency markets? The teams at Swissquote answer this and many other questions on a new website set up specifically for the event. A number of analysis tools designed for investors are avail-

able: charts, tips and analyst opinions, along with exclusive coverage of the views expressed in real time on social media. A closer look at what's on offer, with Yann Quelenn, analyst from the eForex – Trading & Market Strategy department.

SWISSQUOTE SWISSQUOTE MAY 2017

How did you come up with the idea of creating a website dedicated to the French election?

The purpose was to provide investors with useful tools while offering attractive media coverage of the campaign. The website is now live and not only does it feature analyst opinions and investment advice, but it also monitors information posted on social media about each candidate in real time. This exclusive reporting, called the Social Media Opinion Index, has been made possible through our partnership with the Social Media Lab at the Swiss Federal Institute of Technology in Lausanne (EPFL), which draws on the latest advances in artificial intelligence (see p. 70).

What financial advice is offered to investors?

On top of articles from financial analysts and a media watch, we offer a basket of stocks related to themes involved in the presidential campaign. This basket is the latest addition to the regular Themes Trading section available on our website, where we provide potential investment solutions related to targeted themes. For the French presidential election, we thought it would be interesting to project ourselves into the future - hypothetical, of course - scenario of a return to protectionism. Several candidates, especially Marine Le Pen and Jean-Luc Mélenchon, put forward a protectionist approach to stimulate the economy. We want to show how investors could take advantage of that possibility, by identifying the companies that would potentially benefit from it.

How will the platform change after the first round?

As soon as the two winners of the first round are determined, content will be expanded. We'll set out two investment scenarios, one for each candidate, featuring tips on currency trading, indices and shares should that candidate go on to be elected. For example in the Themes Trading section, we'll identify the industries and companies in the best position to grow in value under each candidate in office. An exclusive infographic will also break down their economic programmes, background, support, etc.

Can you explain the concept behind the Social Media Opinion Index?

Twice a week until the evening of the first round, we'll measure the opinion expressed on social media using computer graphics to assess the reputation of the top five candidates: Emmanuel Macron, François Fillon, Marine Le Pen, Benoît Hamon and Jean-Luc Mélenchon. Starting on Sunday 23 April, with only two candidates left in the running, we'll chart their progress with a daily analysis. Every day, an index will show the percentage of positive and negative views expressed about each candidate. The timeline will monitor opinion almost in real time.

That means faster than with traditional polls...

What's useful here is the potential difference that could emerge between the results of traditional polls and direct measures of opinion on social media. If the polls are off,

investors could bet on a surprise win. For example with Brexit, in the days leading up to the vote, the opinion expressed online in the United Kingdom was favourable to withdrawing from the European Union. But the polls didn't pick up on that movement. Similarly, as supporters of the National Front aren't typically open about it, official polls have trouble predicting the vote, and that might be more accurately detected using the tool developed with EPFL. If, as the election nears, more opinions in favour of Marine Le Pen are expressed online, we could suppose that something is going on at that end.

Do you plan to re-apply the concept to other political elections?

Absolutely. We're going to set up a similar platform for the German elections, planned in August. And again, we'll be providing exclusive content.





YANN QUELENN
ANALYST
eFOREX DEPARTMENT - TRADING
& MARKET STRATEGY
SWISSQUOTE BANK

SWISSQUOTE MAY 2017



"THE FRENCH ELECTIONS WILL BE VERY INTERESTING TO FOLLOW"

Capturing and analysing public opinion through social media is the mission of the EPFL Social Media Lab. We interviewed Jean-Luc Jaquier, business development director, to learn more.

Created in 2013, the EPFL Social Media Lab is developing tools that can pinpoint public opinion from the internet, and social media in particular. The Lausanne-based lab generated a buzz at COP21 in Paris at the end of 2015. Tools developed by the lab made it possible to analyse and dissect opinions on climate change all over the world in real time. The goal was to provide the media, experts, NGOs and companies with a revolutionary way to measure public opinion on social media. For the 2017 French presidential elections, the Social Media Lab will provide its expertise to Swissquote, regularly delivering "snapshots" of French public opinion on various candidates. Director Jean-Luc Jaquier takes us behind the scenes of the lab.

Can you explain what your tool does and how it works?

We capture, analyse and publish, in real time, evolutions in public opinion on a given subject through

what is expressed on the internet. We collect a huge amount of data on social networks to obtain an overview of opinions. To do so, we use what we call Natural Language Processing (NLP), which is the understanding of human language, as well as graph analysis, which determines the positions of various people, the connections between them, their respective influence, etc. These two technologies use artificial intelligence (AI), and by bringing them together we can gain a very precise understanding of public opinion shared on social media.

What are the main challenges when it comes to artificial intelligence?

The challenge is reaching a high level of clarity in understanding a text. The branch of NLP that does this is called Natural Language Understanding (NLU), and it is a vast research topic in AI. There is so much room for improvement. One of the main challenges is under-

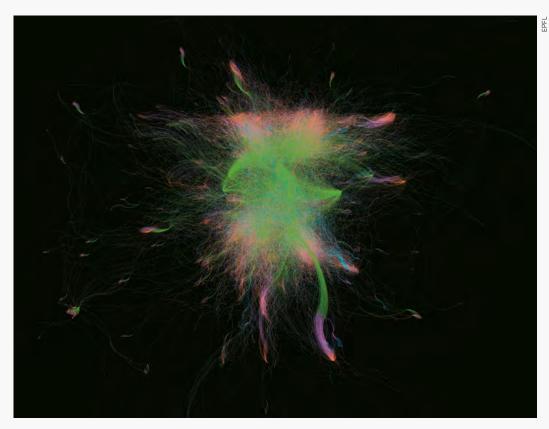
standing posts that are ambiguous, ironic or sarcastic, which are very popular on social networks. A comment may seem positive taken at face value, but in reality it means exactly the opposite. We also have to identify the fake news that contaminates social media.

How does graph analysis fit into the process?

Not only do we have to decipher the text, but we also have to understand the context. Is this a credible source? How was the content shared and in which communities and places? What is the impact? Our algorithm builds a social-media graph based on the answers to these questions.

Let's look at an example. The tool determines that person A posted in support of a candidate in the presidential election. If person B shares that post in a positive way, then Al can deduce that person B is likely to also support this candidate. Con-

SWISSQUOTE SWISSQUOTE MAY 2017



A few hours of Twitter and web activity around the French elections. The social media graph represents about 250,000 users, tweets and articles and how they are connected. Blue shows the references to articles, purple refers to tweets, orange to retweets and green to user mentions. The graph offers a visual exploration of the communities around the different candidates and how the opinion propagates across the social media.

versely, if someone posts a positive comment about a candidate but uses a sarcastic tone, the algorithm will understand that this person probably supports a different candidate.

By combining NLP and graph analysis in our algorithms, our tool is three times more precise than if we just used NLP. The results it produces are already very precise – and a quantum leap ahead of any other tool to date.

Where does human intervention come in?

We believe that big data is a way to connect humans and machines. The machine will analyse the spread of opinion using the graph, and then we zoom in on parts of the graph and score the analysis using human knowledge. If the machine made a comprehension error, we will point it out. It will then recalculate and learn from its mistakes. This is called machine learning and deep learning.

The machine will then adjust the entire graph – which could include millions of opinions – based on our input. The machine is able to adapt and learn.

Just how much can artificial intelligence improve?

There is enormous room for improvement. In the next five to 10 years, we will make huge progress in understanding information expressed by humans. Tools are getting better every day and can analyse millions of data almost instantaneously, in any language all over the world.

Now that we can capture public opinion almost immediately, will traditional polling methods become obsolete?

We can now capture a change of opinion in just a few hours. A traditional poll takes much longer, around two or three days. But polls are the result of in-depth interviews and based on a representative panel. So I'd say that these two methods complement each other. On the internet and social media, we're in rather uncharted territory. Some demographics, mainly young people, express themselves far more on social media. The advantage of our tool is that we can measure opinion in real time, directly from the source with no intermediary. In that sense, the French elections will be a fascinating case to observe.



JEAN-LUC JAQUIER
BUSINESS DEVELOPMENT DIRECTOR
EPFI





in 2003, when Google decided to make the Docklands its European headquarters. The former port neighbourhood was a commercial hub in the 19th century and is conveniently close to the centre of Dublin. Other internet giants soon followed suit, including Facebook,

landscape.

To get the full effect of Dublin's newest neighbourhood, stroll from Portobello to the south bank of the Liffey along the waters of the Grand Canal. The greenway is lined with Victorian houses with

ed at a nearby bench, employees with loosened ties eat salad for lunch. A young retired couple runs with their dogs. As you continue walking, red-brick patios gradually give way to glass facades, engineers wearing trendy sneakers and modern gyms. ▷

TRAVEL SWISSQUOTE MAY 2017

Go up Barrow Street, Google's neighbourhood, or the Grand Canal Quay, and you'll arrive at Grand Canal Square. This 10,000 sq. m square is overflowing with green flowerbeds and neon and red pathways, designed by American landscaper Martha Schwartz. It is the epicentre of Silicon Docks and Dublin's newest urban-design gem. It is in this futuristic square, next to the sharp lines of the Bord Gáis Energy Theatre, where you'll find the fivestar Marker Hotel. Its draughtboard windows shine on the dark waters of the canal. Visitors are drawn to its sophisticated neo-industrial atmosphere, whether to spend a few nights or to drink one of their renowned cocktails on the rooftop bar and admire the view, dotted with factory chimneys and church towers.

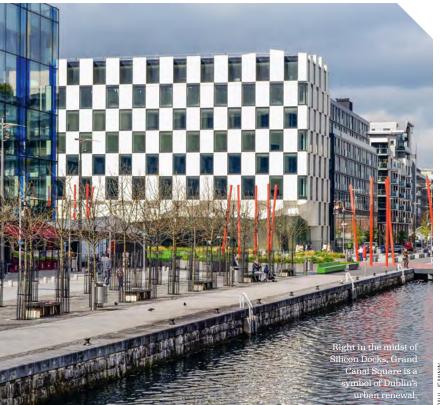
Head up the Hanover Quay along the central pond and you'll soon come across 5Cube. This surprising, sparkling kaleidoscope structure

EMPLE BAR

displays Ireland's consumption of fossil fuels in real time, which aims to make passers-by conscious of the environment.

Just a few minutes' walk from 5Cube is the Samuel Beckett Bridge, which connects the North bank of the Liffey. Inaugurated in 2009, the 120-metre-long cable bridge is the impressive work of master Spanish architect Santiago Calatrava. Suspended above the water by cables resembling the fragile shape of a harp, the bridge is a symbol of the neighbourhood's new breath of life. Heading along the river towards the city centre, architecture aficionados will take the time to stop and admire the facade of the CHQ Building. This excellently restored former tobacco and wine warehouse is now home to EPIC Ireland, the Irish emigration museum.

Indeed, Dublin hasn't always been so booming. Well before becoming Europe's high-tech hub, revitalised by an international younger generation. Dublin suffered from the Great Famine in the 19th century. Much of its population emigrated as a result. This is the history told by the Jeanie Johnston Tall Ship, a three-master moored across from EPIC. The contrast between the photovoltaic facades of the



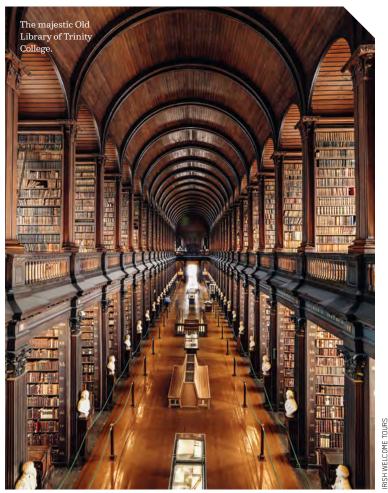
TRAVEL SWISSQUOTE MAY 2017



Docklands and the city's past is even more shocking after crossing the Liffey once again, when you arrive at the Temple Bar neighbourhood, a labyrinth of cobblestone streets filled with pubs. Unlike the LED lighting at the Market Hotel, The Clarence maintains a traditional charm, with an octagonal bar and wood-panelled rooms. It's also a haunt for U2 fans, as lead singer Bono has owned the building since 1992. That's as good a reason as any to wander through Temple Bar, a neighbourhood where Dubliners, engineers and workers come together after work for a Guinness or...a beef and Guinness pie.

The dark beer even has its own museum: the Guinness Storehouse.

located in its very first brewery. Seven floors surround a glass atrium shaped in the form of a pint of Guinness and the tour ends with a tasting of... Guinness. However, some just can't stand the beer. In that case, head to the Irish Whiskey Museum. You don't have to be an alcohol aficionado to appreciate the secrets of whiskey. Its origins and recipes are an interesting way to learn about Irish history, which includes Viking conquests, economic obstacles and an industrial renaissance. Perhaps the best way to end your voyage in time is to visit the library of Trinity College, founded in 1592. It is said to have inspired the architecture of Harry Potter's Hogwarts and the corridors swish with the ghosts of geniuses past.



GET THERE

Direct flights from Basel, Geneva and Zurich. From CHF 59.- per person.

WHERE TO STAY

THE CLARENCE:

starting at CHF 150.- per night (for two people)

WWW.THECLARENCE.IE

THE MARKER:

starting at CHF 340.- per night (for two people)

THEMARKERHOTELDUBLIN.COM

WHERE TO EAT

THE HAIRY LEMON:

the true Irish pub experience

RUSTIC STONE:

healthy cuisine from Michelin-starred chef Dylan McGrath

DELAHUNT:

a more upscale version of local cuisine

OSTERIA LUCIO:

Italian elegance in the heart of the Docklands



MOTOR: 4.0L TWIN-TURBO V8 HORSEPOWER: 550 BHP 0 TO 100 KM/H: 3.8 s STARTING PRICE: CHF 186,700.-

S porty roadsters began appearing in the mid 1950s in both Europe and the US. Take the iconic Jaguar Mk2 (1959), Chrysler 300 (1955) or the Maserati Quattroporte (1963), for example. At the time, Porsche was mainly focused on the minuscule 356. The brand has made up for lost time, as we can see in the second generation Panamera! The car was the ambassador for hatchbacks everywhere since 2009.

THESE LUXURY SALOONS ARE BECOMING SUPERCARS

BY PHILIPP MÜLLER

PORSCHE PANAMERA, REIMAGINED

but this five-door was completely reinvented over the past year. It now joins the group of family 911s. despite its length of 5.05 m (the Executive version is 5.20 m). The hatchback design was replaced with a split rear wing spoiler, which will definitely turn heads. Built using Volkswagen's new MSB platform, the Panamera maintains the front motor. But the engine power got a boost thanks to two V-shaped variable-geometry turbochargers shaped by 6- or 8-cylinder motors. Porsche's E-hybrid and the enormous diesel V8 Audi SQ7 are indeed tempting. But after a few days behind the wheel of the petrol 550

bhp (Turbo), it's hard to drive anything else. True, we didn't push the (virtual) speedometer to its advertised 306 km/h, but the 4L V8 engine, the smooth new double-clutch 8-speed gearbox (standard on all versions) and the efficient four wheel drive and steering are enough to make you forget the almost twotonne chassis when zipping through turns. In terms of comfort, all you need to know is the base could be a Bentley! The Panamera is a pleasure, with sophisticated textures, massage seats, a captivating sound system and a touch screen - a welcome change from a dashboard full of buttons. 4



Style, sound and pure sensations – this aluminium carbon luxury sport saloon, powered by a 5.9L V12 fuel-injected engine producing 560 bhp, can go from 0 to 100 km/h in just 4.2 seconds. A vehicle for driving aficionados who like to take control. From CHF 203,900.



This vehicle has pretty much everything: laser lighting, gesture controls, four-wheel drive and steering and a 6.6L 12-cylinder twin-turbo engine producing 610 bhp. 0 to 100 in 3.9 seconds. From CHF 216,410.-

GET THE NEXT ISSUE!



BOUTIQUE

FUNKY COLOURS

This year, Audemars Piguet is launching the Royal Oak Offshore Diver Chronograph in a range of "funky colours", from dark blue, fizzy lemon yellow and lime green, to bright orange. This diving model is waterproof to 300 m and has a rotating inner bezel with a diving scale and zone from 60 to 15 minutes and luminescent white gold applied hour-markers and hands for increased visibility both in the water and on the surface.

www.audemarspiguet.com





CIGAR ARMCHAIR

The RA 1.15 is an armchair made specifically for cigar lovers by the architect Rodrigo Gonzalez from Chile and the German Alexander Sauer, the two men behind the El Purista label. The chair is custom-made with a walnut and beech wood base covered in leather, and features drawers built in to the armrests to store the smoker's equipment, such as an ashtray, lighter, cigars and even... a whisky glass!

www.elpurista.de From CHF 2,850.-



360 SOUND

The new wireless compact BeoPlay M5 speaker from Bang & Olufsen evenly distributes 360 sound. There are three preset modes to maximise the sound quality based on the speaker's position in the room. Designed by Cecilie Manz, an award-winning Danish designer, this anodised aluminium speaker, covered with a wool blend fabric, has a discreet, elegant look.

www.beoplay.com CHF 649.-



ELECTRIC AND MUSICAL

The Slovenian company Noordung has created the Angel Edition, a limited edition, entirely handmade electric bike of superior design with an aerodynamic carbon-fibre frame, leather saddle with the Brooks stamp, and light as a feather at 15.6 kg. Its distinctive features include a built-in sound system to listen to music on the move and a USB port to charge your smartphone at any time.

www.noordung.com

gosun

SOLAR-POWERED BARBECUING

Golden sausages in just 20 minutes without using coal, gas, electricity or even wood. That's the Gosun Sport Solar Cooker guarantee. Designed to make a meal for two, this portable solar barbecue can reach a temperature of 290 °C to grill, heat, boil and steam food. It can even cook at night or through clouds thanks to its battery which absorbs and stores the sun's energy throughout the day.

www.gosunstove.com CHF 278.-

SMART BOXING

PIQ, the French start-up specialised in sport sensors, has got together with Everlast, the American kit supplier, and launched the first connected device for boxing. The device, which fits in to a wristband, analyses movements and gathers data to highlight your winning factors and guide you to victory.

www.piq.com



THE SELFIE DRONE

The Chinese start-up Zero Robotics has just unveiled the Hover Camera, a compact, foldable selfie drone with a camera to capture moments in 13-megapixel photos and 4K video. Thanks to a sonar and digitally-stabilised cameras, with facial recognition and body tracking technology, the flying object adopts the ideal position to follow and cover its target from all angles.

www.gethover.com CHF 603.-

WELL-ARMED

Official supplier to the American army, SOG takes its name from a special ops unit tasked with covert missions in the jungle during the Vietnam War. And that shows in their most recent creation, the Baton Q4, an essential tool for survival – both in the wild and at the office. This multi-tool, which slips easily into your pocket, is equipped with 10 tools, including two screwdrivers, pliers and a tin opener.

www.sogknives.com

CHF 120.-





Monika Rühl has headed the Board of Management at economiesuisse, the Swiss corporate union, since 1 September 2014. She studied literature and the history of Italian and French language in Zurich before undertaking diplomatic training in Bern, Brussels and Geneva. From 1994 to 2002, Ms Rühl held a number of management positions at the Swiss Federal Department of Foreign Affairs (FDFA), the last of which was with the Mission of Switzerland to the United Nations in New York. She then acted as personal advisor to the Federal Councillor with the Christian Democratic People's Party, Joseph Deiss, for four years, first at the FDFA, then at the Federal Department of Economic Affairs (FDEA). Monika Rühl led the General Secretariat at the Federal Department of Economic Affairs, Education and Research (EAER) from 2011 to 2014, overseeing a team of 100 people.

A KEY EVENT FROM YOUR CHILDHOOD?

Forgetting my ballet slippers for the annual performance of the ballet school, and not being able to dance.

THE PROFESSION YOU WOULD HAVE LIKED TO DO?

Ballet dancer or another artistic profession, for example a gallery owner.

YOUR SECRET HOBBY?

Cleaning: it's exercise and relaxation at the same time. And the result is immediately visible!

SOMETHING THAT INSPIRED YOU RECENTLY?

Engadin is a place that continuously inspires me, in any season.

A PLACE THAT MADE AN IMPACT ON YOU - AND WHY?

I lived in New York City for four years and was there on 11 September 2001. I love the city, but I was very scared that day.

THE FILM THAT YOU WOULD HAVE LIKED TO EXPERIENCE?

Divine Order by Petra Volpe (2017). Out of admiration for all women (and men) who fought for women's suffrage.

A SONG THAT SUMS YOU UP?

Hotel California by the Eagles. That song is part of my youth.

THE IDEAL WOMAN?

She focuses on reaching her goals and ideals and doesn't get discouraged.

THE IDEAL MAN?

The partner I'm with.

THE IDEAL ANIMAL?

Birds, because they have an overview from above but always come back to the ground.

SOMETHING CRAZY YOU DID RECENTLY?

I bought a whole new spring wardrobe by a Swiss designer, even though my closet was already full.

YOU MAKE 5,000 SWISS FRANCS ON THE STOCK EXCHANGE. WHAT DO YOU DO WITH THE MONEY?

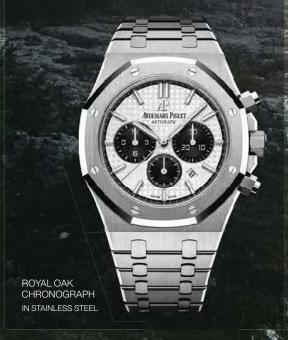
I go on holiday with friends to Engadin or to the seaside, to mix exercise and wellness.

A BOOK THAT YOU RECOMMEND?

Stiller by Max Frisch. I always enjoy reading that book, because it questions who we really are.

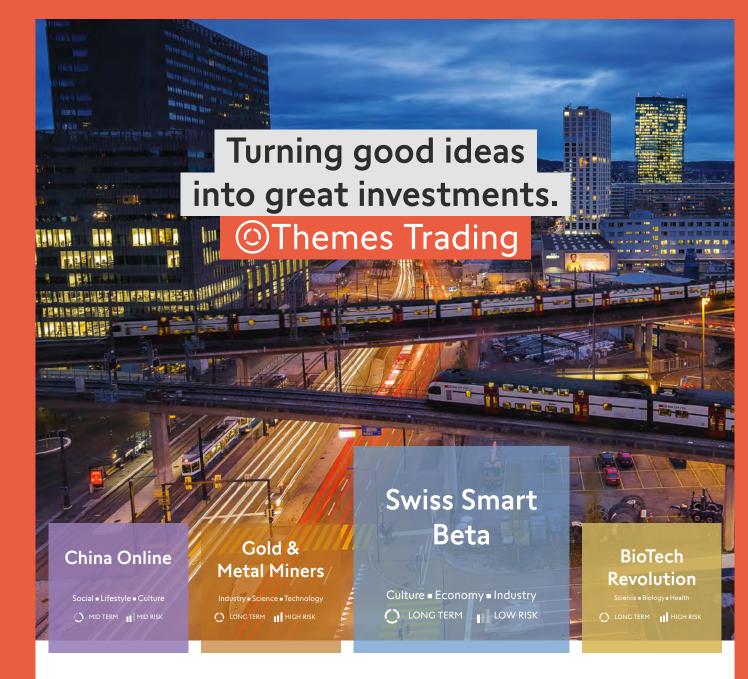


THE VALLÉE DE JOUX. FOR MILLENNIA A HARSH, UNYIELDING ENVIRONMENT; AND SINCE 1875 THE HOME OF AUDEMARS PIGUET, IN THE VILLAGE OF LE BRASSUS. THE EARLY WATCHMAKERS WERE SHAPED HERE, IN AWE OF THE FORCE OF NATURE YET DRIVEN TO MASTER ITS MYSTERIES THROUGH THE COMPLEX MECHANICS OF THEIR CRAFT. STILL TODAY THIS PIONEERING SPIRIT INSPIRES US TO CONSTANTLY CHALLENGE THE CONVENTIONS OF FINE WATCHMAKING.



AUDEMARS PIGUET BOUTIQUES: GENEVA | ZURICH

AUDEMARS PIGUET Le Brassus



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