

SWISSQUOTE

FINANCE AND TECHNOLOGY UNPACKED

STOCK EXCHANGE
Traders flock
to Twitter

PORTRAIT
Arbonia,
the Swiss
phoenix

DIVIDENDS
Swiss companies
pamper their
shareholders

DOSSIER

CANNABIS THE GREEN RUSH

Mary-Louise Parker,
from the TV series Weeds

Why the legal market
is already worth billions.

AURORA ► APHRIA ► CANOPY GROWTH ► HYDROPOTHECARY ► MEDRELEAF ► GW PHARMACEUTICALS

ISSN 2296-3278

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Cartier

SANTOS DE CARTIER COLLECTION



HAPPY SPORT
Chopard

Winds of change



By Marc Bürki,
CEO of Swissquote

2018 is definitely shaping up to be an unexpected and fascinating year for investors on a number of fronts. While cryptocurrencies are still eliciting interest, including from finance professionals, another avenue of investment with just as much unfettered potential is opening up: cannabis.

p. 34 Already **legal** in a number of American states (including California and Colorado), the sale of medical and recreational marijuana will also begin in Canada starting in July this year. Before, no doubt, being authorised in several other countries.

p. 40 This paradigm shift has meant that a number of **companies** involved in this domain have seen their share prices shoot up. Currently, Canadian firms are at the cutting edge. The country boasts large-scale marijuana cultivators and pharmaceutical companies, as well as start-ups that develop more original products, such as flavoured sprays, powders in jars and ointments for use in sport – with a future premium clientele in

their line of sight. This is the case for Quebec-based Hydropothecary, whose CEO Sébastien St-Louis gave us an **interview**. The Canadian businessman is already anticipating the next revolution – an extended disruption of the food and beverage sector. Analysts also expect large-scale acquisitions over the next few years, involving tobacco and alcohol giants.

p. 36

In this euphoric climate, should we remember that cannabis is still a **drug**? Clinical research attributes health benefits (such as painkilling, anti-nausea and appetite stimulation) to cannabis, but its potentially harmful side-effects on teens and young adults have also been established. Duly noted.

p. 53

2018 is also an **anniversary** year. You have *Swissquote Magazine's* 50th issue in your hands. This milestone deserved an illustrated retrospective of our eight years in print. Thank you for continuing to support us in such large numbers.

p. 8

Happy reading!

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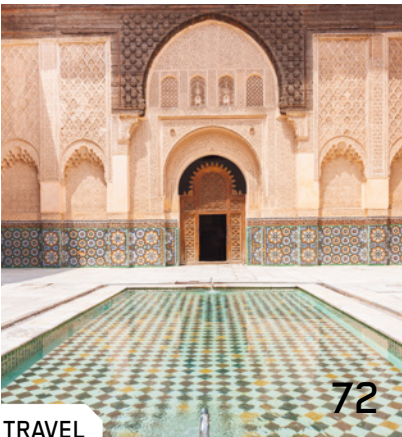
DOSSIER

CANNABIS THE GREEN RUSH



SCANS

STOCK EXCHANGE



TRAVEL

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PUBLISHER
Swissquote
Chemin de la Crétaux 33
1196 Gland - Switzerland
T. +41 44 825 88 88
www.swissquote.com
magazine@swissquote.ch

Manager
Brigitta Cooper

EDITORIAL

Editor-in-chief
Ludovic Chappex

Associate editor
Bertrand Beauté

Design director
Natalie Bindelli and Caroline Fischer
CANA atelier graphique
Route de Jussy 29 - 1226 Thônex
www.ateliercana.ch

Editorial staff
Martine Brocard, Stanislas Cavalier,
Blaise Duval, Sophie Gaitzsch,
Salomé Kiner, Martin Longet,
Philipp Müller, Daniel Schneider,
Gaëlle Sinnassamy, Julie Zaugg

Layout
Natalie Bindelli, Caroline Fischer,
Coralie Meder (CANA atelier graphique)

Cover
Showtime

Photography
AFP, Keystone, Getty images,
iStockPhoto, Newscom, Reuters

Editing (English version)
Ose Ayewoh, Marco Simon

Translation
Technicis Finance

PRINTING, BINDING AND DISTRIBUTION —
Stämpfli Ltd.
Wölflistrasse 1 - 3001 Bern
www.staempfli.com

ADVERTISING
Infoplus AG
Traubenweg 51, CH-8700 Küsnacht
hans.otto@i-plus.ch

WEMF
REMP 2016: 50,756 ex. Print run: 60,000 ex.



printed in
switzerland

SUBSCRIPTION
CHF 40 FOR 6 ISSUES
www.swissquote.ch/magazine

ISTOCK / DISNEY / HYDROPOTHECARY / VIVALAPENLER / ISTOCK

FROM THE DEPTHS OF THE SEA.

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Turning 50

Swissquote Magazine is celebrating its fiftieth issue.
A look back at eight years full of dossiers and reports.

2010

2011

2012

2013

2014

2015

2016

2017



It's hard to avoid the piercing gaze of Peter Brabeck. The CEO of Nestlé at the time was the featured guest of this issue devoted to cult brands. Or the art of winning over millions of consumers.

Which companies had the best performance on the stock market over one year, and how did they do it? That's the question we answered in this issue. One of the highlights of the second year.



Federal Councillor Doris Leuthard was kind enough to let us interview her for this issue dedicated to influential women. A topic that remains relevant today.

The comeback of fossil fuels made the headlines that year. We did a full report on the fracking industry in North Dakota.



After South Korea (2012) and Brazil (2013), it was Shanghai's turn to be the focus of a special edition. It was time to understand why this megacity had been topping all the international rankings.

Three years before this current edition on cannabis, we profiled the tobacco industry. Electronic cigarettes, vaporisers...the old world is horrified.



We had a new layout and a new business model for the first issue in 2016, which covered the champions of the sharing economy. Will Airbnb and Uber soon be listed on the stock exchange?

With big data and personalised medicine, pharma has entered a new era. Swiss companies are some of the first in the game, as demonstrated by the investigation in this issue.



SCANS



“AI is one of the most important things humanity is working on. It is more profound than, I dunno, electricity or fire”

Google CEO,
Sundar Pichai



\$600 BILLION

The amount stolen globally in 2017 by cybercriminals around the world, versus \$445 billion in 2014, according to a study by McAfee and the CSIS agency. The increase is a result of the rise of virtual currency, which is an easy, attractive target for hackers.

entertainment DISNEY JOINS THE STREAMING MARKET

Disney will launch its own streaming service. The platform will include all of Disney's films, as well as films from the Marvel and Star Wars franchises. It will also offer four or five original series, and three or four original films per year. To increase its offer, Disney also acquired a large portion of 21st Century Fox's catalogue at the end of 2017. With this new service, which is expected to launch in 2019, the entertainment giant hopes to compete with Netflix, Amazon and Hulu. To test the waters, Disney launched the DisneyNow platform, where viewers can find all its TV and game programmes in one place. — DIS



DISNEY

drinks YOUNG PEOPLE ARE DRINKING LESS



With Heineken 0.0, the Dutch brand wants to break into the booming non-alcoholic beverage market.

KOEN VAN WEEL

Young people are consuming less alcohol than previous generations. They are also paying more attention to their weight. This trend has boosted the non-alcoholic beer industry. Heineken recently launched a beer dubbed 0.0%. Its competitor, Anheuser-Busch InBev, launched Budweiser Prohibition, which

is also alcohol-free. The company estimates that this segment will generate one-fifth of its revenue by 2025. And beer lovers aren't the only ones looking for healthier alternatives. Diageo recently invested in Seedlip, a start-up that produces non-alcoholic liquors.

— HEIA — ABI — DGE



“What Porsche is doing is to follow our own way. We did it in the past and we'll do so in the future. Therefore it's not so important what Tesla does”

Porsche CEO
Oliver Blume

The German brand will launch its 100% electric, Mission E model in 2019.

luxury RICHEMONT VENTURES TO THE WEB



SHUTTERSTOCK

Richemont will acquire the e-commerce platform Yoox-Net-a-Porter Group for €2.7 billion. The Swiss company is already a shareholder of Yoox-Net-a-Porter Group. The transaction demonstrates the firm's desire to increase its online sales, which were snubbed for a long time as they didn't fit with the group's brand image. E-commerce currently accounts for only 9% of sales. Richemont's competitors also want to increase online sales of luxury items. LVMH recently launched a platform called 24 Sèvres. The e-commerce site Farfetch also specialises in selling high-end products.

— CFR — MC

RANKING

TOP 10 ELECTRIC VEHICLES SOLD IN EUROPE IN 2017 (by number of registrations)

1. RENAULT ZOE
31,302
2. NISSAN LEAF
17,293
3. BMW I3
14,785
4. TESLA MODEL S
14,319
5. VOLKSWAGEN E-GOLF
12,663
6. TESLA MODEL X
10,396
7. NISSAN E-NV200
4,419
8. SMART FORTWO
4,239
9. RENAULT KANGOO ZE
4,232
10. VOLKSWAGEN E-UP!
2,981

Source: Avere

TOP 3 COMMERCIAL SATELLITE LAUNCHERS (by number of successful launches in 2017)

1. SPACEX
18
2. ARIANESPACE
11
3. UNITED LAUNCH ALLIANCE
(alliance of Boeing and Lockheed Martin)
8

Source: various

5 LARGEST COMPANIES IN AFRICA (based on 2016 revenue)

1. SONATRACH (Algeria, hydrocarbon)
\$30,242,200
2. STEINHOFF INTERNATIONAL HOLDINGS (South Africa, furniture)
\$17,304,461
3. SONANGOL (Angola, petrol)
\$14,711,363
4. THE BIDVEST GROUP (South Africa, trading and distribution)
\$13,290,847
5. ESKOM (South Africa, electricity)
\$12,856,531

Source: The Africa Report

SCANS



300 MILLION

The number of electric vehicles that will be on the road by 2040, compared with 3 million today, according to a new study by BP. The petrol group also believes that demand for petrol products will peak by the end of the 2030s, because of the influx of eco cars.

electronics

SMARTPHONE SALES ARE DROPPING



Smartphone sales fell for the first time since 2004 in Q4 2017, dropping 5.6%. Users have started purchasing higher-quality products and replacing them less often, according to market research firm Gartner. Another explanation: few new smartphones with truly innovative features were put on the market last year. The only manufacturers which were successful were China's Huawei and Xiaomi, whose sales increased 7.6% and 79% respectively in 2017. They benefited from their large range of affordable smartphones. — 002502

tourism

KUONI DOES CUSTOM-MADE

This summer, Kuoni will launch an online platform in the UK offering bespoke holidays. Customers can choose from a range of options to personalise their itinerary based on their preferences. For example, travellers can select their hotel of

choice or their preferred mode of transport between two places. The target clientele for this offer, which aims to counter the decrease in traffic in the Swiss travel agency's brick-and-mortar offices, is affluent couples with no children. — KUNN

3D printing

OC OERLIKON INNOVATES FOR BOEING



An aluminium heat sink made by a 3D printer.

Schwyz-based OC Oerlikon has entered into a five-year partnership with Boeing. The two companies will develop a standard process to 3D print titanium parts. This will lower the cost of parts crafted from the ultra-light and resistant material. Last year, Boeing became the first

aeronautics group to use titanium parts made by 3D printers for a passenger plane, the Dreamliner 787. The partnership is also beneficial for OC Oerlikon. Analysts believe that 3D printing will make up 10% of its revenue by 2021, compared with 1% today. — OERL — BA

raw materials

CITRUS AND VANILLA SHORTAGE



A fire at a BASF chemical plant in Ludwigshafen (Germany) has resulted in a citrus fruit shortage.

DANIEL ROLAND / AFP

Flavour and fragrance manufacturer Givaudan is running low on citrus fruits. The raw materials for producing scents in this family, used to scent soaps and other hygiene products, cannot be found anywhere in Europe. This shortage is the result of a November fire that ravaged one

of German company BASF's plants. The Geneva-based group is also faced with a vanilla shortage after Cyclone Enawo destroyed much of the harvest in Madagascar in March 2017. These two events have increased the price of raw materials by 6% for Givaudan. — GIVN



\$4.7 BILLION

The amount Swiss Re spent in 2017 to reimburse customers who were victims of natural disasters. It was one of the costliest years in the insurer's history. 2017 was marked by Cyclone Debbie in Australia, hurricanes Harvey, Irma and Maria in the Atlantic and forest fires in California.



“Trump has a medieval view of the economy”

Pascal Lamy, former director general of the WTO, following Donald Trump's decision to tax steel and aluminium exported to the United States.

KICKSTARTER



BAUBAX

BAUBAX

SWISS ARMY JACKET

Baubax is the ultimate jacket for intrepid travellers. With 12 different-sized pockets, it also includes a neck pillow, eye mask, gloves, footrest, bottle opener, blanket, earphones and water bottle. Available in multiple colours, it is offered in several styles such as a sleeveless pullover, sweatshirt, windbreaker and bomber jacket. The jacket was designed by an American couple who, after getting married in 2013, spent several years in a long-distance relationship. Long plane journeys between Chicago and San Francisco led them to create a unique jacket that includes everything travellers need. One of the first versions of the Baubax, launched in 2015, has already been purchased by more than 200,000 people.

FUNDS RAISED
\$9,192,000

AVAILABILITY
AUGUST 2018

SCANS

health

ROCHE IS BETTING ON BIG DATA

Roche acquired US-based Flatiron Health for \$1.9 billion. The big-data specialist collects thousands of data for oncology clinics and cancer research centres. This acquisition will provide the Basel firm with a huge real-world database, which will help promote developments in new cancer treatments. It will also solidify Roche's position as a market leader in oncology, which already accounts for some 60% of its revenue. Roche is threatened by the fact that several important patents (Avastin, Herceptin, Rituxan) will expire between 2018 and 2020. —◇◇◇ ROG



“When we talk about national infrastructure, we often discuss roads and railroads but as a matter of fact mobile infrastructure is equally as important”

Ericsson CEO
Börje Ekholm.

transport

ELECTRIC LORRIES ARE HERE



Tesla's electric lorry is expected to be marketed starting at \$150,000.

TESLA MOTORS / AFP

Recent battery innovations have lowered the price of electric vehicles and increased the range before recharging. This progress has led to the development of electric lorries designed to transport goods over long distances. Tesla has promised to have its lorry on the roads by 2019 – it has

an 800- (\$180,000) and 480-km range (\$150,000). Daimler is also working on a similar vehicle and has already begun selling small electric lorries to UPS. But large-scale adoption will be made difficult by the weight of these lorries and the lack of charging stations outside cities. —◇◇◇ TSLA —◇◇◇ DAI

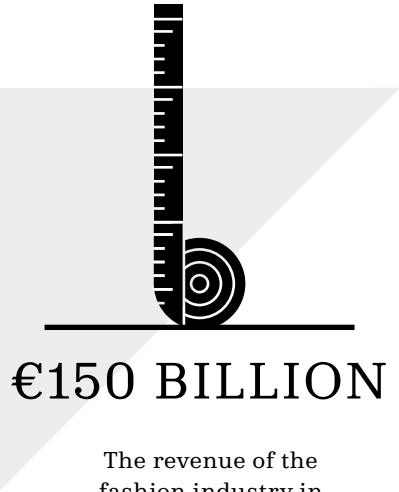
tyres

PIRELLI IS DREAMING OF CHINA



CLEMENT MARIN / AFP

In autumn, Italian tyre manufacturer Pirelli went public on the Italian stock exchange and was the biggest European IPO of the year. As a result, it gained autonomy from China's ChemChem, which acquired it in 2015. But that doesn't mean it's abandoning the East. Far from it. Pirelli hopes to gain a part of this immense market of a growing middle class that dreams of buying a car. At the moment, its revenue – up 7.6% in 2017 – comes mainly from Europe (41.7%) and is boosted by the high-added-value segment. —◇◇◇ PIRC



€150 BILLION

The revenue of the fashion industry in France, according to the French Institute of Fashion (IFM). This figure is higher than that of the country's aeronautics and auto industries.

THE FLOP

Snapchat loses some friends

In early February, social network Snapchat released its latest update. The goal was to group all snaps, stories and messages from friends together in one place. But the update was quickly criticized: online petitions called for reverting to the previous version and Snapchat was the subject of an avalanche of negative tweets and incendiary blog posts. Even

stars got in on the action – shortly following the update, Kylie Jenner tweeted: “Does anyone else not open Snapchat anymore? Or is it just me...it's really sad.” A significant number of Snapchat users actually began to boycott the platform. Consequently, the social network saw its share price fall 6% over a few weeks, losing \$1.3 billion.

—◇◇◇ SNAP

nutrition

CHINA IS CRAZY FOR POWDERED MILK



In 1867, Henri Nestlé developed lactose flour in Switzerland as a substitute for breast milk.

NESTLÉ

The end of China's one-child policy has made powdered milk sales skyrocket. And following a scandal involving local products contaminated with melamine, Chinese parents are preferring foreign brands. Nestlé dominates this segment with a 17% market share, but didn't see a large increase in revenue in 2017. Danone, however,

saw powdered milk sales increase by 10% last year. Its market share doubled over the last five years to reach 11%, due in part to its focus on e-commerce. Smaller brands are also benefitting from the boom, such as Australia's A2 Milk, which saw its Asia revenue increase 204% in the second half of 2017.

—◇◇◇ NESN —◇◇◇ BN —◇◇◇ A2M

hospitality

PRIVATE CONCIERGE EVEN AFTER YOUR HOLIDAY



Sébastien Bazin,
CEO of AccorHotels.

ERIC PIERMONT / AFP

To compete with peer-to-peer rental platforms like Airbnb, hotel group AccorHotels is taking a high-end approach. Its Onefinestay service offers exceptional lodgings and, from March, will be accompanied by a private concierge service called Higher Living. Onefinestay customers will have access to the service for an entire year after their stay. It offers various services such as private and professional car reservations, fitness coaches, at-home chefs, and on-demand shopping. Airbnb is also going upmarket with its new Lux offer, which includes 4,000 lodgings from the Luxury Retreats portfolio the company acquired last year. —◇◇◇ AC



4.4 MILLION

The number of firearms imported by the United States in 2017. More than half of these rifles and pistols came from Europe. The imports benefitted companies such as Austria's Glock, Germany's Sig Sauer and Italy's Beretta.



“We all know that demand for copper is going to go up [...] [and] there’s been a total under-investment in new copper mines”

Glencore CEO
Ivan Glasenberg.

IPO

IN A TOUGH SPOT, SWISSPORT GOES PUBLIC

Swissport, global leader in airport services, will go public on the Swiss stock exchange in 2018. Acquired in 2015 by Chinese conglomerate HNA, the company will use the IPO to save it from the financial troubles of its parent company. Heavily in debt and faced with liquidity strains, HNA is struggling to raise cash in international

markets. To receive loans, the company went so far as to use Swissport shares as a guarantee before even completing the acquisition. The Swiss company was forced to not pay its bonds to its own creditors. Gategroup, a Swiss airline catering company, was also acquired by HNA and also seeks to go public on the Swiss exchange.

smartphones

GOOGLE PUTS ITS MARBLES IN ASIA

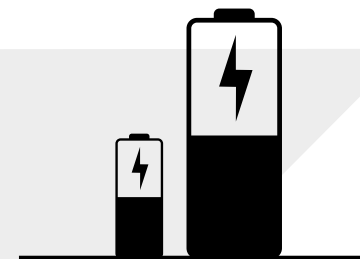


Google CEO Sundar Pichai at the World Internet Conference in Wuzhen (China), in December 2017.

ALY SONG / REUTERS

Google spent \$1.1 billion to acquire a team of engineers from Taiwan's HTC, as well as some of its patents. The deal will increase the US giant's expertise in smartphones. HTC already produces Google's Pixel devices. Google also recently opened an artificial-in-

telligence lab in Beijing, as well as an office in Shenzhen, China's tech hub. This series of investments is a sign of Google's desire to increase its presence in Asia, which has the greatest growth potential in terms of the number of smartphone users. — GÖÖG



\$12,000

The price of one metric ton of lithium. In 2008, the raw material was worth only \$6,000 a metric ton.

The price took off with developments in the electric-vehicle industry, as lithium is used to manufacture batteries for electric cars. Lithium is mainly found in China, Chile and Australia.

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Audi Vorsprung durch Technik



the figure

NOBUAKI KURUMATANI

Sinking Toshiba gets a new captain

Title
CEO of Toshiba

Age
60

Nationality
Japanese

Nobuaki Kurumatani is now at the helm of Toshiba as the first outsider to become CEO of Toshiba in 50 years. An economist by trade, he made his career in the banking industry. He was previously the vice president of Sumitomo Mitsui Financial Group and the Japanese director of venture capital firm CVC Capital Partners. He's also on Sharp's Board of Directors. He takes on his new role as CEO during

a critical time for the Japanese conglomerate: Toshiba has just experienced an accounting scandal, and its nuclear subsidiary Westinghouse in the United States has declared bankruptcy. These events forced Toshiba to sell its most profitable division, which manufactures computer chips, for \$18 billion. But this isn't Kurumatani's first rescue mission: he played a key role in the financial bailout of nuclear-power-plant operator TEPCO after the Fukushima disaster in 2011.

— 6502



the country

SPAIN

Revenge of the Iberian bull

Long considered one of the poorer members of the Eurozone, Spain has made a remarkable comeback over the past three years. Its GDP grew more than 3% in 2017, for the third year in a row. Destroyed after the real estate bubble burst in 2008, the economy sunk by 8% and unemployment skyrocketed to 27%. But increased momentum in do-

mestic spending – which began in 2013 – as well as tourism, exports and real estate, has put the Spanish economy back on the right track. In the last two years, Spaniards purchased 2.4 million new cars. In 2017, they spent 30% more at restaurants than they did in 2013. This year, wages are expected to increase for the first time in six years.

Population
46.5 million

Per capita GDP in 2017
\$28,212

Growth in 2017
3.1%

Main industry sectors
agriculture,
tourism,
construction,
renewable
energies



Expected to be on the roads in 2019, the Cruise AV was designed for total safety, without a driver, steering wheel or pedals.

the innovation

CRUISE AV

A fleet of electric robotaxis

General Motors has just unveiled Cruise AV, a self-driving electric taxi. The futuristic vehicle does not have pedals nor a steering wheel, and its doors open and close automatically. GM expects the car to start transporting passengers in several US cities by 2019 if it gets permission from the Department of Transportation. Developed with the expertise

of AI start-up Cruise (acquired by GM in 2016 for more than \$1 billion), this self-driving car is designed for mass production, which would reduce the cost of its various sensors. With the launch of the robotaxi service – at least 2,600 vehicles – GM hopes to compete with other more expensive ride-hailing services such as Uber. By not needing a driver, rides will be

cheaper: a cost price of \$1 per mile (1.6 km) compared with \$2.50 per mile for current services. GM believes that the market for such an offer is worth \$1.6 trillion in the US alone. It plans to expand this service to transporting goods. — GM

Company
General Motors

Launch
2019

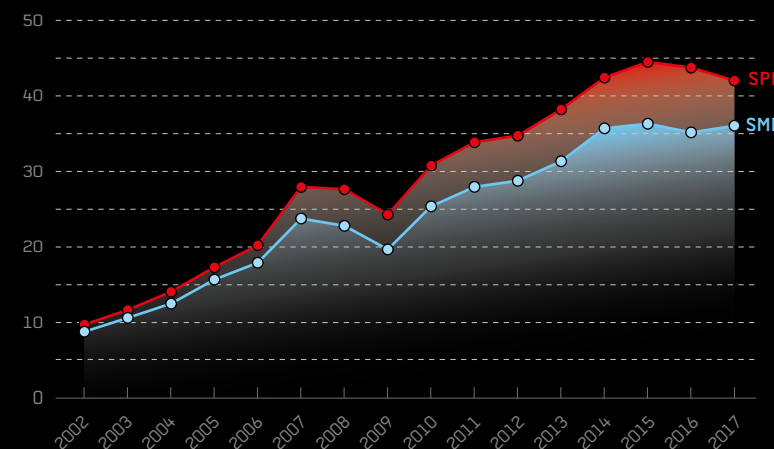
Cost
not shared

GENERAL MOTORS

DIVIDENDS

Swiss companies pamper their shareholders

In billions of Swiss francs



Over the past 15 years, the dividend distribution rate has increased significantly among Swiss companies. Here's an overview.

2017, ANOTHER PROSPEROUS YEAR

In 2017, SMI companies, i.e. the 20 largest Swiss capitalisations, paid out more than 36 billion Swiss francs in dividends to their shareholders. The total amount for all companies on the Swiss exchange (SPI) was more than 42 billion francs.

DIVIDEND YIELD

TOP 20 ON THE SWISS EXCHANGE*

Bellevue Group	6.37%
St Galler Kantonalbank	6.20%
Cembra Money Bank	6.00%
Zurich Insurance	5.91%
Gam	5.51%
Compagnie financière	5.49%
Swiss Re	5.33%
Gavazzi Carlo	5.19%
Walter Meier	5.14%
Credit Suisse	4.79%
Mobilezone	4.67%
Basler Kantonalbank	4.62%
Intershop	4.52%
Energiedienst	4.51%
Sunrise	4.49%
Bank Cler	4.29%
Swisscom	4.24%
Helvetia	4.19%
EFG International	4.06%
Bâloise	4.05%

*Dividend yield is the return on investment for a stock (20.03.2018)

CASH PAYMENTS

BEST GROWTH OF THE YEAR*

Bobst	+ 52.9%
Swissquote	+ 50.0%
Daetwyler	+ 36.4%
Schindler	+ 33.3%
Barry Callebaut	+ 29.0%
Bossard	+ 27.3%
Inficon	+ 25.0%
Comet	+ 25.0%
Swiss Life	+ 22.7%
Also	+ 22.2%
Dormakaba	+ 21.4%
Sunrise Communications	+ 20.1%
Partners Group	+ 20.0%
Siegfried	+ 20.0%
Emmi	+ 18.6%
Temenos	+ 18.2%
Julius Baer	+ 16.7%
Sika	+ 15.6%
Fischer	+ 15.0%
Belimo	+ 13.3%

*Regular dividends + return of capital



AIR

LAND

SEA

NAVITIMER 1



NAVITIMER 1 B01 CHRONOGRAPH 46
MANUFACTURE CALIBER B01
CHRONOMETER-CERTIFIED

BREITLING BOUTIQUE
GENEVA • LAUSANNE • ZERMATT
ZURICH

Business is heating up for Arbonia

After major restructuring, the Thurgau-based company and industry leader in Europe, is back in the black.

BY MARTIN LONGET

“One could say that Arbonia is like a sick person who has undergone treatment. Now, the patient is feeling better but is still recovering.” Martin Flückiger, analyst at Kepler Cheuvreux, doesn't mince words: Arbonia, the Swiss heating, door and window specialist, is making a comeback. After losing 177.1 million Swiss francs in 2015, the Thurgau-based company posted a net profit of 46.4 million in financial year 2017, after essentially breaking even in 2016.

“The latest figures are rather good. The adjusted EBITDA exceeded market expectations, as did the company's organic growth,” said Flückiger. “It's the first time since 2011 that Arbonia has seen organic growth over 1%.” But this remarkable comeback doesn't come without its concessions. Window production at its Villeneuve (Vaud) and Altstätten (St. Gallen) locations was relocated to Slovakia in 2016.

In total, Arbonia has moved 400 jobs to Eastern Europe since 2015,

mainly to factories in Germany, Czech Republic and Poland. Simultaneously, Arbonia sold several assets, including its coating sector, in order to focus on four business lines: heating (radiators, ventilation, air conditioning), sanitary equipment, windows and doors. “Without this radical shift, Arbonia just wouldn't exist today,” said Alexander von Witzleben, the group's CEO.

“Without this radical shift, Arbonia just wouldn't exist today”

Alexander von Witzleben, the group's CEO

It would have been the end of a long history, as Arbonia's roots go back to 1874. According to the company's history, the two founders wanted to “provide people with heating solutions in the most direct sense of the term”. Through various acquisitions, notably its counterpart Looser Holding in 2016, Arbonia diversified and became a European leader in the door, window and heating industry.

Today, the company, which has close to 7,600 employees around the world, is also the top seller of radiators in Germany and Switzerland, of windows in Switzerland and Poland and the number two in the sale of doors in Germany. Arbonia is also targeting the Russian market. It just began construction on a new radiator production site in Russia, expected to open in 2019.

“Currently, 90% of our recovery plan has been achieved and we hope that our 2018 figures will further reflect the work we've done,” said von Witzleben. The company is counting on an organic sales growth of 3% in 2018 and 3.5% in 2019, compared to 2.6% in 2017. But to achieve its

target, Arbonia must face stiff competition, notably from Internorm in Austria. This makes sale prices all the more important, especially for basic models.

“Although margins are progressively picking up, profitability and capital efficiency remain historically low,” said Flückiger of Kepler Cheuvreux. “Furthermore, with the rise of the euro and salaries in key markets, Arbonia must face an increase in payroll expenses, preventing it to take full advantage from relocating some of its production sites.” Operating in countries with historically low unemployment rates, Arbonia is predicting a significant increase in salaries in

2018 that could reach up to 6.6% in Czech Republic.

Moreover, the company is struggling to keep up with demand, particularly in Germany, where demand for doors exceeds current production capacities. “In 2018, our priority is to increase capacity by investing in existing factories,” said von Witzleben, who states that investments during the 2016–2019 period will reach as much as 400 million Swiss francs.

Despite encouraging numbers in 2017, Arbonia shares aren't expected to shoot up in 2018: “We're not expecting the share price to change that much from its current price between 17 and 18 Swiss francs in the

BY THE NUMBERS

1874

Year Franz Josef Forster started a coppersmith's shop, which would become today's Arbonia Group.

1,245

Arbonia's 2017 revenue in millions of Swiss francs.

7,600

Approximate number of employees.

41%

Percentage of the group's revenue from Germany in 2017.

An Arbonia employee checks the quality of a radiator at the Arbon production site in Thurgau (2014).



KEYSTONE

coming 12 months,” said Flückiger. “Based on 2017 results, we maintain a hold rating with a target price of 17 Swiss francs.”

But Arbonia will press on with its expansion plans. “The industry will continue to concentrate over the coming years. You can expect to see Arbonia making investments in companies that have interesting business lines,” said the German CEO, though he states that the group isn't interested in the heating division of the company “whose name starts with Z”. That would be Zehnder, Arbonia's main competitor in Switzerland. — ARBN

ANALYSIS

THE VIEWPOINT OF SPECIALISTS

FOCUS

World Cup sponsoring: behind the scenes

Companies who sponsor major sporting events see major fluctuations in their stock price. A closer look.

BY BERTRAND BEAUTÉ

Hyundai, Budweiser, McDonald's... As you watch the World Cup matches starting 14 June in Russia, you might ask yourself how much these companies spend to be an "official sponsor". The answer: a lot. For the 2014 World Cup in Brazil, FIFA's 22 official sponsors paid a grand total of \$1.4 billion, or an average of \$63 million per company.

Is it worth it? To find out, researchers carefully analysed market reactions when sponsorship announcements were made for major sporting events by listed companies between 1998 and 2008. Their results, published in May 2017 in the *Journal of Advertising Research*, show that overall share prices increase in the days following the announcement

of this type of partnership. In other words, sponsoring a sporting event such as a World Cup has a positive effect on markets.

"Exposure of that magnitude using traditional marketing methods would be even more expensive"

Emmanuel Bayle, associate professor at the Institute of Sport Sciences (SSP) at the University of Lausanne

However, the researchers noted that while this effect was significant in 1998, it is becoming weaker over time. In 2008, at the end of the

study, the market effect was practically zero. Why? The cost of sponsorship. For example, companies paid \$866 million to sponsor the Olympic Games in Turin and Beijing (2006 and 2008), but \$663 million for the games in Salt Lake City and Athens (2002 and 2004) and "only" \$579 million for Nagano and Sydney (1998 and 2000). The prices continue to rise, which doesn't help reassure investors!

"Because of increased fees, shareholders are less likely to believe that sponsoring major sporting events can strengthen the brand's value and generate cashflow more effectively than other marketing strategies," said Marc Mazodier, associate professor of marketing

BRUNO FAHY / AFP



Consumers don't always remember who the official sponsors are of big events, such as the World Cup.

at Zayed University in Abu Dhabi. "From their perspective, the return on investment isn't very obvious."

A study published in the *Journal of the Academy of Marketing Science* stated that in 2010, the markets generally had a negative reaction to the 300 sponsorship announcements for sporting events that year. But if investors don't think sponsorships are effective, why are companies rushing to sponsor the World Cup and other Olympic Games?

"The main reason is exposure," said Emmanuel Bayle, associate professor at the Institute of Sport Sciences (SSP) at the University of Lausanne. "Huge sporting events have very large audiences. Even if

sponsor fees are quite high, studies have shown that exposure of that magnitude using traditional marketing methods would be even more expensive."

Jean-Pascal Gayant, economics professor at Le Mans Université and author of the book *Economie du sport*, agrees. "Nothing compares to the media impact of an event such as the World Cup. For an entire month, every media outlet and all conversations are talking about the same thing." More than 4.8 billion spectators followed the 2012 Olympics in London and approximately 3.2 billion watched the World Cup in Brazil (2014).

For globally recognised brands such

as Coca-Cola and Nike, this media exposure maintains their status quo. "The top brands are associated with the top sporting events," said Bayle. But sponsoring a sporting event can turn into a significant advantage for up-and-coming companies in particular. For the 2018 World Cup, FIFA enticed four new Chinese players: TV manufacturer Hisense, dairy group Mengniu, telephone company Vivo and conglomerate Wanda.

"With World Cup sponsorship, these companies seek to gain legitimacy and respect at a time when they want to expand internationally," said Mazodier. "And this can work, as long as sponsorship is followed by other marketing tactics." >

Lionel Messi was sentenced to 21 months in prison in 2016 for tax fraud in Spain. It was bad news for his sponsors.

Betting on a sports star is a risky move

It is risky for brands to partner with a sports star. A 2013 study published in *Management Science* stated that in the two weeks following the Tiger Woods sex scandal, the entire portfolio of his sponsors fell 2% on the market. The biggest losses were felt by his three main sponsors (Electronic Arts, Nike and Pepsi Co), which lost 5.8% of their market capitalisation. This is why some companies prefer to sponsor events rather than particular athletes. "This way, companies are also associated with the celebration aspect and the fans," said Emmanuel Bayle, associate professor at the Institute of Sport Sciences (SSP) at the University of Lausanne. "From this perspective, they are sure to profit." But these companies benefit less from specific wins. A 2017 study showed that in the five days following an athlete's victory in an individual sport, the share price of the athlete's clothing sponsor (clothes and shoes) increases by 0.5% (0.33% for a tennis championship, 0.45% for running and 0.7% for golf). But sponsors of the second-place athletes don't see the same jump in price. Winner takes all!

Experts believe that a company must spend three times the amount of the sponsorship on traditional marketing to make the investment worthwhile. According to numbers from the *Financial Times*, Vivo spent €400 million to associate its name with the 2018 and 2022 World Cups. If the Chinese company wants to maximise its brand image, it must then invest €1.2 billion in traditional marketing in addition to the sponsorship. And if they don't? "Consumers might associate another brand with the event," said Marc Mazodier.

It's not just a theory. In 2000, Ansett Australia was the official airline of the Olympic Games in Sydney. But its major rival Qantas stole all the limelight. In a smart move, Qantas supported Australia's star Cathy Freeman

and totally eclipsed Ansett Australia, which went bankrupt a year later.

"Studies show that consumers don't always remember who the official sponsors are for major events," said Mazodier. "Here's a test: which car manufacturer sponsors the World Cup? Off the cuff, many people may say Toyota, but it's actually Hyundai... Brands must supplement their partnership with traditional marketing, communications tactics and social media strategy."

And to convince their investors, "listed companies have to answer to their shareholders for any negative consequences of sponsoring a sporting event," warned the researchers in the *Journal of Advertising Research* study. "Event organisers also need to lower sponsorship fees". ▴

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Standard:

- 4x4 with torque vectoring
- 8-stage automatic transmission



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DOSSIER

CANNABIS: THE GREEN RUSH

Just a few months before Canada legalises recreational marijuana, the global market is booming.

BY BERTRAND BEAUTÉ

- 34. Infographic: the world map of cannabis
- 36. Interview with Sébastien St-Louis, CEO of Hydrothecary
- 40. Nine rising companies
- 48. Cannabis, a superdrug?
- 52. A women-led industry?
- 53. Cannabis is still a drug
- 54. Cannabis for dinner
- 58. BioCan, the heavyweight of Swiss cannabis

Is the cannabis ban, a global consensus for almost a century, starting to go up in smoke? After Uruguay and several US states, Canada will legalise recreational cannabis in July 2018. It's a fundamental shift. "For years, the production, sale and consumption of marijuana were intensely criticised across the globe," said Christian Ben Lakhdar, economics professor at University of Lille 2. "Now we're seeing a complete reversal: more states are legalising cannabis use for medicinal and recreational use. And this phenomenon is occurring around the world. It opens the door to a completely new market, one >

Dossier prepared by
Bertrand Beauté,
Martine Brocard,
Stanislas Cavalier,
Ludovic Chappex,
Blaise Duval
and Martin Longet

that is undeniably attractive for investors.”

The outlooks are indeed tempting. According to a study published in January 2018 by the consulting firm Arcview, the sale of cannabis in US states where it is legal will generate \$40 billion in revenue in 2021, compared to \$16 billion in 2017. Close to 100 small local producers share the market. But none of these companies are on the stock market, since cannabis is still illegal in the United States at a federal level.

“Investors are very passionate about this industry”

Martin Landry, analyst at GMP Securities

In the meantime, Canadian companies such as Canopy Growth, Hydropothecary and Aurora are taking the lion's share of the market (read features on p. 40). “By legalising medicinal marijuana about 15 years ago and recreational marijuana in July, Canada has become the number one producer of legal marijuana worldwide,” said Martin Landry, analyst at GMP Securities in Montreal. “On the global market, eight of the 10 largest companies that grow cannabis are Canadian. They are far ahead of any international competition.”

CANADA: TOP GLOBAL EXPORTER

Instead of limiting themselves to the domestic market, Canadian companies have started to export their production to all places where medicinal mar-

ijuana is legal (see infographic on p. 34). In May 2017 for example, Aurora announced the acquisition of German distributor Pedanios in order to sell its medicinal cannabis in Germany. Canopy Growth has also been selling its products in Brazil since 2016. Other countries, such as Australia, South Africa, Spain, Poland and Denmark are either already supplied with Canada's marijuana or soon will be. “We don't export to the United States, since it is still illegal on a federal level. But we're going to sell to all countries where it will become legal,” said Pierre Debs, Canopy's director for the European market. “We aren't limiting ourselves when it comes to exports.”

“Canadian companies are targeting European countries that are starting to legalise medical marijuana but don't have the local production capacities in place. Germany is particularly appealing because medical marijuana is reimbursed by the national healthcare system,” said Landry. “Of course, competition will come. But I think the advantage of being the first company on the market will last for several years. In five years, there will no longer be eight Canadian companies in the top 10, but the biggest global producer will still be Canadian.”

By then, the global cannabis market is expected to be worth between \$100 and \$200 billion dollars per year, according to various estimates. Medical marijuana will make up half the revenue, and the other half will come from recreational use. According to the Canadian national statistics agency, 4.9 million Canadians have spent close

to \$4.5 billion to purchase cannabis in 2017. But only 10% purchased it legally for health reasons. The other 90% illegally purchased the drug for recreational use. With the legalisation of recreational use in July 2018, much of this black market is expected to be taken over by medicinal marijuana producers.

According to a 2016 study by Deloitte, sales of pure cannabis could reach more than \$6 billion yearly after legalisation, not including revenue from medicinal marijuana. This is a godsend for the small universe of green gold producers, in which transactions are increasing. In October 2017, for example, US company Constellation Brands (which dis-

tributes Corona beer) announced that it acquired a 9.9% share in Canopy Growth for \$191 million (see p. 54).

On 24 January 2018, Aurora Cannabis acquired CanniMed Therapeutics for \$850 million. Simultaneously, the capitalisation of the biggest players is booming. On the Toronto stock >

183 million
The number of people globally who consumed cannabis illegally in 2014, which makes up a black market estimated at \$300 billion yearly.

LINGO

DIFFERENT TYPES OF LEGALISATION

RECREATIONAL CANNABIS

In countries that have completely legalised marijuana, like Uruguay and Canada in July 2018, cannabis can be freely sold under certain conditions (age, quantity, etc.) similar to tobacco and alcohol.

MEDICINAL CANNABIS

In countries where medicinal use is legal, doctors can prescribe the plant in its natural state. Once prescribed, patients either smoke or consume it in another form (inhalation, infusion) as treatment for various illnesses such as pain, spasms and nausea.

MEDICINE MADE WITH CANNABINOIDS

Like willow, which contains salicylic acetic acid (known as aspirin), the cannabis plant has many active molecules called cannabinoids. Pharmaceutical companies extract these molecules to develop treatments such as Sativex, authorised in approximately 20 countries including Switzerland and France.

exchange, Canopy's share price tripled over one year, while Aurora's increased four-fold and Hydropharmacy's shares doubled.

"Investors are very passionate about this industry," said Landry of GMP Securities. "But when a share price goes up 30% or 50% in a single month, you have to be very careful." For some analysts, a financial bubble has started to grow in the cannabis market. And it could burst. "It's a new, dynamic,

flourishing industry that will last. But it's also not the market of the century like petrol was," said Ben Lakhdar. "It's also not risk-free for investors."

The first risk is if supply quickly exceeds demand. In Canada, the Ministry of Health gave more than 90 production licences to companies, more than 10 of which are listed on the stock exchange. And they're all preparing to massively increase their production in order to meet the supposed sharp upward trend in

demand once recreational use is legalised. This could be cause for concern if this emerging, speculative industry is producing too much.

"In the short term, we're expecting a shortage of legal cannabis in Canada. Companies will be able to obtain attractive margins. But by 2020, when new factories will be fully operational, production capacities will exceed demand," said Landry. "This will put pressure on sales prices and small companies

A WELCOME TAX BOOST

In Colorado, where sales were first legalised in 2014, the cannabis market created 18,000 full-time jobs in three years. Moreover, the new industry brought in nearly \$700 million in additional tax revenue for the state, not including an unprecedented increase in tourism. "The main benefits of legalisation will go to states," said Christian Ben Lakhdar, economics professor at University of Lille 2. "They will no longer have to finance police detail allocated to ineffective patrolling, tax revenue will increase and dealing areas will decrease."

But will this push former cannabis dealers to move

to selling harder drugs like cocaine and heroin? "The demand for these drugs is much lower," said Ben Lakhdar. "Furthermore, the additional tax revenue can go to helping neighbourhoods ravaged by drug trafficking."

Oakland (California) for example, decided to allocate half of the permits to sell marijuana to people who were convicted of a marijuana-related crime during the years it was illegal, as well as to people living in a neighbourhood with a high number of arrests in the past few years. In short, the city is providing a way for these people to return to society thanks to the green gold business.

will struggle to keep up. In this context, industry consolidation appears to be unavoidable." Sébastien St-Louis, co-founder and CEO of Hydropharmacy, agrees. (Read his interview with *Swissquote Magazine* on p. 36).

WHEN REPRESSIVE POLITICS FAIL

Moreover, Canadian producers can only grow internationally if local laws change, and they remain very restrictive in most of the world. Currently, only 1.4% of the global population lives in a place where selling marijuana is legal. This demonstrates the enormous potential of the market, as well as its current limitations. "All countries will closely watch what happens in Canada when recreational marijuana is legalised

this summer," said Pierre Debs of Canopy Growth. "I believe that when other countries see that Canadian society isn't falling apart and the economy is doing well, arguments in favour of keeping cannabis illegal won't hold water anymore."

Christian Ben Lakhdar, author of *De l'intérêt de sortir le cannabis des réseaux criminels*, agrees: "On a global level, banning cannabis was a painful failure. Repressive politics never stopped drug trafficking and they were very expensive for countries to enforce. That's why several countries are thinking of legalising marijuana. It's a fundamental shift that could also have great benefits from a tax perspective." ▲

**66,000,000
kilos**

The annual global
consumption of
cannabis in 2014.

SEAN KILPATRICK / NEWS.COM



Based in Smiths Falls, Ontario, Canopy Growth operates over 600,000 square feet across seven production sites.

LEGALISATION

THE WORLD MAP OF CANNABIS



Countries where recreational cannabis has been legalised

The sale of cannabis is officially authorised.

- Canada (as of 01.07.2018)
- United States
 - Alaska
 - California
 - Colorado
 - Maine
 - Massachusetts
 - Nevada
 - Oregon
 - Washington
 - Washington D.C.
- Uruguay



Countries where recreational cannabis has been decriminalised

The consumption and possession of small quantities of cannabis will not result in criminal charges.

- | | | | |
|------------|----------------|------------------------|----------------|
| Germany | United States | Georgia | United Kingdom |
| Argentina | North Carolina | U.S. Virgin Islands | Russia |
| Australia | Connecticut | India (certain states) | Slovenia |
| Austria | Delaware | Israel | Switzerland |
| Belgium | Illinois | Italy | Ukraine |
| Belize | Maryland | Jamaica | |
| Bolivia | Minnesota | Latvia | |
| Brazil | Mississippi | Luxembourg | |
| Chile | Missouri | Malta | |
| Colombia | Nebraska | Mexico | |
| Costa Rica | New Hampshire | Moldova | |
| Croatia | New York | Netherlands | |
| Denmark | Ohio | Peru | |
| Ecuador | Rhode Island | Poland | |
| Spain | Vermont | Portugal | |
| Estonia | Finland | Czech Rep. | |



Countries where recreational cannabis is illegal

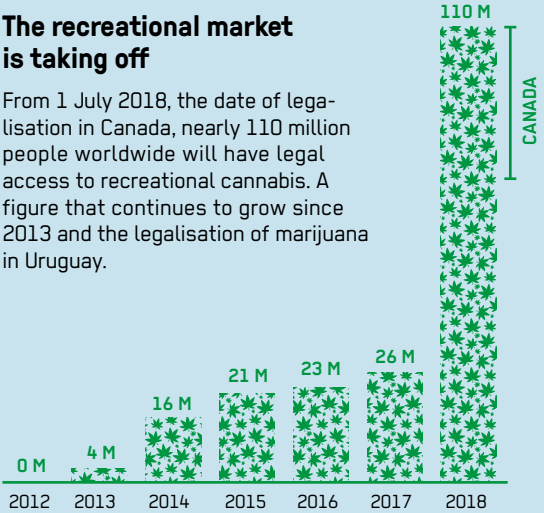
Countries where medicinal cannabis is legal*

- | | |
|--------------------------------|-------------|
| Germany | Italy |
| Australia | Jamaica |
| Canada | Netherlands |
| Chile | Peru |
| Cyprus | Poland |
| Colombia | Czech Rep. |
| United States (certain states) | Sweden |
| Israel | Switzerland |
| | Uruguay |

* This list does not include countries where only certain specific cannabis-based pharmaceuticals are authorised.

The recreational market is taking off

From 1 July 2018, the date of legalisation in Canada, nearly 110 million people worldwide will have legal access to recreational cannabis. A figure that continues to grow since 2013 and the legalisation of marijuana in Uruguay.



“TWO OR THREE MULTINATIONALS WILL DOMINATE THE MARKET”

Canadian company Hydropothecary is at the forefront of developing new products and the CEO sees a radiant future for the industry.

BY LUDOVIC CHAPPEX

HYDROPOTHECARY

Vaporizers, dried flowers, cannabis powders and oils... Hydropothecary, based in Quebec, has become a market leader with its premium marijuana-based products. CEO Sébastien St-Louis, enthusiastically answered our questions.

Starting 1 July of this year, recreational cannabis will be legal in Canada. Do you think this will spread to the rest of the world?

The cannabis phenomenon is effectively just getting started. Canada paved the way, but we'll soon see other countries like Denmark, Germany and Australia follow suit. I expect a timing similar to that seen in Canada, namely four or five years of medicinal legalisation before total legalisation. And I would say eight to 10 years before we'll see legalisation at the federal level in the United States.

Are you worried that the United States might take a step backwards, with Washington imposing a strict marijuana ban at the state level?

No, I don't think the current movement will be stopped. There could be up and down periods, similar to market fluctuations, but legalisation seems inevitable at this point.

Canada will be a good example to consider, especially after increased revenue comes in from taxes.

Are Canadian companies at an advantage?

It's really simple: even if there's a legislative change in the United States in the next year, Canadian companies already have a decisive advantage. They have experience in the market and a bigger cashflow. Newcomers will find themselves in a start-up situation competing with established companies. The most promising future companies will probably be acquired by Canadian companies. My prediction is that two or three multinationals will ultimately dominate the cannabis market. And we intend to be one of them. Canopy Growth has a good chance of being the other.

But, excluding financial obstacles, what's stopping a newcomer from copying the way you do things?

It all depends on the business you're talking about. Obviously, growing cannabis isn't that complicated. But our business model isn't just for growing. We don't just grow the plant; we transform it to be used in our various products. Today, we are without a doubt a technological manufacturing company. Innovation >

TECHNOLOGICAL ENTREPRENEUR

Until the summer of 2013, there was no reason for Sébastien St-Louis to take an interest in cannabis. The CEO of Hydropothecary, who has an MBA in finance, was running a real estate company at the time. Prior to that, he was CFO of an auto parts company after spending a few years working at a bank. St-Louis was only 17 when he founded his first start-up, a consulting firm specialising in 3D simulations, and 20 when he bought his first rental property. The turning point for this entrepreneur was when Canada legalised medicinal marijuana. Now aged 34, Sébastien St-Louis recalls his early days as a CEO: "I was too young at the time. To combat my lack of experience, the first thing I did when I started Hydropothecary was to build a very strong team. I surrounded myself with experts in marketing, law and finance. We even hired a former health minister."



The company's crop acreage should reach 120,000 m² by December 2018, allowing the production of 100,000 kg of dried cannabis per year.

HYDROPOTHECARY

and R&D aren't easy to implement in this industry, and neither is the approval and authorisation you need to put new products on the market.

Due to legislative restrictions, Hydropothecary currently specialises in medicinal products only. What will be the impact of recreational legalisation on your business and your commercial strategy?

All market studies have said that legalisation will have a huge impact on the industry. Sales of medicinal products will be replaced 90% by recreational products.

Once this market is legalised, we can reach a larger customer base by adapting our product lines.

I can imagine that many industrial sectors will be impacted by legalisation...

That's correct. We often talk about the tobacco, alcohol and pharma industries. In the purely recreational sector, the cannabis-infused beverage market will explode. One of the advantages of these drinks is that there are no hangovers the morning after... But other industries will also be affected, such as cosmetics and natural products, and

on a larger scale, the food industry.

“The cannabis-infused beverage market will explode”

At Hydropothecary, we're currently developing cannabis drinks with the intent of stimulating appetite (ed. note: using the CBD molecule found in cannabis) as well as ointments for sport-related use.

How do you develop new products?

We have a team of about 30 in-house engineers and chemists who focus partly on R&D. We also collaborate with external scientific consultants.

What will be the next big innovative products expected on the market?

One of the biggest technical challenges is to make THC water-soluble. Once that is solved, the door is wide open to a whole range of new products. The idea is to use the active molecules of THC but without the cannabis taste. One example is to create drinks with a low dose of THC that are subsequently less psychoactive.

Do you expect to sell your expertise to food and drink industry giants? In October, US company Constellation Brands, owner of Corona, took a 10% share in your competitor Canopy Growth...

These types of alliances are clearly likely to multiply. Big drink brands will not only become our clients, but also our partners.

Many investors believe that cannabis is still an uncertain market. What arguments would you give to reassure them?

In the short term, let's say in the next 18 months, cashflow levels at the biggest companies are set to increase significantly, which is a guarantee of survival. Hydropothecary alone has already pre-sold 20,000 kilos of cannabis to the Quebec government, which is the largest order ever recorded. And that's just the beginning in only one province... We're expecting volume to increase substantially.

Enough to generate a large profit?

Yes. We can do a quick calculation: the vast majority of our products will be sold for around \$7 per gram,

we know there will be about a \$1 tax. We also know that our government partners won't take a margin of more than 50%. That ensures we make about \$3 per gram. Since our current costs are less than \$1 per gram, we make \$2 as profit. A cautious investor could say that our long-term profits will be close to \$1 per gram, but objectively the \$2 range seems more realistic to me, especially when you take into account forthcoming economies of scale. Our goal is to produce 100 million grams per year. If we take a conservative average, that would mean \$150 million in profits per year. If you look at it that way, Hydropothecary is still a bargain, with its capitalisation at \$700 million.

However, black market actors will probably reduce their margins to try and compete by bringing prices down...

We are well aware that the black market will not vanish overnight. But we are optimistic: the officially supported rate of 7 dollars per gram is below the current black market price. This is a brand new industry, which implies that there are some unknowns. What is important is to remain adaptable.

Do you personally test Hydropothecary's products?

Yes, I am a consumer. I have a medical prescription. On Friday nights, I would rather have a dose of our menthol Elixir spray than an alcoholic beverage.

What is your opinion of the CBD market in Switzerland?

It's a very interesting type of legalisation. It's a start. We could quite easily imagine working with existing Swiss SMEs in the future, knowing that they already have a distribution network once cannabis is legalised in Switzerland. We'll have a complete portfolio of products to offer. ▲

CANADA: LAND OF EXPERIMENTATION

While recreational cannabis will be legalised starting 1 July in Canada, the change won't occur exactly the same way across the country. Each province has set its own regulations for selling marijuana, and some provinces are combining the private sector with government structures. This is the case in Quebec, where the Société québécoise du cannabis (SQDC) has been established. This state-owned company, a subsidiary of Société des alcools du Québec (SAQ), purchased 54,000 kilos of cannabis from Canadian producers, of which 20,000 was from Hydropothecary and 12,000 from Canopy Growth. Its mission is to sell the stock throughout the province. To do so, the Quebec government has planned to open 20 marijuana shops this year and up to 150 shops in the next two years. When the project was presented, Canadian authorities insisted that shops could not promote cannabis as a type of “nirvana”. Users will have access to clean shops in which no consumption is allowed on the premises and no products can be displayed in the window. The profits that SQDC makes, around 50% of the sales, will be fully allocated to research, prevention and treatment of addiction.

NINE RISING COMPANIES

Overview of the most promising companies for investors.

BY BERTRAND BEAUTÉ
AND LUDDOVIC CHAPPEX

Aurora Cannabis, the monster of Vancouver

The company spent \$860 million in January

Aurora Cannabis was often in the news in December 2017 and at the start of this year. Rumours that Aurora would acquire its competitor Cannimed – the transaction was finalised on 24 January for the tidy sum of \$860 million – have sent its share price soaring. It has since fallen, but the merger gave Aurora Cannabis access to almost 20% of the medical marijuana market in Canada.

The company is notable for the fact that it was in the black for three of the last four quarters. This sets it apart from its competitors who are currently less profitable, such as Canopy Growth. While profitability isn't a decisive factor for investors, the industry is just getting started and is in the investment phase. And despite several agreements between Aurora and institutional partners, it is still much less well-known than Canopy Growth among regular users. Many analysts recommend holding shares, as they are already well-valued.

FOUNDED
2013
HEADQUARTERS
VANCOUVER (CA)
EMPLOYEES
500
2017 REVENUE
CAD 18 M
CAPITALISATION
CAD 3.54 BN
ACB

CEO and co-founder of Canopy Growth Bruce Linton. Linton previously was the head of IT solutions provider Martello Technologies.



Canopy Growth, the Canadian leader

The Ontario-based company is far ahead of the competition

“We want to dominate the world.” In September 2016, CEO of Canopy Growth Bruce Linton unveiled his worldly ambitions. Instead of finding him over the top, shareholders cheer him on. That’s because Canopy doesn’t stop growing – in success, acquisitions and expansion projects.

It all started in 2014 when a start-up called Tweed Marijuana, renamed Canopy in 2015, received authorisation to produce and sell medicinal cannabis in Canada. Tweed purchased a former chocolate factory in Smiths Falls, Ontario, to grow marijuana. But the facility, which is 46,000 m², wasn’t good enough for Linton. In 2015, Tweed acquired its competitor Bedrocan for \$61 million. A year later, it acquired another industry heavyweight, Mettrum, for \$430 million. The company became the first cannabis unicorn, with a valuation of more than \$1 billion.

With these acquisitions, Canopy became the leader of Canada’s cannabis industry. Most analysts recommend purchasing shares, which could still rise. Currently, Canopy holds 30% of the medicinal cannabis market in Canada and analysts expect it will hold the same

percentage of the recreational market when it is legalised in July. To meet the increased demand, Canopy announced in October that it would double its production between now and this summer.

And the international market will be another growth opportunity. After choosing American rapper Snoop Dogg as the face of its advertising, Canopy spread to Brazil and Australia in 2016 and even Europe, acquiring German company Medcann in November 2016. “Canopy is an attractive investment,” said Martin Landry, analyst at GMP Securities. “It’s very well-positioned to conquer the global market.”

But this fast-paced growth comes at a cost: in 2017, Canopy posted an operational loss of CAD 17 million (ed. note: CHF 12.7 million). But Landry says the promising partnership with alcohol producer Constellation Brands, which brought in close to \$200 million in October, is a game changer: “This influx of funds will allow Canopy to carry out its ambitious expansion plan. It will also open the door to a juicy new business: cannabis-infused drinks.”

FOUNDED
2014
HEADQUARTERS
SMITHS FALLS (ONTARIO, CA)
EMPLOYEES
700
2017 REVENUE
CAD 40 M
CAPITALISATION
CAD 5.55 BN
WEED



NATHAN DENETTE / KEYSTONE

MedReleaf, a powerful giant

The company expects to quadruple its production capacities by the end of 2018

“I really like MedReleaf,” said Martin Landry, analyst at GMP Securities. While the company, based in Markham, north of Toronto, is lesser-known than its competitors Canopy and Aphria, it’s not lacking in opportunities. MedReleaf hopes to take part of the recreational market. To do so, the company has begun a substantial development programme. In February 2018, it announced that it purchased more than 660,000 m² of land (164 acres) which is expected to boost its production capacities from 35,000 kg of cannabis per year

in 2017 to 140,000 kg by the end of 2018.

MedReleaf is also targeting the international medicinal cannabis market. Already present in Australia since 2017, the company announced a partnership with German company Cannamedical in March 2018. It will be one of the main suppliers to German pharmacies. Like most analysts, Martin Landry “recommends purchasing shares”, especially because they seem undervalued compared to the competition.

FOUNDED
2013

HEADQUARTERS
MARKHAM
(ONTARIO, CA)

EMPLOYEES
NOT SHARED

2017 REVENUE
CAD 40.3 M

CAPITALISATION
CAD 1.612 BN

LEAF

Aphria, the other Canadian heavyweight

The company is signing partnerships and acquisitions left and right

“Aphria has many advantages,” said Noel Atkinson of Clarus Securities. “This well-established company produces 240,000 kg of cannabis per year. The increased volumes combined with a sophisticated production process make it possible for Aphria to post the lowest production costs on the market. Additionally, as its management team is very competent, it has an excellent relationship with its clients.”

On its website, Aphria clearly plays the medicinal marijuana card and sells its product dried in a jar or as various oils. But according to Noel Atkinson, the company is ready to transform its product line and marketing strategy starting on 1 July: “The recreational cannabis business is expected to make up 90% of the market,” said the analyst. “The big companies will shift to focus on this segment.”

Aphria has a solid structure. It has entered into several partnerships over the past few years, such as with Canadian pharmacy Shoppers Drug Mart, which will sell Aphria products online. In January, it also acquired a sizeable competitor, Nuuvera, based in Ontario, for \$330 million. Nuuvera is very well positioned internationally, especially in Germany and Italy, anticipating future legislative breakthroughs in these countries. Analysts recommend purchasing Aphria shares, or at the very least, they believe it will outperform the market.

FOUNDED
2014

HEADQUARTERS
LEAMINGTON
(ONTARIO, CA)

EMPLOYEES
150

2017 REVENUE
CAD 20 M

CAPITALISATION
CAD 2.1 BN

APH

Neil Clossner, CEO of MedReleaf, poses in one of his greenhouses in Markham, Ontario.

CannTrust, the small newcomer

The company entered into a key partnership with pharma Apotex

With a production area of less than 5,000 m² in 2017, CannTrust is the David to Canopy and MedReleaf’s Goliath. But the company, which went public on the Toronto exchange in August 2017, is growing rapidly. It just completed a 23,000 m² extension and a second plot is expected to be operational in June 2018. The production area will reach just under 50,000 m², or a ten-fold increase in just one year.

To ensure its growth, CannTrust can count on its trusted partner: Apotex. Little known on this side of the Atlantic, Apotex is the fifth largest pharmaceutical company in Canada. Together, the two are developing new products derived from cannabis. Globally, CannTrust entered into a joint venture with Denmark’s Stenocare. This transaction will make it possible for CannTrust to export its production to Denmark, which has legalised medicinal marijuana as of 1 January 2018.

“CannTrust is a small, undervalued player,” said Martin Landry of GMP Securities. “I recommend purchasing shares, which have a price target of \$17, compared to less than \$10 currently.”

FOUNDED
2014
HEADQUARTERS
VAUGHAN
(ONTARIO, CA)
EMPLOYEES
NOT SHARED
2017 REVENUE
CAD 20.7 M
CAPITALISATION
CAD 781 M
TRST

HYDROPOTHECARY

Hydrothecary employees store cannabis heads. This year, the company started a vast project to expand production.



Hydrothecary, the innovator

This Quebec start-up is developing never-before-seen products

After going public last year, Hydrothecary has made a name for itself among investors. The Quebec company has emerged as the leader in the premium segment, offering products that are often unique on the market, well-packaged and duly authorised by the authorities. For example, it sells cannabis capsules, oils, powders and flavoured sprays.

This singular positioning could be very beneficial to Hydrothecary once recreational cannabis is legalised. In the meantime, the young company received a record

order in February: the Quebec government, which will pilot cannabis sales in the province (read inset on p. 39), purchased 20,000 kg of marijuana.

Substantial expansion work is currently underway at the company’s facilities in Gatineau. The growing area is expected to reach 120,000 m² in December, allowing for a production of 100,000 kg of dried cannabis per year. Because of the cheap cost of land, water and electricity in the region, Hydrothecary has some of the lowest production costs on the

market. The only issue is that it has a higher risk exposure if there are any problems with its single location.

Most analysts recommend purchasing shares, such as Vahan Ajamian of Beacon Securities, who set the price target at \$8.50. Given the company’s low capitalisation – compared to industry heavyweights – the analyst doesn’t rule out the possibility that it could be acquired by a competitor.

FOUNDED
2013
HEADQUARTERS
GATINEAU
(QUEBEC, CA)
EMPLOYEES
130
2017 REVENUE
CAD 4.1 M
CAPITALISATION
CAD 700 M
THCX

Insys Therapeutics, synthetic cannabis

The US company wants to be the leader in THC-based drugs

Insys is changing direction. The company, which is known for its flagship product Fentanyl, is re-thinking its strategy amidst a big scandal. Founder John Kapoor is accused of bribing doctors to prescribe the analgesic, which is 100 times stronger than morphine – leading to countless overdoses. While the entrepreneur pleaded not guilty, Insys announced that it would stop focusing on opioids and has switched to cannabinoids, the molecules present in marijuana.

The company sells Dronabinol, a synthetic form of natural THC that is authorised in the US to treat AIDS-related anorexia. But sales of Dronabinol don't make up for the losses caused by Fentanyl. "Insys' revenue is declining and its equity has disappeared," said Jérôme Schupp, an analyst at Prime Partners. "Currently Insys is not a commercial or market success." But it's not necessarily a bad investment: due to the current low capitalisation, most analysts recommend purchasing shares.

FOUNDED
1990
HEADQUARTERS
CHANDLER
(ARIZONA, US)
EMPLOYEES
350
2017 REVENUE
\$140.7 M
CAPITALISATION
\$472 M
INSY

GW PHARMACEUTICALS / NEWSCOM

Sativex, an oral cannabis spray used to help with the effects of multiple sclerosis, is reimbursed by health insurance in Switzerland.



GW Pharmaceuticals, the pioneer

This UK firm was the first pharma company to develop a cannabis-based drug

The virtues of cannabis have been well-known since ancient times. The Romans, for example, used it to soothe women during childbirth, and the plant was standard until the 1950s. And then the 1960s happened and marijuana was banned around the world. Pharmaceutical companies abandoned cannabis for other pain medicines, such as opioids.

Was that the end of it? Definitely not. In 1998, researchers Geoffrey Guy and Brian Whittle received authorisation from the British government to grow cannabis in order to study its pharmacological properties. Together, they created GW Pharmaceuticals, which conducted its first clinical trial less than one year later. Their research led to the creation of Sativex, the first canna-

bis-based drug (it contains THC and CBD). After more than 20 clinical trials on more than 3,000 patients, Sativex received market authorisation in around 30 countries, including Switzerland, to treat spasms associated with multiple sclerosis. GW is also developing Epidiolex, a drug made from CBD extracted from cannabis. This product is very promising and is pending market authorisation to treat a severe form of epilepsy.

But all this research is costly. "In 2017, GW lost close to \$175 million and its equity is in free-fall," warned Jérôme Schupp, an analyst at Prime Partners. Nevertheless, analysts recommend purchasing shares. The risky bet could pay off if the Food and Drug Administration (FDA) authorises Epidiolex. The decision will be made in June 2018.

FOUNDED
1998
HEADQUARTERS
CAMBRIDGE (UK)
EMPLOYEES
583
2017 REVENUE
\$11M
CAPITALISATION
\$3.14 BN
GWPH

Zynerba, cannabis ointment

This pharma company has two drug candidates in its pipeline

Unlike other pharmaceutical companies such as Insys or Cara Therapeutics, US-based Zynerba Pharmaceuticals is focused solely on developing drugs using synthetic cannabinoids – the active molecules naturally present in marijuana. Currently, the company has two products in its pipeline: ZYN001 and ZYN002. During clinical trials, the first drug, which contains THC, showed promising results in treating Tourette's Syndrome. But

it's still in an early stage of development and therefore very far from being found on pharmacy shelves.

ZYN002, a gel made from synthetic cannabidiol (CBD), is further along in the process. During phase II clinical trials (i.e. on a limited number of patients), its application on skin seemed beneficial in treating Fragile X Syndrome (a genetic disorder) and certain types of epilepsy. Analysts believe these results are promising

and recommend purchasing shares.

However, the investment isn't entirely risk-free. As all of its products are currently in development, Zynerba has no revenue. It does have enough capital to continue its research until 2019. Beyond that, there are no guarantees.

FOUNDED
2007
HEADQUARTERS
DEVON
(PENNSYLVANIA, US)
EMPLOYEES
22
2017 REVENUE
0
CAPITALISATION
\$123 M
ZYNE

OTHER CANNABIS-RELATED BUSINESS LINES

CANNABIX TECHNOLOGIES

To help the police, Cannabix developed a type of breathalyser that can detect THC directly from the breath of drivers. Preliminary tests are excellent, according to the company. But it recorded a \$2.9 million loss in 2017.

FOUNDED:
2011
HEADQUARTERS:
BURNABY (CANADA)
CAPITALISATION:
CAD 170.3 M
BLOZF

TRUE LEAF

Cannabis isn't just for humans! Through its subsidiary True Leaf Pet, medicinal cannabis producer True Leaf offers a range of hemp-based food supplements for pets.

FOUNDED:
2013
HEADQUARTERS:
VERNON (CA)
CAPITALISATION:
€36.3 M
TLA

DIEGO PELLICER

Dubbed the "Starbucks" of cannabis by the American media, Diego Pellicer has given up marijuana production to focus on sales. The company opened a chain of shops in Washington state and Colorado, as well as an e-commerce site.

FOUNDED:
2013
HEADQUARTERS:
SEATTLE (US)
CAPITALISATION:
\$2.67 M
DPWW

QUADRON CANNATECH

This company supplies cannabis production equipment, particularly machines used for quality control. It also sells vaporisers for customers who don't want to smoke marijuana.

FOUNDED:
2011
HEADQUARTERS:
VANCOUVER (CA)
CAPITALISATION:
CAD 20.48 M
QU9



CANNABIS, A SUPERDRUG?

“You’re going to have to fight.” That’s what doctors said to Nicolas when they told him he had cancer. And he was ready to fight: “In the beginning, I felt like a warrior. I knew I was going to beat it,” said the 40-year-old. “But when I started chemotherapy after the operation, I gradually lost my will to keep going. I was dead tired, I lost my appetite and I was permanently nauseated. At one point, I lost hope. To me, it seemed like the side effects of chemo were actually worse than the cancer itself.”

Doctors could only help so much: “They prescribed anti-nausea medication, but it wasn’t effective.” Finally, Nicolas found a cure himself, on the street rather than from a pharmacy: “I discovered that smoking weed greatly reduced my symptoms.”

For Dr Barbara Broers, head of the addiction unit at the Geneva University Hospitals (HUG), patients like Nicolas come through her office all the time. “As a doctor, I never recommend that my patients smoke

The pharmaceutical industry is starting to take an interest in the medicinal properties of marijuana. The drug can have promising therapeutic effects for patients.

BY BERTRAND BEAUTÉ

marijuana because inhaling smoke, whether from cannabis or tobacco, is not good for their health. But I often see patients for whom traditional treatments don’t work, and they discover on their own that marijuana eases their symptoms. In these cases, I can’t advise against it, even if I would prefer if they didn’t have to buy it on the black market.”

“For years, it was hard to research cannabis because it was considered a drug”

Dr Barbara Broers, head of the addiction unit at HUG

The benefits of cannabis are increasingly supported in research: “In scientific literature there are many spectacular cases where patients who are very sick or crippled with pain found that their health improved suddenly with cannabis,” said Dr Giovanni Marsicano, who studies

the effects of cannabinoids at the Neurocentre Magendie in Bordeaux. “Epileptic patients, for example, went from having 300 episodes a day to only one. And multiple sclerosis patients can go back to living a mostly normal life.”

These significant examples, spread by patient associations, have led several countries, including Canada, Australia and Greece, to legalise medical marijuana (see infographic, p. 34). In Colorado, patients can even receive a prescription for medical marijuana to ease pain. Dr Broers believes this is a positive change, but she warns: “The term ‘medical marijuana’ is misleading. As doctors, we only prescribe treatments where the effects have been proven in clinical trials. This is not the case for the cannabis plant, which is used in these countries to help soothe patients for whom usual treatments don’t work.”

In 2015, the Swiss Federal Office of Public Health (FOPH) ordered a systematic review of 6,500 patients. ▶

The results, published in 2015 in the *Journal of the American Medical Association* (JAMA), confirmed that marijuana had some therapeutic effectiveness, especially for chronic pain and multiple sclerosis. But “no clinical study has proven this statistically,” said the authors, who recommend further trials. In short: the effectiveness of medical marijuana isn’t scientifically proven like any other treatment is.

Studies are difficult because the plant is so complex: “Cannabis leaves contain almost 100 active molecules, called cannabinoids. But we don’t know anything about these molecules. We only have data for three of them: tetrahydrocannabinol (THC), cannabidiol (CBD) and cannabitol (CBN). All the others are uncharted territory,” said Dr Marsicano. “Depending on the type of marijuana, the concentration of these molecules can vary significantly depending on if it is smoked or ingested, which makes it difficult to predict its effect on patients. For example, a small dose of THC can reduce anxiety. But in larger doses

it actually induces anxiety, which can result in bad trips. Depending on the dosage, patients can experience very different effects. As a result, it’s difficult to classify the cannabis plant in itself as a treatment. Taken individually, however, cannabinoids can have promising medicinal effects. But it remains to be seen which molecule and what dose should be used for each illness.”

“Cannabinoids are a fascinating field of research”

Dr Giovanni Marsicano, researcher at the Neurocentre Magendie in Bordeaux

The pharmaceutical industry is starting to take an interest in this issue. UK-based GW Pharmaceuticals, for example, has developed Sativex. The oral spray, which only contains a very precise concentration of two cannabinoids (THC and CBD), went through clinical trials just like

The therapeutic indications of cannabis will multiply in the coming years.



ISTOCK

IN SWITZERLAND, MEDICAL MARIJUANA IS MAKING STRIDES

“Please doctor, give me marijuana!” Doctors are able to prescribe cannabis for medicinal purposes in Switzerland, ever since the revised LStup came into effect in 2011. Two drugs (Sativex for multiple sclerosis and Epidiolex for epilepsy) are approved by Swissmedic and therefore covered by health insurance.

For other indications, such as cancers, chronic pain or HIV-related anorexia, patients who wish to try cannabis must request an exceptional authorisation from the Federal Office of Public Health (FOPH). “In practice, these requests are often ap-

proved by the FOPH. They often come from older patients with chronic pain,” said Dr Barbara Broers, head of the addiction unit at the Geneva University Hospitals (HUG). “Cannabis is provided as either an oil or an alcoholic solution, prepared by two Swiss pharmacies.”

But the complex administrative procedures and expensive treatments (anywhere from 200 to 600 Swiss francs per month, rarely covered by insurance) make many patients turn to the black market, where weed is more accessible. “There are still too many barriers against

the use of medical marijuana in Switzerland,” said Dr Broers. “And we’re in a tricky situation: to reduce a patient’s pain, it’s easier to prescribe morphine than cannabis, but cannabis has fewer side effects.”

According to the FOPH, the positive effects of cannabis can improve conditions such as chronic neuropathies, pain associated with cancer, spasms from multiple sclerosis, nausea caused by chemotherapy, weight loss for patients with AIDS, insomnia and Tourette’s syndrome. But cannabis doesn’t seem to have any effects on anxiety or depression.

any other drug. It is now approved for use in around 30 countries, including Switzerland, to treat multiple sclerosis. Similarly, Epidiolex (a viscous liquid made from CBD) has been approved to treat epilepsy (see company features, p. 40).

“For years, it was hard to research cannabis because it was considered a drug. The pharmaceutical industry wasn’t interested in the plant, even though it had been used for medicinal purposes since ancient times,” said Dr Broers. “But things are starting to change, and many clinical trials are currently underway. I am convinced that in coming years, there will be many more therapeutic indications in a vast range of fields, from diabetes to oncology.”

Dr Marsicano agrees: “Cannabinoids are a fascinating field of research. The molecules in the plant are currently being tested to develop treatments. And researchers are also trying to synthesise new cannabinoids that don’t exist in its natural state, in order to maximise the medicinal benefits. We’re just getting started.”

While waiting for the results of this research, patients with a wide variety of illnesses continue to treat themselves with the plant. “I don’t know if cannabis is a miracle drug,” said Nicolas, who is now in complete remission after his cancer. “But in my case, smoking greatly contributed to making me feel better.” ▲

THE IMPACT OF CANNABINOIDS

PROVEN EFFECTS
ALLEGED EFFECTS

TETRAHYDRO-CANNABINOL (THC)

PSYCHOACTIVE
Desired effect for recreational use

ANTI-SPASM
Effect reduces spasms from multiple sclerosis

ANTI-NAUSEA
Helpful in reducing the side effects of chemotherapy

PAIN RELIEVER
Treatment for chronic pain

INCREASED APPETITE
Treatment for HIV-related anorexia

ANTI-TUMOUR
Cancer treatment

CANNABIDIOL (CBD)

ANTI-EPILEPTIC
Reduces the number of epileptic seizures

REDUCES ANXIETY
Treatment for mood disorders

ANTI-PSYCHOTIC
Treatment for mood disorders

ANTI-INFLAMMATORY

CANNABINOL (CBN)

SEDATIVE
Insomnia treatment

SLIGHTLY PSYCHOACTIVE
Recreational use

See also p. 53 on the dangers of cannabis

A WOMEN-LED INDUSTRY?

Showtime

According to some studies, women are over-represented in management teams at cannabis-related companies.

STANISLAS CAVALIER

The year is 2005. Marijuana consumption is still illegal in California. But to maintain her lifestyle, Nancy Botwin (played by Mary-Louise Parker) is forced to start selling cannabis. Over the years, this ordinary forty-something becomes an accomplished business woman, juggling weed and cash with equal ease. Almost 15 years later, will the premise of *Weeds*, a series aired on Showtime between 2005 and 2012, become a reality – but legally this time?

Newsweek certainly thinks it could. In an article entitled “How Legal Marijuana Could Be the First Billion-Dollar Industry Not Dominated by Men”, the American magazine explains that this new business offers more prospects to women than other more mature industries. Noelle Skodzinski agrees: “A new, open industry like the marijuana market provides signifi-

cant opportunities for women,” says the co-founder and editor-in-chief of the *Cannabis Business Times*. “Many women become owners, CEOs or executive management; with no established patriarchal hierarchy, there are no real glass ceilings.”

There are many iconic examples – take Rosie Yagiello, for instance, who founded HempStaff, one of the largest medicinal cannabis producers in the United States. And according to a study published in October 2017 by New Frontier Data, 30% of companies active in the US medicinal cannabis market are owned by women. “Our report proves that this industry has broken gender barriers,” said Giadha Aguirre de Carner, CEO of New Frontier Data, in a press release.

But the reality is somewhat less rosy and more nuanced than the numbers suggest. According to another study

conducted by *Marijuana Business Daily*, the percentage of women holding executive positions in cannabis companies fell 9% between 2015 and 2017. This could indicate that as the industry becomes more professional, women are no longer holding executive positions. “I think that more and more wealthy investors will become interested in the cannabis industry. As these investors are likely men, the high-ranking positions will increasingly be held by men,” says Skodzinski.

In Canada, where medicinal marijuana has been legal since 2001, this sea change has already happened. According to data compiled in March 2018 by *Le Journal de Montréal*, at least 77 Canadians have become millionaires thanks to the cannabis industry. Of these 77, only three are women... Alas, it seems that Nancy Botwin could be an exception after all. ▀



CANNABIS IS STILL A DRUG

Because of its effects on memory, concentration and motivation, marijuana consumption is especially harmful for young people.

BY BERTRAND BEAUTÉ

“

As a doctor, I've seen problems from drugs on the black market too often to

be against the legalisation of recreational cannabis.” Surprisingly, like many health professionals, Dr Barbara Broers, head of the addiction unit at the Geneva University Hospitals (HUG), is rather in favour of a legal cannabis market. “Banning it never stopped consumption and it creates violent trafficking,” she explains.

But what would be the health consequences of legalising marijuana? “Alcohol and tobacco kill far more people than marijuana does,” said Dr Broers. “The main problem comes from the fact that people consume it as a joint, that is, by smoking it, which results in the same diseases as tobacco, especially cancers and pulmonary diseases such as Chronic Obstructive Pulmonary Disease (COPD).” Dr Giovanni Marsicano, cannabinoid expert, agrees: “I’m in favour of legalising cannabis, because it will reduce crime. But we need a very strict law with a total ban for young people and drivers,

since cannabis is still a drug with its share of negative effects.”

In the hours after consuming cannabis, attention, reaction time and memory are all affected. These are particularly troubling effects for young people. A May 2017 study in the *International Journal of Epidemiology* showed that marijuana consumption had catastrophic effects on academic success. Results showed that teenagers who smoked joints before age 17 were 60% more likely to not continue on to higher education, compared to their non-smoker peers. “That’s probably linked to the direct effect of cannabis on the concentration, memory and motivation of young people,” said the authors.

Surprisingly, marijuana consumption among young people decreased in the United States by 12% following the legalisation of cannabis in several states, according to a federal study. This drop is the result of the reduced black market. Indeed, opening legal shops for adults only has reduced trafficking, making

access to marijuana more difficult for young people.

But for adults, studies haven’t formally shown any negative effects, besides car accidents and an increased cancer risk. “We need to legalise cannabis, but avoid the mistakes we made with alcohol and tobacco. In other words, the market cannot be completely deregulated. We need age limits, no advertising and very controlled sales,” said Dr Broers. “In Colorado, for example, the authorities went too far. Canadian laws seem more promising to me, even if I think the right model has yet to be developed.”

But health may not be the leading concern for business: “Because investors take risks and there is a lot of money in the legal cannabis industry, an entire lobbying movement is starting to come together around the world in order to make legislation as permissive as possible,” said Christian Ben Lakhdar, author of *De l'intérêt de sortir le cannabis des réseaux criminels*. “In fact, a purely commercial model could be implemented in the future.” ▀



ISTOCK

CANNABIS FOR DINNER

From cosmetics to food, several industries will be changed dramatically by the legalisation of marijuana.

BY BERTRAND BEAUTÉ

Will we soon see marijuana Coronas in supermarket aisles? Constellation Brands, the distributor of the famous beer brand, is seriously considering it. In October 2017, the US company announced it acquired a 9.9% share of Canopy Growth, Canada's leading hemp producer, for 180 million Swiss francs. The goal is to "collaborate in developing and selling drinks made with cannabis," said Bruce Linton, CEO of Canopy.

As several countries have legalised the sale of cannabis for recreational use (see infographic on p. 34), companies have now started to consider developing cannabis-based products. "I think that several industries will see major changes," said Christian Ben Lakhdar, economics professor at University of Lille 2. "In the US states where marijuana is already legal, it's not just sold in the form of dried flowers. It can also be found in cannabis-based products. In these states we're seeing drinks made with marijuana, as well as foods, creams and a whole host of other things."

Instead of focusing solely on selling pure marijuana, coffee shops are already offering many products made from cannabis.

Head to Colorado, the first US state to legalise recreational cannabis in 2014, to have a look at the creativity of this burgeoning industry. In shop aisles, next to the traditional small packets of marijuana are related products: cannabis sweets, drinks, cookies, chocolates, balms, sleep aids, pain relief pills, etc.

"As more countries legalise marijuana, multinationals will become more interested in this business"

Christian Ben Lakhdar, economics professor at University of Lille 2

Until recently, these products were only made by small local businesses, such as the Dixie brand for example, which makes elixirs, lemonades and other sweets in Colorado and Nevada. But the legalisation of recreational marijuana in Canada will be a game changer, as seen by the collaboration between Canopy >

and Constellation. “As more countries legalise marijuana, multinationals will become more interested in this business,” said Ben Lakhdar.

That’s because the market will be huge. According to a Deloitte study published in October 2016, cannabis-based products could represent an annual market of \$14 billion CAD in Canada, or almost double the sales of pure cannabis, estimated at \$8 billion CAD.

“Marijuana will become a common ingredient and will be marketed as a healthy superfood”

Sylvain Charlebois, dean of the Faculty of Management at Dalhousie University in Halifax

After tobacco, the first industry involved will likely be the alcoholic beverages sector, as the players are well-versed in the constraints that come with marketing a drug. When asked about the subject in February 2018, Alexandre Ricard didn’t hide behind false pretences: “We’re watching this very closely,” said the CEO of Pernod Ricard, during an interview with Bloomberg TV. “The whole industry is watching this closely.”

This promising market is also enticing the agro-food industry. “All the companies I meet are very interested in developing cannabis-based food products,” said Sylvain Charlebois, dean of the Faculty of Management and professor of food policy and distribution at Dalhousie University in Halifax. “It’s very possible that 5–7% of food products sold in Canada over the next 10 years will contain cannabis, including ready-to-eat food. Marijuana will become a common ingredient and will be marketed as a healthy superfood.”

But if it isn’t regulated, this development could lead to health concerns. According to a July 2017 study published in JAMA Pediatrics, the number of children admitted to hospitals for accidentally ingesting cannabis went up 150% in Colorado since 2014, the year recreational use was legalised. According to the authors, in the most serious cases,

children have had to be intubated because of respiratory distress.

“In Colorado, cannabis gummy bears (gelatin sweets shaped like bears) quickly became one of the most popular products, which led to accidents with children,” said Charlebois. “But ever since, Colorado tightened up regulations and candy shaped like



Hemp-infused beer. The alcoholic beverages industry is very interested in this market.

BSIP / NEWS.COM



WHOOP! & MAYA

Actress Whoopi Goldberg started her own cosmetics line with cannabis-based products.

characters was made illegal. The state also required manufacturers to use specific, child-safe packaging so that children couldn’t access the product.”

With Colorado’s example in mind, Canada decided it was necessary... to wait. Edible products made with marijuana will only be legalised on a federal level one year after the legalisation of dried cannabis, or in July 2019. “For investors, the real question is: when should they get in on the market?” said Ben Lakhdar. “When these products are legalised, or beforehand? The risk is if

the law will end up being stricter than expected in Canada. But also if the global trend towards cannabis legalisation in more countries ends.” Constellation Brands and Canopy Growth already announced that their cannabis-based drinks will only be sold where they are fully legal in an entire country; which cancels out the United States and pushes any potential sales in Canada to July 2019.

But it is certain that these drinks will arrive in Canadian shops, according to Charlebois, as legalisation has become “inevitable”: “Many people buy dried marijuana

and make food with it themselves. The problem is that many don’t know how to cook with it, which leads to intoxication. It’s better to have manufactured products that have the correct amount and are well-labelled.”

In the cosmetics industry, the dangers seem more moderate. Because of its antioxidant, anti-inflammatory and pain relief effects, several experts believe that cannabis will be the next leading ingredient in beauty and fitness products. Actress Whoopi Goldberg is on board; she launched her own beauty line named Whoopi & Maya that includes pomades and other products infused with cannabis. She joined the growing market of brands such as Crave Skincare and Cannabis Cosmetics.

But in all industries, weed’s scandalous reputation could keep multinationals from participating. “Not all companies will be part of the industry,” said Charlebois, “because it could be disastrous to be associated with an intoxication incident. Furthermore, many consumers are still uncomfortable with cannabis. Each company will have its own approach, based on its brand image.”



In California, customers can choose between many cannabis-based products.

BSIP / NEWS.COM

THE HEAVYWEIGHT OF SWISS CANNABIS

In Switzerland, the classification of cannabis containing less than 1% THC as a tobacco product was a game changer. The number of cannabis producers skyrocketed so high that the hemp market is now highly saturated. But this doesn't concern the very first vendor, BioCan, who welcomed us at its facilities halfway between Zurich and Schaffhausen.

BY MARTINE BROCARD

Three women are busy working in front of small scales in an attic room of a traditional Zurich farm. The tips of their fingers blackened by pollen, they weigh dried cannabis flowers in plastic bowls to then divide them into 10-gram bundles. In the room next door, about 10 women are doing the same thing as the plant's characteristic sweet odour wafts through the air. A clandestine operation? Not at all. This is where BioCan, the top seller of legal cannabis in Switzerland, packages its product.

While the packaging is done by hand and the SME won't go public on the Swiss exchange any time soon, the product is anything but amateur. "Fifteen people package approximately 2,000 packets a day," explains BioCan founder Markus Walther, holding a cigarette in the break room kitchen. These 10-gram maroon packets, labelled "CPure" – BioCan's brand – are sold for

39 to 59 Swiss francs a piece at BioCan's some 5,000 sales locations, which include specialised shops and Denner supermarket subsidiaries. The cannabis is to be rolled and smoked and can either be mixed with tobacco or not. The packets currently make up 90% of the group's revenue. The rest comes from the sale of edible items, such as turmeric hemp capsules, hemp oil and ground cannabis.

SWEET AND FRUITY

While the Ossingen-based company is the biggest player on the Swiss market with around 20% market share, its founder isn't particularly interested in the numbers. It's only when he puts vibrant green buds on the table that his blue eyes shine like the piercing in his ear. "Here's our variety: Fedtonic," he says proudly. "It's very fruity and sweet to smoke; customers like it a lot." Fedtonic – halfway between the

"Fedora" and "Cannatonic", European and Canadian varieties – was grown by Walther in a greenhouse right next door to a church in a town of 1,600 people. "We bred cross strains based on taste, yield, quantities of THC and CBD (see inset on p. 39) and adaptability to the Swiss climate," said the entrepreneur, who founded a bike messenger company in Winterthur before purchasing the Ossingen property in 1995 to grow cannabis.

This area, which is equivalent to 100 football pitches, will produce about 20 tonnes of cannabis

"Please close the door/Bitte Türe schliessen" says a sign on the greenhouse door. The mother plants can't be exposed to the arctic late

In a warehouse in Bassersdorf (ZH), BioCan grows cannabis plants under UV lamps.

Dario Tobler, CEO of BioCan, checks out young cannabis plants.



KEY MILESTONES IN SWITZERLAND'S CANNABIS LEGISLATION

1951

Cannabis is made illegal in Switzerland.

1995

Cannabis growing is legalised, as long as growers do not intend to produce drugs. This was the period of “aromatic pillows” filled with hemp, which officially wasn’t meant to be ingested but in reality ended up being smoked.

2000

The Federal Supreme Court determines that 0.3% is the maximum percentage of THC allowed in products made with cannabis. Widespread hemp growing ends.

2008

Swiss voters vote against a popular initiative to decriminalise cannabis.

2011

The Federal Council decides that cannabis products with a THC level of less than 1% no longer fall under the Federal Act on Narcotics and Psychotropic Substances.

2016

The Federal Office of Public Health decides that the CBD tobacco substitute produced by BioCan is considered cut tobacco, according to the tobacco ordinance, and can therefore be sold under the same conditions as tobacco. This landmark decision sparks a green gold rush in Switzerland.

2018

560 legal cannabis producers are registered with the Federal Customs Administration.

February temperatures. Bright light from lamps, a light breeze from several fans and climate control set to approximately 20 degrees... “They have to feel like it’s spring,” insists Walther, sounding very much like a protective parent himself. Around 50,000 plants are currently being grown in the greenhouse. The upper part is removed once or twice a week and then trimmed to create cuttings. Before being planted in fields, the cuttings wait on carts, their growing roots compacted into a cube of dirt. “So if there are three pallets of 77 cuttings on each of the five levels of the cart, how many plants are there in all?” Walther asks his eldest son who is running the greenhouses.

PRICE PRESSURE

The cuttings from Ossingen will be sent off to fields in Zurich, Bern, Lucerne, Glarus, Schaffhausen, and Ticino. “Production has grown fivefold each year since we started,” says Walther. BioCan began with two hectares in 2016 and was up to 16 last year. This year, it will have 70 hectares of fields and 4.5 hectares of greenhouses. This area, which is equivalent to 100 football pitches, will produce about 20 tonnes of cannabis.

But the leaves will no longer be packaged by hand in Ossingen. A specially designed machine will take care of this at a former printing press in Thayngen (SH) where BioCan has been packaging its harvests since April 2017. “We want to mechanise our processes to reduce personnel costs, explains Hans Peter Kunz, the company’s CFO. “To make it through the coming years, we need to reconcile quantity, quality and low production costs.” Indeed, the Swiss cannabis market has become highly saturated due to its recent expansion. There were only five cannabis producers registered with the Federal Customs Administration in January 2017, but the number jumped to 560 (!) by March 2018. But the situation doesn’t

worry the former UBS private banking employee in the slightest. “Prices have dropped and will continue to fall, but that’s in our favour, because we’re the largest company on the market,” answers the talkative Kunz, as we drive to Schaffhausen. “This year, we’re going to grow so much that we can put pressure on prices. The little guys will have a hard time keeping up.”

“All the employees are incredibly motivated, and we feel like we’re at the start of a new era after years of prohibition”

Gerhard Reitberger, employee of BioCan

A SWEET-SMELLING SAFE

While a leftover rotary press hints at the former purpose of the building in Thayngen’s industrial district, the smell of cannabis leaves no doubt as to what the facility is being used for today. And it’s still only the off-season. About 3,500 square metres are rather empty. In one corner, wire nets that look like double camp beds will be used to dry the next harvest. The BioCan teams have made no less than 2,000 of these. Here and there, fans wait to circulate air during the packaging process and hemp grinders shaped like clocks will separate the leaves of the flowers. The flowers are still sorted by hand so that only the best-looking flowers end up in packets, because according to Kunz, “consumers are very demanding”. A quarter of the flowers are discarded and will be used to extract CBD. Flowers with the proper shape and colour will go into the bunker, where they are stored in thick plastic bags weighing 5 kilos each.

LEGAL CANNABIS AND CBD

In Switzerland, cannabis must contain less than 1% of THC – tetrahydrocannabinol, the psychoactive substance found in cannabis – to be legal. The percentage of CBD – cannabidiol, a non-psychoactive substance also found in cannabis – is not regulated. This cannabinoid has currently sparked lots of interest for its potential antioxidant, anti-inflammatory and anxiolytic benefits.

Last fall, the storage facility, which smells strongly of cannabis, stored no less than five tonnes, or the equivalent of at least 20 million Swiss francs. The space is of course protected with security alarms, as is most of the building. As for the fields, they are monitored two to three weeks before the harvest.

“There are always a few thefts that we can’t prevent,” smiles the CFO. In his sixties, wearing jeans and a leather jacket, Kunz quickly realised that his new industry wasn’t as strict as the banking sector. “Managing this company comes with some real challenges,” he jokes. “The team hates administrative business. I try to tell them that we need to draft reports, take notes, but they just laugh... As a result, I did over 300 hours of overtime last year!”

PHARMA IN THE LINE OF SIGHT

BioCan has 25 permanent employees, 60 temporary and a few extras during harvesting season. “Several people who have had a hard time professionally have come to work for us,” said Kunz. “We don’t require lengthy work experience.” A brewer by trade, Gerhard Reitberger left his hometown in Bavaria to work in the hemp cultivation industry, which is “more lucrative than beer”. He’s been at BioCan for a year and says the work environment is very stimulating. “All the employees are incredibly motivated, and we feel

like we’re at the start of a new era after years of prohibition.” With bare feet in Crocs, Reitberger shows us the machines that will roll and package cannabis cigarettes, a new project that he’s in charge of. “We put the tobacco here and the cigarette comes out there.” What about the cannabis? “Industry secret,” he replies.

Cannabis cigarettes are considered a supplement to BioCan’s original products rather than an entirely new dimension. But BioCan is really betting on cannabis for medicinal use. Even though it makes for extra work since the flowers have to be cleaner, medicinal cannabis has some serious advantages because the sale price is higher and it is exempt from tobacco taxes. “This market was just legalised in Germany and could soon be in Switzerland,” predicts a hopeful Kunz. “We’re targeting the Swiss and European markets, which could make up 50% of our revenue.” From Thayngen to Ossingen, the smell of cannabis won’t be fading away anytime soon. ▲

BioCan’s cannabis packets, with a low dose of THC, are marketed under the brand CPure.



CHRISTIAN BEUTLER / KEYSTONE

THE CANNABIS CERTIFICATE

The Swissquote Cannabis Portfolio covers the cannabis industry's dominant firms.

[SWISSQUOTE.COM/CANNABIS](https://www.swissquote.com/cannabis)

Which companies have the best positioning on the fast-growing cannabis market? Will the future winners be producers, distributors, pharmaceutical companies or financial services?

The Swissquote Cannabis Portfolio, a certificate developed by Swissquote and traded on the Swiss stock exchange (SIX), offers an effective way of figuring out those questions without actually having to become an expert on the subject. The diversified portfolio is made up of cannabis industry leaders, all listed companies, that offer investors the potential to generate high returns.

Like our multi-cryptocurrency certificate (see p. 64), The certificate is powered by an algorithm that applies a quantitative and qualitative filter to track the highest-potential companies. One of the selection criteria is that the majority of company revenue must be generated in the marijuana business.

Given the volatility of the still burgeoning cannabis industry, the portfolio is automatically reallocated every quarter. This enables investors to limit risks while reaping the benefits of this extremely buoyant market. ▲

ISIN: CH0372704327 SYMBOL: WEEDTQ

PROFILE OF SELECTED FIRMS

- Majority of revenue from cannabis related business
- Minimum market capitalisation of \$50 million
- Daily trading volume of \$500,000
- Share price of at least \$0.10

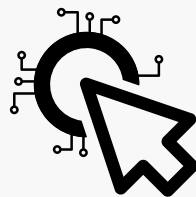
ADVANTAGES OF THE SWISSQUOTE CANNABIS PORTFOLIO

- Broad diversification
- Professionally and actively managed
- Transparency
- Relatively low cost
- Daily liquidity



HOW LONG IS FOREVER?

HYT
#HYTWATCHES



A CRYPTOCURRENCY PORTFOLIO IN JUST ONE CLICK

Easily invest in Bitcoin, Ethereum or Litecoin with no prior knowledge, all while minimising risk and controlling volatility? This is exactly what the new Swissquote product offers.

[SWISSQUOTE.COM/CRYPTOS](https://www.swissquote.com/cryptos)

Many investors are interested in the world of cryptocurrencies, but don't necessarily have the time or desire to explore it themselves. For these investors, Swissquote has created an actively managed multi-cryptocurrency certificate. Arnaud Masset, market analyst in the trading department, explains further.

What is Swissquote's actively managed multi-cryptocurrency certificate?

It's a financial product made up of four cryptocurrencies: Bitcoin, Bitcoin cash, Ethereum and Litecoin. Our teams developed an algorithm that automatically manages this portfolio by ensuring an optimal diversification of the funds invested based on market fluctuations. Reallocation occurs once a week. The objective is to limit risk for the investor, notably by reducing the probability of big losses. The algorithm is based on statistical models and is powered by machine learning technologies.

How can one invest in this certificate?

It's as simple as purchasing shares of a company...just go to our trading portal. There's no need to open a new account just for cryptocurrencies. The certificate is listed in dollars, so investments are made in dollars.

Who is the target investor for this product?

This product is for anyone looking to invest in cryptocurrencies but doesn't have the time, desire or sufficient knowledge to follow the day-to-day evolution of the portfolio and reallocate funds accordingly. It's ideal for our clients who have until now been hesitant to get started with cryptocurrencies. It's also the first listed financial product that includes several cryptocurrencies.

Why is Ripple not one of the currencies included in this product?

We wanted to invest in cryptocur-

rencies that were 100% decentralised, and Ripple is not. Note that in November 2017, we also launched a certificate based entirely on Bitcoin that is also available on our platform. It is also a model of a dynamic allocation certificate. Depending on the market, Bitcoin exposure ranges from between 60% and 100% of the dollar value of the portfolio and the rest remains in cash.

What are the advantages of investing in this type of product?

Profits can be exceptionally high, given the volatility of the cryptocurrency market. But it goes both ways, so losses are also possible. The good thing about our algorithm is that it minimises risks. ▴



ARNAUD MASSET
MARKET ANALYST,
TRADING DEPARTMENT

ISIN: CH0372704095 | SYMBOL: SQCRTQ

Weekdays 6 PM

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**Swiss
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Martina, Amanda, Hannah, Ana Maria



Money
SWITZERLAND

www.cnnmoney.ch



Twitter: a trader's best friend

One tweet can make share prices drop or soar in record time.
While disturbing for Wall Street, it can be
a godsend for investors.

BY SOPHIE GAITZSCH

Investing in the stock market by analysing Twitter feeds? The idea may seem crazy, but investors take it very seriously. For some, Twitter and its 330 million users has even become a haven for stock recommendations. "Social networks have an enormous influence on the markets because they increase the amount of information available to the public," says Tobias Schlager, professor at HEC Lausanne. "Twitter is particularly powerful, because it relies more on official and reliable information than Facebook does."

Several studies support this claim. Researchers from the University of California Riverside analysed the behaviour of 150 randomly selected companies on the S&P 500 index. The results showed a correlation between the number of tweets about a company and its share price. The more positive and numerous tweets are about a company, its CEO or its products, the more the share price increases. Researchers then developed a mathematical model they used on a fictitious portfolio. The portfolio beat other strategies based on traditional financial analysis by 11%.

As a result, the Twitter feeds of companies, financial institutions and ratings agencies are now intensely analysed. But they're not

the only accounts that are influential. Analysts, bloggers, politicians and celebrities can also have an effect on share prices, sometimes with only a personal opinion. "The authority or influence of the author of the tweet is often more important than the content of the tweet," says Schlager.

**A Google
engineer
developed
a "bot"
that would
automatically
react to tweets
from Donald
Trump**

The most obvious example of this is undoubtedly the official Twitter account of Donald Trump (see p. 68). In January 2017, the US president tweeted: "Our pharmaceutical industry is a disaster." In the minutes that followed, pharma companies (Johnson & Johnson, Merck, Eli Lilly, Pfizer) saw their share prices drop rapidly

before stabilising back to their regular amounts a few hours or days later.

Such criticism strikes fear into the hearts of companies, but are the effects lasting? It seems unlikely. The *Wall Street Journal* analysed 12 companies targeted by Donald Trump between February 2016 and February 2017 and concluded that in most cases, a sharp drop is usually followed by a rebound in price.

With this in mind, Google engineer Max Braun developed a "bot" – a computer programme – that would automatically react to tweets from Donald Trump. If the president tweeted positive things about a company, the bot purchased shares, hoping they would increase. If the tweets were negative, the bot began to sell short – a financial mechanism where investors can earn money on a falling stock. With a fictitious starting portfolio of \$100,000 on 6 December 2016, Braun's bot found itself, 20 tweets later, with \$107,000 on 30 January 2017.

Is it really as simple as that? Unfortunately not, since a favourable tweet from the US president can in some cases be disastrous for the company in question, as unlisted clothing retailer L.L. Bean found out the hard way. Overnight, consumers decided to boycott the brand because of a Trump tweet...



Donald J. Trump

@realDonaldTrump

Tweets
37.3 K

Followers
50.2 M

A PYROMANIAC IN THE WHITE HOUSE

The US president is quick to directly address companies on Twitter, and his tweets can have devastating consequences.

“Amazon is doing great damage to tax paying retailers. (...) many jobs being lost!” On 16 August 2017, Donald Trump tweeted this from his Twitter account @realDonaldTrump, which has close to 50 million followers. The online retail giant’s stock price quickly dropped 1.2 – a value loss of \$5.7 billion for the company – before going back up a few hours later.

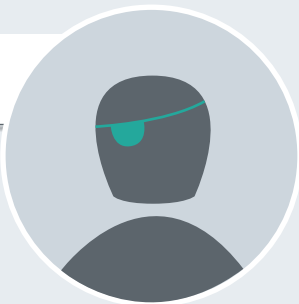
This is far from an isolated case:

several companies have paid the price for critical Trump tweets since the election. In January 2017, Toyota lost \$1.2 billion in just a few minutes when Trump tweeted “NO WAY!”, critiquing plans for a plant in Mexico to build cars for the US. In December 2016, Donald Trump lashed out at defence contractor Lockheed Martin for being too costly for the US government. The company’s stock tumbled 5.4%. Boeing and Apple were also targeted by Trump’s tweets.

THE FAKE TWEETS OF JAMES ALAN CRAIG
The power of Twitter can lead to manipulation.

Unfounded rumours and false truths abound on social media. In January 2013, Scottish trader James Alan Craig made stock prices drop for US companies Audience and Sarepta Therapeutics, which fell 28% and 16% respectively, when he used fake Twitter accounts to claim the companies were under criminal investigation. Craig then bought the undervalued stocks hoping to sell them for a higher price. But the US Securities and

Exchange Commission (SEC) uncovered the scam. James Alan Craig was arrested in Scotland and the FBI began extradition proceedings in June 2017. In the United States, he faces a possible 25 years in prison and a fine of \$250,000. Stocks of Audience and Sarepta Therapeutics have since gone back to their normal share prices, but the companies still lost \$1.6 million, according to the US Department of Justice.



James Alan Craig

Deleted account



Carl Icahn

@CarlC_Icahn
Tweets
341

Followers
350 K

CARL ICAHN PROPELS APPLE

Two tweets from the businessman were worth \$17 billion.

Carl Icahn is rarely on Twitter and has almost 350,000 followers. But a tweet from the American investor and businessman can have remarkable repercussions. In August 2013, Icahn announced on social media that he had a large

position in Apple, saying: “We believe the company to be extremely undervalued.” A few minutes later, he tweeted a second time, saying he had a “nice conversation” with Tim Cook, Apple’s CEO. Shares went up 4%, and Apple made \$17 billion.



Kylie Jenner

@KylieJenner

Tweets
12.5 K

Followers
25 M

THE STARLET AND THE START-UP

Kylie Jenner critiques Snapchat and its share price falls 8%.

Reality TV and social media star, model, businesswoman: Kylie Jenner, 20 years old and Kim Kardashian’s half-sister, demonstrated her immense influence in mid-February. On her Twitter account with 25 million followers, the young woman said she decided to stop using Snapchat, an application that shares videos that disappear after a certain time. In the chaos, the share price of parent company Snap fell 8%. It finished the day on the New York Stock

Exchange with a 6% loss, or down \$1.3 billion.

The reason that Kylie, who has over 100 million followers on Instagram, stopped using Snapchat? The design was changed, which many users did not like. But analysts put her tweet into perspective, highlighting the share’s extreme volatility: in early February, following profits slightly exceeding expectations, the share price went up close to 50%.

BERNIE, HILLARY AND PHARMAS
Pharma companies pay the price for Democratic attacks.

In late 2016, former Democratic candidate Bernie Sanders denounced the “greed” of pharma companies in a tweet, calling out Arias, whose leukaemia drug costs \$199,000 per year. The US group’s share price fell 15%. A few months earlier, Hillary Clinton

tweeted a similar message that made US lab Mylan’s share price fall 5%. In 2015, the presidential candidate shook up biotech prices when she announced on Twitter that she had a plan to fight the “scandalous” prices of specialised drugs.



Hillary Clinton

@HillaryClinton

Tweets
10.1 K

Followers
22.1 M



Oprah Winfrey

@Oprah

Tweets
12.4 K

Followers
42.1 M

THE POWER OF OPRAH WINFREY

When the talk-show host and producer tweets about her weight loss, Weight Watchers soars.

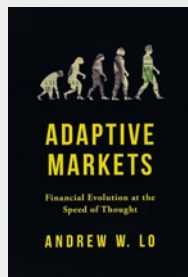
In January 2016, television star Oprah Winfrey announced on Twitter that she lost 12 kilos using a weight-loss programme from Weight Watchers, while continuing to eat bread. During the hype, the US company’s stock price went up 20%. One year later, the same thing happened: Winfrey tweeted that she lost 18 kilos and share prices went up 20%.

Generally, ever since the popular host started talking about Weight Watchers, the company has made a huge comeback on the stock market. Between

February 2016 and February 2018, the share price went up six-fold. One of the first investors to take advantage of this boom was none other than...Oprah Winfrey herself. In June 2015, she acquired 10% of the company’s capital, a \$43 million investment that was worth \$300 million in November 2017.

Similarly, a 2013 tweet from Winfrey made the share price of Seb skyrocket. She endorsed Actifry, an oil-free fryer from French appliance company Seb, saying that it “changed her life”.

TO READ, TO DOWNLOAD

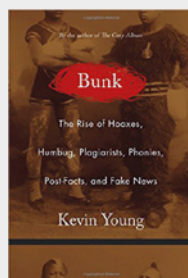


From CHF 55.-

ADAPTIVE MARKETS: FINANCIAL EVOLUTION AT THE SPEED OF THOUGHT

By Andrew W. Lo
(Princeton University Press, 2017)

Are markets rational and efficient, or are they controlled by the whims and irrationality of investors? American professor Andrew W. Lo doesn't claim to provide an answer to this eternal financial debate, but his book does present a new perspective, which he calls "adaptive markets". According to this theory, reason and emotion are not opposites; instead, rationality and irrationality coexist when it comes to speculative behaviour. Providing an overview of the history of the modern financial system and its theoretical construction, the author draws on recent knowledge from various fields such as neurobiology, psychology and ecology to understand market behaviours and offers readers concrete implications of the theory. This book is essential reading for any serious investor.



From CHF 40.-

BUNK: THE RISE OF HOAXES, HUMBUG, PLAGIARISTS, PHONIES, POST-FACTS AND FAKE NEWS

By Kevin Young
(Graywolf Press, 2017)

While the term is new, the fake news phenomenon is as old as time. In BUNK, American poet and critic Kevin Young looks at the role of hoaxes, lies and fabrications in US history. This fascinating book covers many tall tales quickly circulated and forgotten, such as the story of Joice Heth, a black slave paraded in the 1830s with the false claim that she was George Washington's nanny 100 years earlier! Young also raises and critiques public responsibility and collective amnesia, as he believes the lack of insight facilitates fake news.



Free
App Store,
Google Play

VIVINO WINE IN A CLICK

Like a Shazam for wine, Vivino is an extremely detailed database where you scan a label and learn tons of information about almost any bottle of wine, including vintage, grower, grape variety, price and even notes from other users. Searches can be saved and referenced later, and the app suggests a selection of vintages based on search criteria. The UI is also very user-friendly.



Free
App Store,
Google Play

SNAPCALC MATHS FOR DUMMIES

SnapCalc is an app you wish you had in school: with impressive handwriting recognition capabilities, this advanced calculator solves handwritten maths problems and can even describe the steps it took to solve an equation. Maths lovers will also appreciate the wide variety of graphical and statistical representations. Practical and educational at the same time!



Free
App Store,
Google Play

SWISS BANKNOTES VERIFYING YOUR MONEY

Developed by the Swiss National Bank, this augmented reality app verifies the authenticity of new Swiss banknotes. Just focus your smartphone camera on a bill and several 3D designs will appear on the screen: dandelions blowing in the wind on a 50 franc note, watches on a 10 franc note, and constellations on a 20 franc note. The app also provides technical information for this new series of banknotes, the ninth set since 1907.



Free
Google Play

HAVEN: KEEP WATCH ESPIONAGE

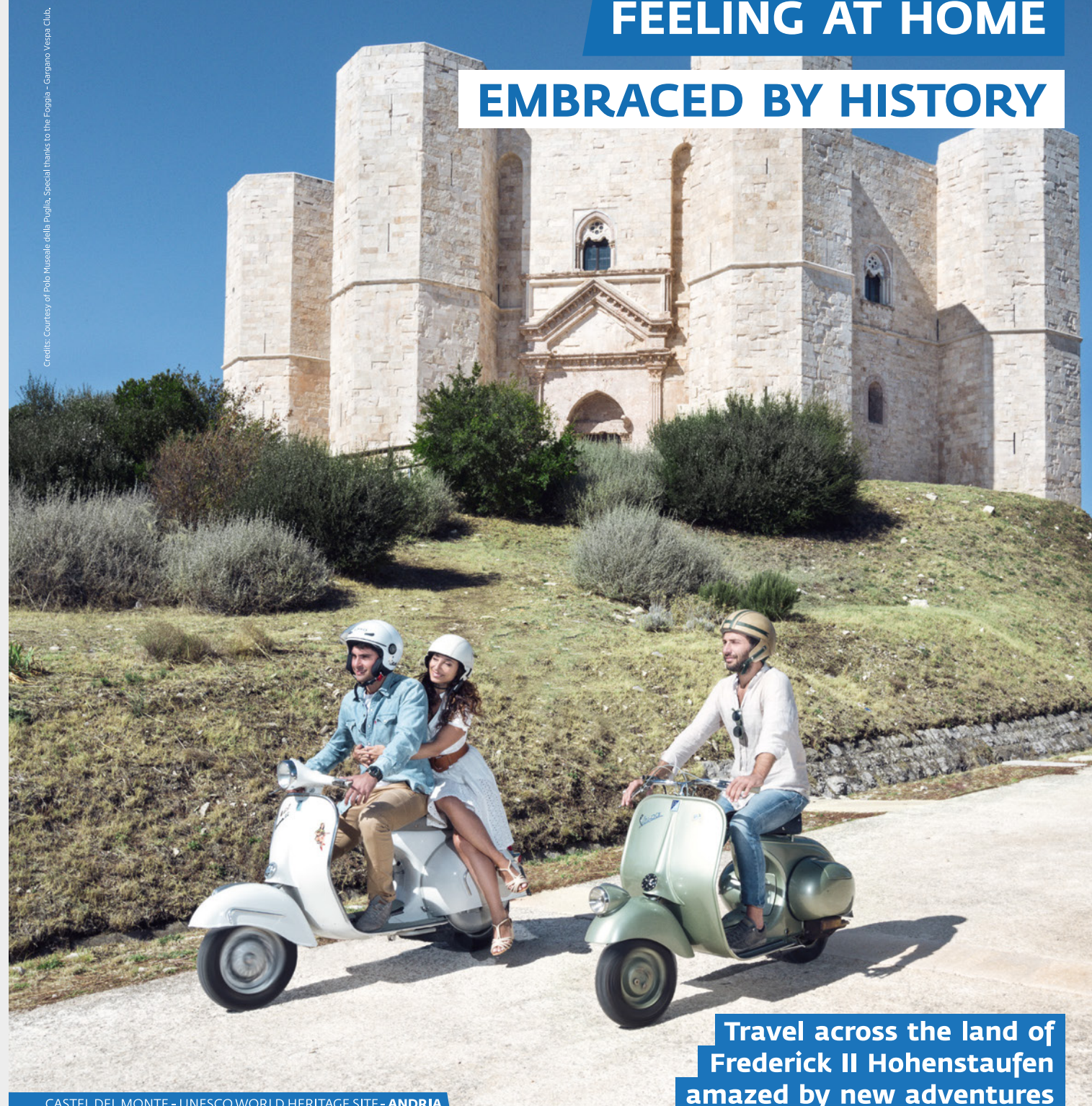
Sponsored by Edward Snowden himself, the Haven app transforms your smartphone into surveillance equipment that can detect and record every change in its immediate environment using the sound, light and motion sensors already on your phone. The app is still in its beta phase, but as an example, if a phone is placed on a hotel table, guests can determine if the hotel maid is actually a CIA agent waiting to place a keylogger on their laptops.

#WEAREINPUGLIA



PUGLIA, FEELING AT HOME EMBRACED BY HISTORY

Credits: Courtesy of Polo Museale della Puglia. Special thanks to the Foggia - Gargano Vespa Club.



Travel across the land of
Frederick II Hohenstaufen
amazed by new adventures

CASTEL DEL MONTE - UNESCO WORLD HERITAGE SITE - ANDRIA



Unexpected Italy
WEAREINPUGLIA.IT
Fly to **BARI** and **BRINDISI**



UNIONE EUROPEA
PER L'EUROPE 2014-2020
Asse II - Azioni LE



REGIONE PUGLIA
GOVERNATORE NINO DI STEFANO
SILVANO DI STEFANO



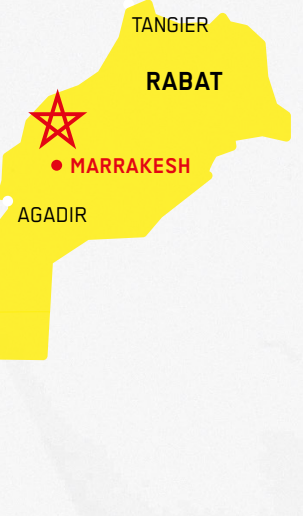
PROMOZIONE
AGENZIA REGIONALE DEL TURISMO

TRAVEL

A royal detox in Marrakesh

In Morocco, well-being rituals are far more than simply aesthetic; they stem from an Eastern way of life where taking care of the body feeds one's spirit. Venture to Marrakesh to replenish your energy.

BY SALOMÉ KINER



To drink



Neatly lined up in Jemaa el-Fna – the main square – juice vendors concoct tantalising combinations to entice consumers. It's worth a stop before heading into the chaotic souk to bargain hunt. The orange, grapefruit, apple, carrot, ginger and pomegranate juices are full of vitamins. But be sure to check that the juices are made on the spot: avoid ice cubes and tap water. Pair your juice with a pastry from Café des Epices and admire the view from the large bay windows that look out onto its namesake square. You will see multi-coloured piles of cumin, nutmeg and saffron from one of the many herbalist stands at this former slave market that is now an open-air pharmacy.

+++
Café des Epices
www.cafedesepices.net



In the centre of Marrakesh's Medina (old city), Jemaa el-Fna square welcomes water vendors, snake charmers and most importantly the fruit juice carts, which are not to be missed.

16/9CLUE

Savour (and cook)



Moroccan cuisine is one of the healthiest in the world, and its focus on olive oil and fresh vegetables is well-known around the globe. In Marrakesh, the best tajines in the city can be enjoyed at the Al Fassia restaurant, located within the hotel bearing the same name. The dish, which must be simmered for several hours, is an example of one of Morocco's best secrets: the art of patience. At Riad Monceau, Eastern culinary classics are served with a fine modern twist. But the wine list is the real star, as the restaurant

partners with the best vineyards in Morocco. The only downfall to this extraordinary cuisine is that you may become addicted to it. You won't easily forget its smooth textures, subtle spices and bright colours. This is what you'll encounter at the highly successful La Maison Arabe. After a half-day workshop, guests will leave knowing how to prepare two recipes of their choice (appetizer and main or main and dessert), taught by a Dada (traditional Moroccan cook) or a local chef. Similarly, chef Tarik Harabida shares his culinary secrets from

within his own garden, carefully extolling his farm-to-table expertise.

+++
Restaurant Al Fassia
www.alfassia.com
Le Riad Monceau
www.riad-monceau.com
La Maison Arabe
www.lamaisonarabe.com
Atelier Chef Tarik
www.atelier-chef-tarik.com

Unwind



After some rest and delicious meals, your body can now move to a higher state. There's no better place than the Royal Mansour, the ultimate luxury hotel. "We are proud to showcase the art of well-being in Morocco. Our mission is to offer our clients the essence of Royal traditions," said Stella de Bagneux, spa director. This is immediately apparent as you walk through the door, surrounded by a sumptuous citrus garden that ushers you into a sun-dappled lobby made of wooden

lattice. The spa offers a dizzying number of services, but the hammam is not to be missed. In its three pink marble rooms, guests relax in the capable hands of an expert masseuse that scrubs, exfoliates and massages using various natural ointments. All wraps are treatments directly inspired by traditional recipes and fertile regions, falling under three categories: dynamic, with lavender and holy basil; gourmet, with saffron and orange blossom honey; and relaxing, with rosebuds. All raw materials are

prepared right in front of you, which ensures an authentic experience with the highest quality products. You will leave the spa utterly relaxed and can even prolong the feeling with a visit to Yves Saint Laurent's elegant new museum afterwards.

+++
Spa Royal Mansour
162 Swiss francs for the signature hammam.
<https://www.royalmansour.com/en/the-spa/>

Get some fresh air



Amere 35 km from Marrakesh, down a road that seems to head straight into the Atlas mountains, is a little slice of paradise. A journey within a journey, the Jardin Bio-Aromatique de l'Ourika began with an original idea: show the world the powers of some of the 4,200 medicinal plants that grow in Morocco. This teaching garden is free and open to the public year round. Its mission is to raise awareness about environmental issues and the fragility of our vast biodiversity. Visitors can walk along curved flowerbeds, take in the delicate aromas and have lunch under a Berber tent. The garden also offers a variety of activities, such as foot soaks in bitter orange essential oil and Berber beauty treatments, as well as introductions to henna art and Argan workshops to witness the various steps of extracting the sacred oil. Cooking classes and an introduction to traditional bread-making are also available. ▲

+++
Jardin bio-aromatique de l'Ourika
www.jardin-bioaromatique-ourika.com



Marrakesh is also at the foot of the Atlas mountain range, an ideal playground for hikers.

ANTONIO MARIN SEGOVIA



CARS

A CLASS OF THEIR OWN

EVOLUTION CAN TAKE SEVERAL PATHS

BY PHILIPP MÜLLER

MERCEDES-BENZ G500, ALL-TERRAIN MUTANT



ENGINE: PETROL TURBO V8, 3,982 CM³
POWER: 422 HP TO 5,500 RPM
0 TO 100 KM/H: 5.9 sec
BASE PRICE: CHF 136,800.–

The Class G is one of the few dinosaurs in the auto world whose evolution is on par with the latest *Jurassic Park* films. The rustic twin of the famous Magna-Steyr Puch driven by Swiss troops has evolved to become a powerful luxury engine over the past four decades. For 2018, the Tyrannosaurus Benz has even become a super predator, faster but also more tame.

The megalithic shape was barely altered, but the flat windows and visible hinges are hiding a whole host of modern amenities available in the G. The independent front suspension transforms the G's driving capabilities, as does the adjustable damping, permanent all wheel drive and sleek automatic 9-shift gearbox. The reduction, the three locking differentials and the 24.1-cm ground clearance maintain the vehicle's trademark off-road heritage.

And since the vehicle weighs over 100 kilos less than its predecessor (but still 2.4 tonnes), the combined consumption of 12.1l/100 km

seems almost reasonable. Or at least less unreasonable than the 39-page list of available options that include multi-contour ventilated seats with eight available massage options. What a way to relax after the bumpy roads of the bush.

Note that the coupling hook is included but the DAB+ tuner comes separately...a matter of priorities. Even techie adventurers will enjoy the G with a plethora of assistance technologies and a large digital dashboard. This is extended by a very primitive grab-rail, as if to highlight the contrasts and versatility of one of the last authentic all-terrain vehicles on the planet. ▲



JEEP WRANGLER ENDURES

The most iconic 4x4, the Jeep Wrangler is slightly larger, available in a short or long (unlimited) model. It boasts new, more energy-efficient engines (2l micro-hybrid petrol turbo 270 hp and 2.2l turbodiesel 200 hp) and an 8-speed gearbox.

Available from October, approx. CHF 55,000.– (diesel).



LAND ROVER DEFENDER, 70TH ANNIVERSARY

While waiting for the new model in 2019, the rustic British brand has built 150 limited-edition models of the Defender, with an unprecedented 5L V8 petrol engine offering 405 hp. This "collector's" edition has several expensive customisations.

Version 90 Works V8 from £150,000.



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BOUTIQUE



ELECTRIC AND CHIC

Is it a motorcycle? No, it's an electric bicycle with an innovative design from Italy's SPA. With its carbon frame and fork, this 24-kg bike is equipped with a 500-watt motor that can reach speeds of 45 km/h and a range of up to 50 km after only five hours of charging. We particularly like the stylish luggage compartment inspired by Cafe Racer motorcycles.

www.spabicycleto.com
From CHF 10,600.-

GOLF SCOOTERS

Say goodbye to traditional golf carts. The Rollegolf transforms seamlessly between a trolley and electric scooter on demand, based on what golfers need on and off the green: it has a ride, a walk and even a travel mode (when folded). The latest version has a very light aluminium chassis and an adjustable telescopic steering column. The pièce de résistance is that the engine can also be controlled via a smartphone. Richard Branson himself has endorsed it.

www.rollegolf.com
From CHF 9,300.-



BIVOUAC FOR MOTORCYCLISTS

Handmade in Switzerland, the Bivouac tent from Exposed can be mounted to a motorcycle so you can camp wherever you want. Waterproof and rip-stop, this makeshift shelter can be set up in a matter of minutes. When rolled up, the tent is a compact package of only 15 cm in diameter and 45 cm wide. This refreshing, original concept is perfect for any motorcyclist who enjoys sleeping under the stars.

www.stayexposed.com
CHF 450.-



POCKET DRONE

Perfect for travelling, the Mavic Air weighs in at only 430 grammes and features foldable arms, making it DJI's most compact drone. But despite the drone's lightweight build, the engine has truly impressive flying capabilities. It can brave wind gusts up to 38 km/h and reach an altitude of 5,000 m. Equipped with a 4K camera, the drone can also take automatic shots in photo and video mode.

www.dji.com
CHF 980.-



WIRELESS GAMING KEYBOARD

Gamers were waiting and Corsair delivered. The very successful German manufacturer of PC cases and accessories now offers its K63 mechanical keyboard in a wireless version, but with the same flawless reactivity. Gamers can also purchase a lap board with a full-sized mousepad to place the keyboard on. The ultimate accessory for high-speed gaming from the comfort of your couch.

www.corsair.com
From CHF 138.-



SPY SHOES

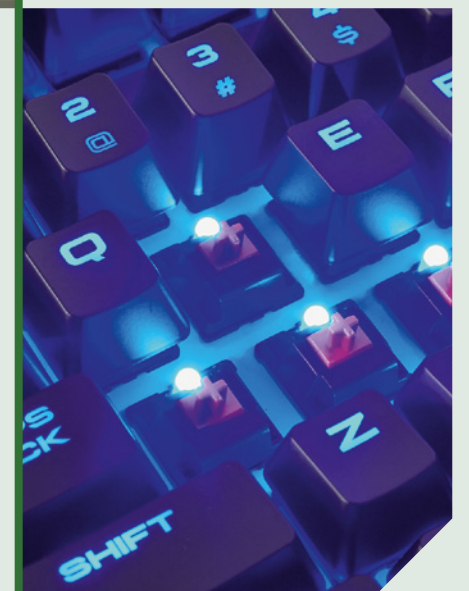
British shoemaker Oliver Sweeney has created a unique Derby, dubbed the "Secret Shoe". Crafted from wild red deer hide sourced in Scotland and vegetable tanned, this elegant made-to-order shoe contains a secret compartment in the sole that can hold three gadgets. You can select from 12 gadgets, including an extra-small mobile phone, a torch, a pen, a miniature camera, a GPS, a USB stick, a Swiss army knife or a compass.

www.oliversweeney.com
CHF 2,600.-

DEPECHE MODE FANS

Hublot designed 55 Big Bang watches inspired by Depeche Mode's 55 singles. The watch is protected in a black anodized aluminium suitcase by Rimowa, and each unique timepiece comes with the corresponding single on vinyl as well as a Roland JP 08 synthesizer. All profits go to charity: water, a charity organisation that provides clean water to developing countries.

www.hublot.com
CHF 29,900.-



TRIED AND TESTED

HEADPHONES
THAT SPEAK
40 LANGUAGES

BY DANIEL SCHNEIDER

In the US, Google has just released the first AI-powered headphones. *Swissquote Magazine* tested its instant translation feature.

With just one tap on the right earbud, the pocket interpreter is switched on. In French, I explain that I'm looking for a place to buy train tickets. "Where can I buy train tickets?" said my smartphone in English. The woman I'm talking to is confused; she doesn't know if she should answer me, my app or my headphones. I show her my mobile...

Her answer to me in English is instantly translated in my ear into French. Magic! Google's Pixel Buds can now translate into 40 languages. Of course, the feature still needs improvement. But for basic conversations, with short sentences in a calm environment, it's actually pretty remarkable. When Google first presented these to the public, the translation feature was the main advantage over Apple's AirPods.

We tested Chinese, Russian, Italian, Korean, French and German. After an initial phase

of getting used to the product, we enjoyed it very much and can see the future possibilities. Machine translation is about to improve dramatically thanks to advancements in artificial intelligence. As for the interpreter's voice, Google unveiled its Tacotron 2 prototype in December 2017, and it is no different from a human voice. Intonation, rhythm, volume, speed: everything sounds like a normal voice.

Much sooner than we think, two people with these headphones will be able to communicate naturally, without knowing a single word in the other's language.

Today, the Pixel Buds are still far from that goal. But the technology isn't in the headphones, but rather in the cloud. Updates will be available as progress is made, so users don't have to do anything manually.

However, if you plan to buy Google's headphones for the sole purpose of the automatic trans-

lation feature, you may be slightly disappointed. The subtleties of Swiss German, for example, are still lost, even for the internet giant.

That being said, Pixel Buds have other interesting features. The sound is perfect for a device in this price range. The five-hour battery life is excellent and the stylish felt case includes a battery that adds approximately 20 hours of additional listening time. The touch command reactivity is also impressive, especially when paired with Google's Pixel 2 smartphone (but the headphones work on most Android and iOS devices).

We also particularly liked the ingenious feature where the earbuds can be adjusted in the ear by twisting the cord. Those who cannot get used to Apple AirPods, like me, will be thrilled. In our opinion, keeping the cord is more of an advantage than a disadvantage. You don't fear losing an earbud if you make a sudden movement; if one of the earbuds falls out, it will stay around your neck. ▴

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