

New visionaries and the Chinese Century

Billionaires insights 2018

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A few words about our research

This is the fifth of our reports on billionaire wealth, continuing our investigation into this historic era of wealth generation. This year we have increased our research universe to cover 2,158 billionaires from 43 countries in the Americas, EMEA and APAC, looking back over more than two decades. By comparison, we analyzed 1,550 billionaires from 14 countries last year. Our database includes the 43 largest billionaire markets, which account for around 98% of global billionaire wealth. Further, we've conducted over 25 interviews with billionaire advisors and further face-to-face interviews with more than 30 billionaires and approximately 30 of their heirs. UBS and PwC advise a large number of the world's wealthy, and have unique insights into their changing fortunes and needs. (For more information see our disclaimer on page 30.)



New visionaries and the Chinese Century

A strong year in 2017 saw the world's billionaires grow their wealth to approximately \$8.9 trillion, its highest level in recorded history.

This report tells the story of a group of 2,158 individuals and counting. Over the past two centuries their predecessors' restless entrepreneurial spirit has given us revolutionary innovations such as the steam engine, the motor car, and the internet. Today, they are themselves at the vanguard of a new industrial revolution which is harnessing the great power of technology to disrupt old industries and create new ones. In the process, they are transforming the global economy and creating jobs and wealth for millions of people around the world.

Nowhere is this more visible than in China. Twelve years ago, the world's most populous country was home to only 16 billionaires. Today, as the 'Chinese Century' progresses, they number 373 – nearly one in five of the global total. Our report shines a spotlight on this rapid growth, spurred by innovations in areas such as technology and e-commerce and by a population that is unprecedented in terms of size.

Over the next two decades, we will see USD 3.4 trillion of wealth pass on to a new generation. Many of this younger, emerging group are looking to become entrepreneurs in their own right, transforming family businesses into business families. As they do so, they are focusing on making an impact on wider society, through activities such as philanthropy and sustainable investing.

The trends we discuss in the following pages are just in their infancy. As billionaires continue to grow in number and evolve, their influence will continue to expand beyond the economy and into tackling some of the biggest challenges facing humankind. We look forward to charting their progress in the years to come.

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Executive summary

1. Shaping history

Globally, billionaire wealth increased by USD 1.4 trillion to USD 8.9 trillion in 2017, its greatest absolute growth ever, supported by a high level of entrepreneurial value creation. Just a handful of entrepreneurs, most of them from the US, have changed the world over the past few decades. Billionaires have driven almost 80% of the 40 main breakthrough innovations over the last 40 years. Approximately 70% are technology-related and 80% of the companies behind them are based in the Americas, with 20% in APAC.

2. The China phenomenon

China's billionaire entrepreneurs are leading their country's economic transformation, and by extension that of the rest of Asia. Over little more than 10 years, they have created some of the world's largest companies, raised living standards and made fortunes at an unprecedented pace. 2017 itself was an exceptional year: reflected in China minting two new billionaires a week, and Asia as a whole creating more than three billionaires a week. For context, as recently as 2006, there were only 16 Chinese billionaires. There are already more billionaires in Asia than in the US most of them Chinese. If they continue to progress at this rate, within three years Asia's billionaires will be wealthier as well.

3. The vanguard of the 'Fourth Industrial Revolution'

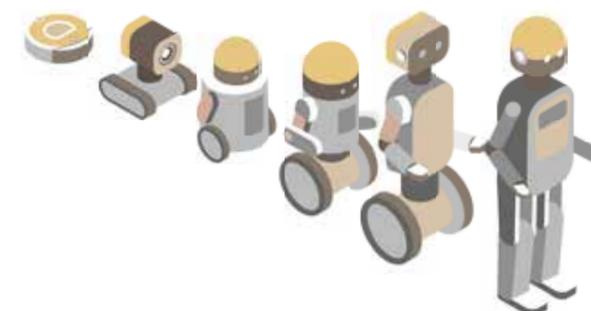
One hundred and ninety-nine entrepreneurs became billionaires for the first time in 2017 – some of them in the vanguard of the 'Fourth Industrial Revolution'. They are blurring the lines between the material, digital and biological worlds. By our estimation, almost a third (30%) of the 199 new self-made billionaires accumulated their wealth through innovation and business model disruption, some of them in areas related to this accelerating revolution. The remainder did so through scaling up businesses, especially in the huge markets of APAC such as China, India and Indonesia.

4. Shenzhen challenges Silicon Valley

A new cohort of Chinese entrepreneurs is challenging Silicon Valley, amid rising tensions over trade and intellectual property. They are developing new business models, seizing opportunities, moving rapidly between business sectors. Some 89 Chinese entrepreneurs became billionaires for the first time in 2017 (a high number of Chinese also lost billionaire status), three times more than the 30 in the US. What's more, China produced 50 unicorns from 2016 to 2018, just slightly behind the 62 in the US. Encouraged by their country's rapid growth, the Chinese are proving restless innovators and disruptors.

Innovation

Leading innovators



Billionaires have driven almost 80% of the 40 main breakthrough innovations over the last 40 years. Approximately 70% are technology-related and 80% of the companies behind them are based in the Americas, with 20% in APAC.

Growth

The China phenomenon



Globally, billionaire wealth increased by USD 1.4 trillion to USD 8.9 trillion in 2017, its greatest absolute growth ever, with China minting 2 billionaires a week.

Industry

The vanguard of the 'Fourth Industrial Revolution'

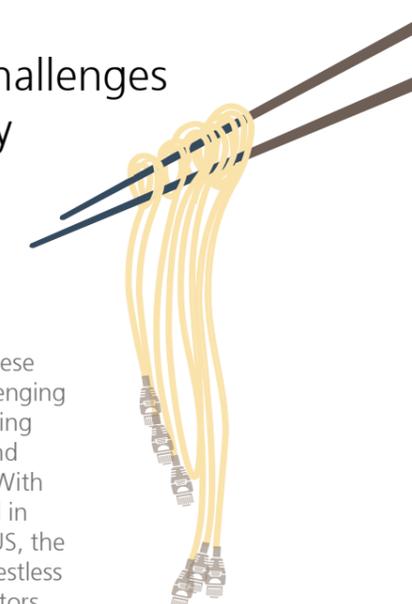
One hundred and ninety-nine entrepreneurs became billionaires for the first time in 2017 – some of them in the vanguard of the 'Fourth Industrial Revolution'.



Technology

Shenzhen challenges Silicon Valley

A new cohort of Chinese entrepreneurs is challenging Silicon Valley, amid rising tensions over trade and intellectual property. With 50 unicorns produced in China and 62 in the US, the Chinese are proving restless innovators and disruptors.



Global

From the family business to business families

As the next generation of sons and daughters grows up, there is rising entrepreneurial spirit in billionaire families across the world.



Sustainability

New wealth, new impact

While sustainable investing is becoming mainstream, as millennials assume roles in family offices and philanthropic organizations the trend is likely to grow stronger.



Succession

Leading 21st Century families forward

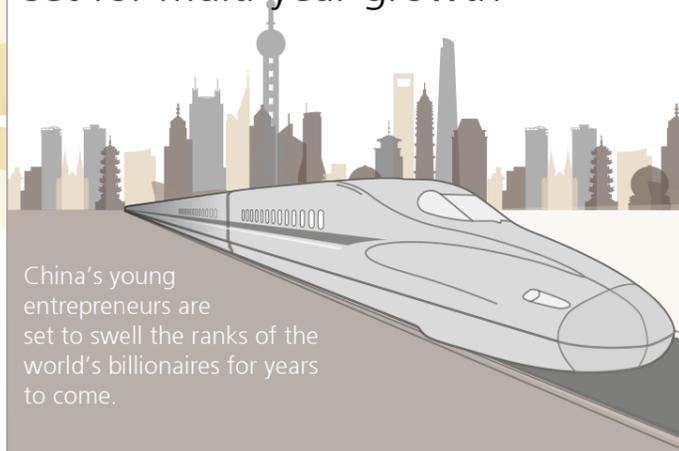
New multigenerational families are being created, recognizing the need to plan for succession. In 2017 alone, 44 heirs inherited more than a billion dollars each (56% Americas, 28% EMEA, 16% APAC), totalling USD 189 billion.



Outlook

China's young entrepreneurs set for multi-year growth

China's young entrepreneurs are set to swell the ranks of the world's billionaires for years to come.



5. From the family business to business families

As the next generation of sons and daughters grows up, there is rising entrepreneurial spirit in billionaire families across the world. The family business is a good starting point. Some 62% of multigenerational billionaires who inherit a family business go on to start further businesses themselves. By comparison, only 42% of those who inherit assets do so. This data shows that keeping the original business can sustain a family's entrepreneurial spirit through the generations.

6. New wealth, new impacts

While sustainable investing is already becoming mainstream, as millennials assume roles in family offices and philanthropic organizations the trend is likely to grow stronger. Showing the enthusiasm for sustainable investing, more than a third (38%) of family offices are now engaged in sustainable investing, and almost half (45%) plan to increase these investments in the next 12 months.¹ Looking to the future, 39% anticipate sustainable investing increasing still further when the family's next generation takes control.

7. Leading 21st Century families forward

New multigenerational families are being created. In 2017 alone, 44 heirs inherited more than a billion dollars each (56% Americas, 28% EMEA, 16% APAC), totalling USD 189 billion. Over the next two decades we expect a wealth transition of USD 3.4 trillion – almost 40% of current total billionaire wealth. Recognizing the need to plan for succession, and reflecting the altruism of the millennial generation, new wealth planning principles should include: multigenerational collaboration, preparing wives and daughters, embarking on joint family projects, encouraging entrepreneurship and thinking about sustainability.

8. China's young entrepreneurs set for multi-year growth

China's young entrepreneurs are set to swell the ranks of the world's billionaires for years to come. Supported by rapid urbanization and productivity growth, they are leveraging technology to revolutionize the country's services sector, as well as growing businesses in areas such as AI and healthcare. However, the pace of growth will fluctuate, depending on the economic cycle, financial liquidity and whether the US/China trade war escalates. Their example is being followed in Asia's other populous developing markets such as India and Indonesia.

¹ The Global Family Office Report 2018. UBS; Campden Research.

Section 1

The rise of the new billionaire

A new group of self-made entrepreneurs is leading billionaire wealth to fresh highs. As the value of billionaires' assets grew by USD 1.4 trillion to USD 8.9 trillion in 2017, the greatest annual increase ever, just 332 new billionaires accounted for more than a third (38%) of the increase. Notably, 199 of them were self-made entrepreneurs, of whom 89 were from China.

Growing by almost a fifth (19% compared to 18% the year before), 2017's increase was substantially higher than the average 9% for the past five years. Nonetheless, billionaire wealth underperformed the world's equity markets – the MSCI AC World Index² rose by a quarter (25%). In a year when the index's top ten stocks dominated its performance, billionaires were bound to underperform. However, it is

interesting to note that six of the top ten performers were technology stocks founded by entrepreneurs who subsequently became billionaires.³

Three decades of exceptional entrepreneurial activity is creating newly influential families: the new Rockefellers and Rothschilds. Among 2017's new billionaires were 61 heirs. The number of multigenerational billionaires is expected to grow significantly over the forthcoming decades.

Billionaires in Consumer & Retail – including food, cosmetics and drink – added most to their wealth, which increased in total by USD 360 billion. Technology followed, adding USD 250 billion, and then Materials tycoons, with

USD 180 billion. Almost a quarter (23%) of billionaire wealth is from Consumer & Retail – more than any other sector.

China mints two billionaires a week

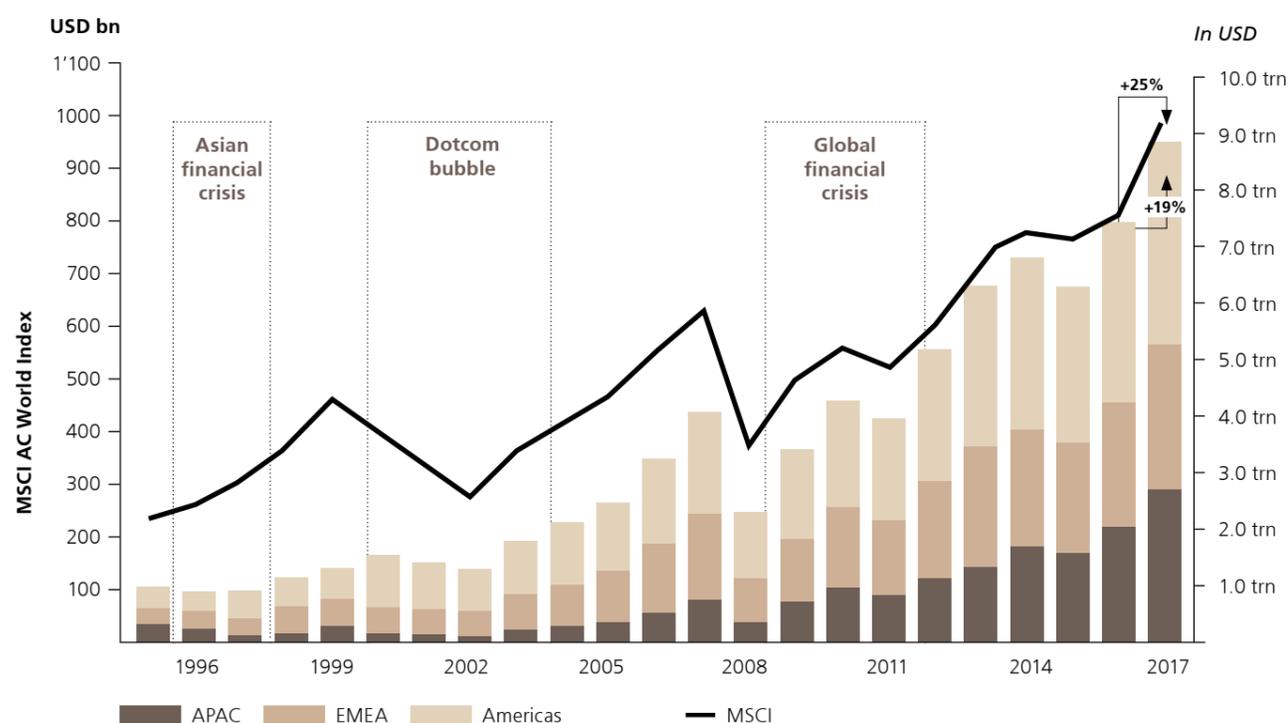
China's billionaires are making history. Reflecting their role in the country's extraordinary economic success story, there were 373 Chinese billionaires at the end of 2017, and 97% of them were self-made. This phenomenon has happened in little more than 10 years – as recently as 2006 there were just 16 Chinese billionaires.

In a 'mobile-first' country with a population of 1.4 billion, by far the world's biggest, disruptive innovation is a powerful force. China's entrepreneurs are discovering new markets among the country's 770 million internet users,⁴ creating businesses and changing society at a pace never seen before.

After several years in the making, in 2017 the growth of China's e-commerce and technology businesses exploded. In this one year alone, Chinese billionaires' wealth increased by 39% to USD 1.12 trillion – equal to the market capitalization of the entire Swiss Market Index.⁵ More than two Chinese billionaires were minted each week. By the year end there were 55 net new billionaires, increasing the total to 373. (China's billionaires have a high turnover – 106 people became billionaires but 51 dropped off the list, illustrating the risks of doing business in China.)

Outstanding economic and market conditions were ideal for wealth creation. Real GDP grew by 6.9% and profits in the offshore MSCI China Index surged by 23%. The MSCI China Index rose 54.1% and the MSCI China A Onshore Index by 20.5%. There were 631 IPOs in Greater China, raising USD 52.1 billion, compared with 378 that raised USD 47.3 billion in 2016.⁶ Valuations were high: 81% of

Wealth development of billionaires across the regions 1995–2017



² www.msci.com/acwi

³ Apple, Microsoft Corp, Amazon, Facebook, Alphabet, Tencent Holdings.

Development of number of billionaires across the subregions 2016–2017

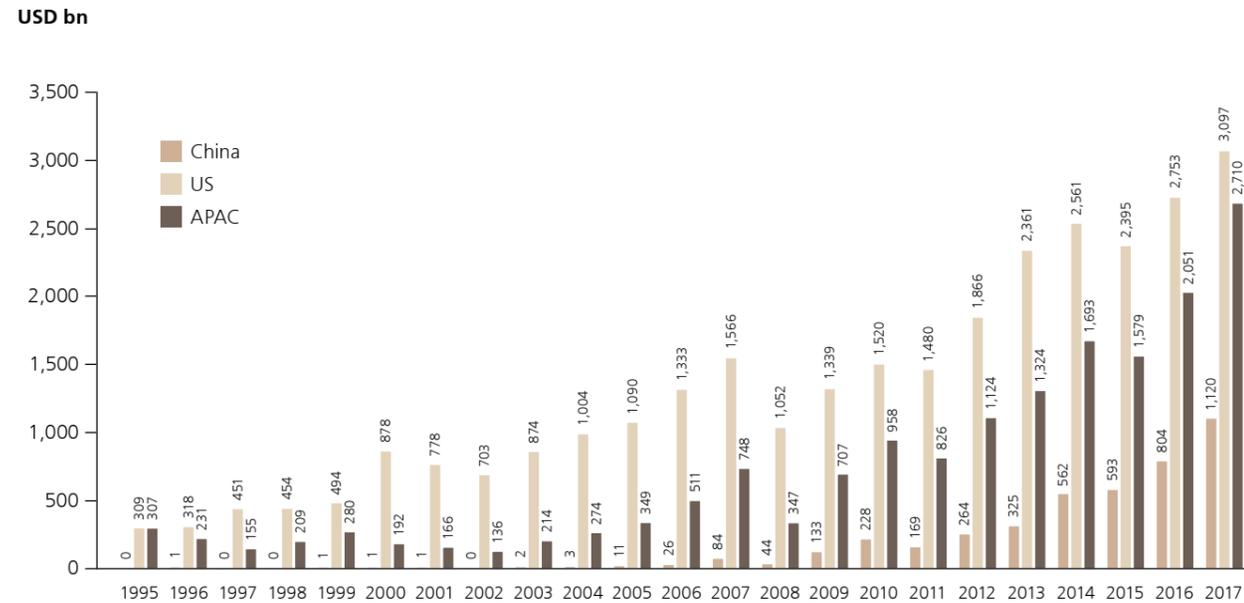
Region	Subregion	Number of billionaires 2016	Number of billionaires 2017	Avg. wealth 2017 in USDm	Avg. age 2017	Share of female billionaires in %
APAC	Greater China	418	475	3,240.4	55.75	8%
	Oceania	34	43	2,741.9	66.07	23%
	South East Asia	259	296	3,555.4	66.71	4%
	APAC Total	711	814	3,328.6	61.43	8%
EMEA	Eastern Europe	147	163	3,366.3	56.88	4%
	MENA	42	52	3,175.0	63.94	6%
	Western Europe	397	414	4,517.4	64.11	18%
	EMEA Total	586	629	4,108.1	62.23	13%
Americas	Central and South America	83	84	4,596.4	68.71	14%
	North America	599	631	5,142.9	66.76	12%
	Americas Total	682	715	5,078.7	66.99	12%
Total		1979	2158	4,135.7	63.51	11%

⁴ As at December 2017.

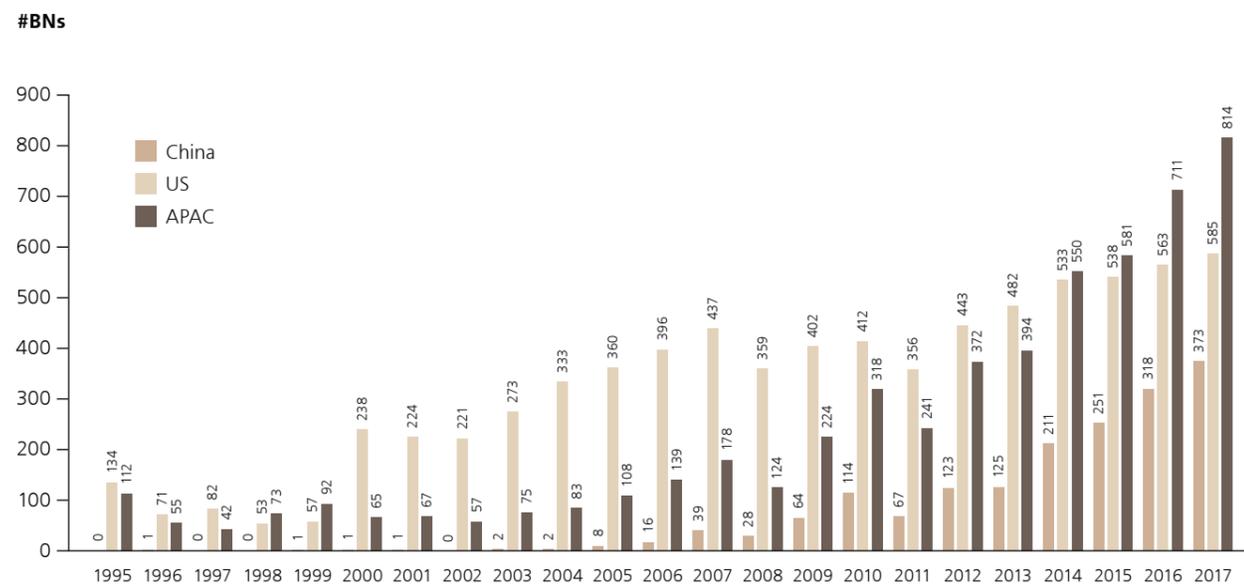
⁵ CHF 1,145 billion (29.12.2017).

⁶ PwC Greater China IPO Watch 2017.

Wealth development of billionaires in US, China and APAC 1995–2017



Development of number of billionaires in US, China and APAC 1995–2017



2017's IPOs floated on price/earnings multiples exceeding 20 times, compared to 63% in 2016. These conditions allowed businesses to flourish and entrepreneurs to exit at high valuations. Reflecting successive phases of China's rapid ascendancy, just three sectors accounted for over half of billionaire wealth at the end of 2017 – Real Estate (20%), Technology (19%) and Consumer & Retail (13%). Early in the country's boom, entrepreneurs made their fortunes in real estate, as people migrated from the country to the city. But in the past 10 years, activity has switched to the internet and e-commerce. Most recently, there has been growth in other areas of technology such as fintech, biotechnology and artificial intelligence. "Nowhere else in the world can you find better conditions for growth than in China," asserted a Chinese billionaire. "The continued progress of wealth creation is supported by government policies liberating the economy, while urbanization and business model disruption has crafted powerful new entrepreneurs."

APAC billionaires overtake US in three years

Within Asia, the type of billionaire varies enormously. There are 814 billionaires across a region that includes China, the developed economies of Japan and Australia, and emerging markets such as India and Indonesia. While almost all of China's billionaires are self-made, just 60% of those in the rest of APAC are. Some 177 Asian billionaires were minted during the year – over three a week (although the net growth after dropouts was 103). The 14% growth rate was twice Europe's (7%), and three times the rate in the Americas (5%). More than half, or 58%, of new billionaires worldwide came from APAC. Fueled by China's rise, APAC billionaires' net worth grew by almost a third, or 32%, to USD 2.7 trillion in 2017. At this rate, they will be wealthier than their American peers in less than three years.

After China, India and Indonesia have similarly fertile conditions for wealth creation. Huge populations – India's is 1.3 billion and Indonesia's 261 million – that are urbanizing fast offer the scale for innovative businesses to disrupt inefficient service industries in sectors such as retail and finance.

India's billionaire wealth increased by a substantial 36% in 2017, though at USD 440.1 billion it remained roughly a third of that in China. The number of local billionaires increased by 19 to 119, again still considerably lower than China. In Indonesia, billionaire wealth increased by 37% to USD 72.5 billion, while the number of billionaires was static at 20. But both countries lack China's legacy of a strong manufacturing base and R&D expenditure. So, they may well follow China but are unlikely to match it.

Momentum slows in the US and Europe

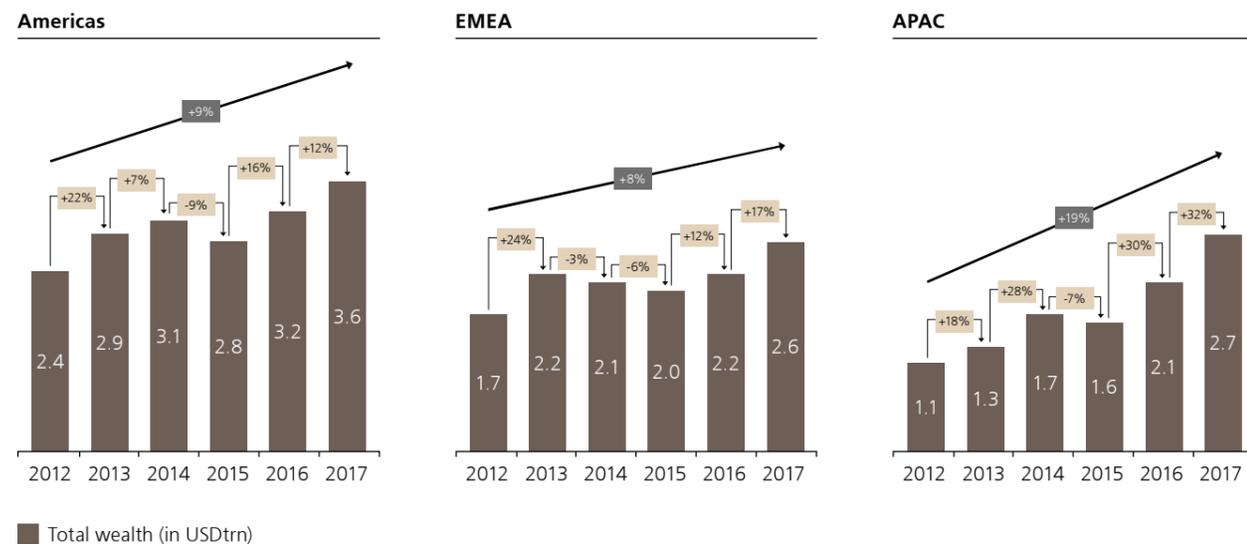
While the US has the largest concentration of billionaire wealth, its growth has slowed. 2017's 12% growth, to USD 3.1 trillion, was far lower than the average global rate. In a country where a few visionaries have pioneered the world's technological revolution, Technology was the biggest wealth driver, followed by the Consumer & Retail sector. Focusing specifically on new billionaires, the greatest number of them (40%) came from Consumer & Retail, followed by Financial Services (17%) and Technology (11%).

The number of new US billionaires is far lower than five years ago. The net number of billionaires grew by just 22 in 2017, down from 87 in 2012. In Financial Services, for example, there were nine new billionaires, compared with 20 in 2012. This may be due to the pressures on hedge funds, where both fees and performance have fallen. But we are also witnessing the rise of stealth wealth. A tendency to keep businesses private for longer before listing on public markets means that wealth creation is underreported in the US, and even Europe.⁷

In US dollar terms, 2017 appeared to be Western Europe's standout year. Billionaire wealth grew by 19% to USD 1.9 trillion, but this partly reflected the 15% appreciation in the euro versus the dollar. The region's billionaire population increased by just 4%, or 17, to 414. Signaling the importance of multigenerational families, wealth transition between the generations of just five families in Consumer & Retail (cosmetics, retail, foods and toys), as well as Technology, accounted for almost a third (30%) of Western Europe's total wealth expansion. Beyond the US and Europe, billionaires depended largely on the fortunes of local economies as well as commodity prices. As Russia struggled to return to growth after a recession caused by sanctions and low oil prices, the number of billionaires increased by five to 101. Wealth increased by just 6% to USD 409.3 billion. In Brazil, Latin America's largest billionaire market and another country gradually recovering from recession, wealth grew just 2% to USD 176.7 billion. The number of billionaires dropped by two to 42.

The contrast to China could not be greater. Neither Russia nor Brazil enjoys conditions so conducive to entrepreneurial activity – a huge population, highly supportive government policy, rapidly liberalizing economy and major technological change.

Yearly billionaire wealth growth across the regions 2012–2017



⁷ For example, over one third of private equity companies have been held for over five years. PwC Deals. US private equity deal insights, year-end 2017.



Section 2

Creating wealth and shaping history

Just a few entrepreneurs have changed how we live. Whether inventors, executives, business owners or investors, their innovations have brought major benefits to society. As these innovations have been widely adopted, so the entrepreneurs have reaped great financial rewards.

Over the last 40 years, almost 80% of the 40 main breakthrough innovations have been driven by people who are billionaires today. Approximately 70% are technology-related and 80% of the companies behind them are based in the Americas, with 20% in APAC.⁸ In technology, for example, today's billionaires have been behind the personal computer revolution, smart phones, the internet and e-commerce, social networking and GPS systems. In medical science, they have pioneered DNA testing and sequencing/human genome mapping. And in renewables they have been driving forces for wind turbines and biofuels.

Entrepreneurs are also the architects of today's 'Fourth Industrial Revolution,' blurring the lines between the material, digital and biological worlds.⁹ They are among 2017's 199 new self-made billionaires, almost half of whom are leading China's transformation. By our estimation, almost a third (30%) of the 199 accumulated their wealth through innovation and business model disruption, some of them in areas related to accelerating industrial revolution.

Yet, many entrepreneurs are also growing businesses through scaling them up, especially in Asia's fast-developing, huge markets such as China, India and Indonesia. As people move to the cities and join the middle classes, so consumer markets are growing quickly. They are easily accessible through e-commerce that breaks down physical distances.

Shenzhen challenges Silicon Valley as home of tech innovation

In just 30 years, China has evolved from a command economy to challenge the US, the center of capitalism. Remarkably, China's government only allowed private enterprise in 1988. Over the past 10 years, private enterprise, typically in the new economy, has played an even greater role in the country's rapid growth.

China has taken over from the US as the place where exceptional wealth is created at the fastest rate. Eighty-nine Chinese entrepreneurs became billionaires for the first time in 2017, three times more than the 30 in the US, which was comparable to EMEA's 34 (however, five of them are Russian, with almost half of these in the mining industry). As China's 'new economy' outpaces the 'old,' entrepreneurs are building businesses faster. Seventeen percent of 2017's new Chinese billionaires founded businesses less than 10 years ago; in the US that number was 7%.

The country has become a mobile-first nation. Smartphones are a necessity for everyday life, with 788 million internet users accessing the web via their phones.¹⁰ Smartphones and the internet have created huge new addressable markets in e-commerce, microcredit and payments. At the same time, the government has prioritized supporting artificial intelligence. A huge population, the invention of the smartphone and government support have made one of history's great moments for new enterprise.

⁸ Sources: Wharton School of Economics, "A World Transformed: What Are the Top 30 Innovations of the Last 30 Years" (2009); Massachusetts Institute of Technology, Breakthrough Technologies List (2010–2018).

⁹ World Economic Forum, "The Fourth Industrial Revolution: what it means, how to respond", Klaus Schwab, 14 Jan 2016.

¹⁰ Source: China Internet Network Information Center (CNNIC)

2017's 199 self-made billionaires: From the Fourth Industrial Revolution to pork processing

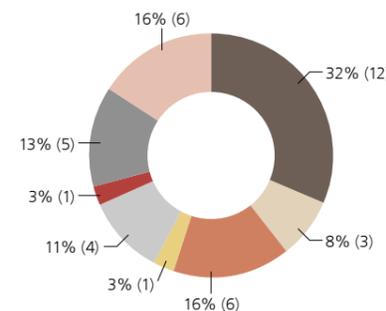
The 199 self-made individuals who broke into the billion-dollar bracket in 2017 include some of the leading innovators using technology to disrupt the full range of business sectors all over the world. In the US, Chris Larsen is co-founder and executive chairman of Ripple, the San Francisco-based company using blockchain technology to revolutionize the global payments industry. A serial entrepreneur, he co-founded Ripple in 2012 to transform the efficiency of international payments for banks. His wealth is based on his stake in Ripple and his holdings of XRP, the token of Ripple. Previously, he co-founded the online mortgage lender E-Loan, in 1997, and, eight years later, the peer-to-peer lender Prosper.

One of China's many new billionaires is Wang Jian, a former research fellow at the University of Washington in Seattle, who co-founded BGI, the Shenzhen-based gene-sequencing company. He started BGI in Beijing in 1999, subsequently moving to Shenzhen. BGI has grown into one of the world's leading gene-sequencing companies, providing researchers and healthcare professionals with high-quality genomic data at rapid turnaround times with competitive pricing. In 2017, Wang Jian became a billionaire when BGI went public. Also in China is Zhang Yiming, who chairs Beijing ByteDance, one of the country's largest content platforms. Another new joiner is the serial Russian entrepreneur, Pavel Durov, who created the Telegram Messenger app, which reportedly has about 180 million users worldwide.

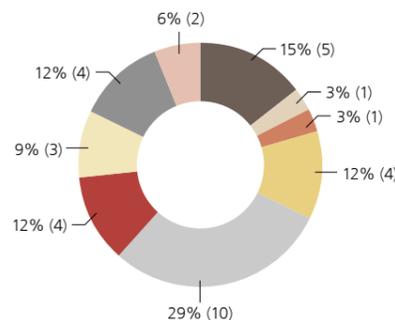
Those who built their businesses through scaling up include Wan Long, the Chinese chairman and CEO of WH Group, the world's largest pork processor and hog producer. Similarly, Wu Shaoyun chairs Jing Brand, which supplies 180 million liters of Chinese liquor and spirits each year. In North America, Lawrence Rossy, owner of Canada's largest dollar store chain, is another who used scaling up to build a business.

Split of 199 self-made billionaires per region and per industry

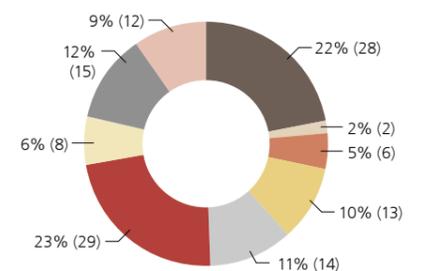
Americas – 38 billionaires



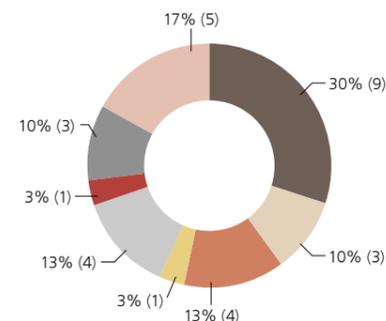
EMEA – 34 billionaires



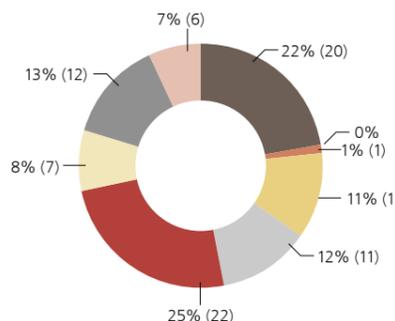
APAC – 127 billionaires



United States – 30 billionaires



China – 89 billionaires



- Consumer & Retail
- Entertainment & Media
- Financial Services
- Health Industries
- Industrials
- Materials
- Other/diversified
- Real Estate
- Technology

Notably, 199 of 2017's new billionaires were self-made entrepreneurs, of whom 89 were from China.



China is catching up with the US fast. Between 2016 and 2018, 62 companies gained unicorn status (a start-up company valued at more than a billion dollars) in the US and 50 in China.¹¹ As a result, there are 119 unicorns in the US and 67 in China, many of them based in Shenzhen (the city is a hub for hardware and social networking, while Beijing leads in software and Hangzhou in e-commerce). In 2017, VC funding for start-ups in the US and China was even – at 42% of the global total by investment value.¹² Similarly, China had four times as many artificial intelligence-related patents and three times as many blockchain and crypto-related patents as of 2017.¹³

But the US still has by far the bigger tech industry, as billionaire wealth attests. Seventy US tech billionaires account for USD 707.6 billion of wealth, while China's 45 account for less than a third of that at USD 213.4 billion. For comparison, EMEA is home to 30 tech billionaires with USD 97.5 billion in aggregate wealth.

China's billionaires are different

Like billionaires elsewhere, China's are 'smart risk takers,' but even more so. Relentlessly innovative, they are forever seizing new opportunities to make their companies fast-growing, powerful and flexible. Younger than their peers elsewhere – Chinese billionaires are 55 years old on average, compared with an average of 64 globally – they are always reinventing their businesses. In China's unforgiving business world, to stand still is to risk being disrupted.

They transform their companies repeatedly. For example, the country's e-commerce giants have moved into finance, offering money market products with higher interest rates than banks. But the climate of unremitting reinvention means that the flip side of rapid wealth creation is sudden loss of wealth (as reflected in 2017's billionaire data, see "China mints two billionaires a week").

There are four generations of Chinese entrepreneurs, all of whom have built their businesses in the past 30 years. The first leveraged their country's lower wages, becoming export manufacturers to the world when trade barriers were being lowered. The second's opportunity came in real estate as the cities expanded fast. Meanwhile, the third built the internet platform companies for e-commerce.

Finally, the fourth generation is developing enabling technologies – in areas ranging from apps to artificial intelligence to healthcare – fostering the Fourth Industrial Revolution.

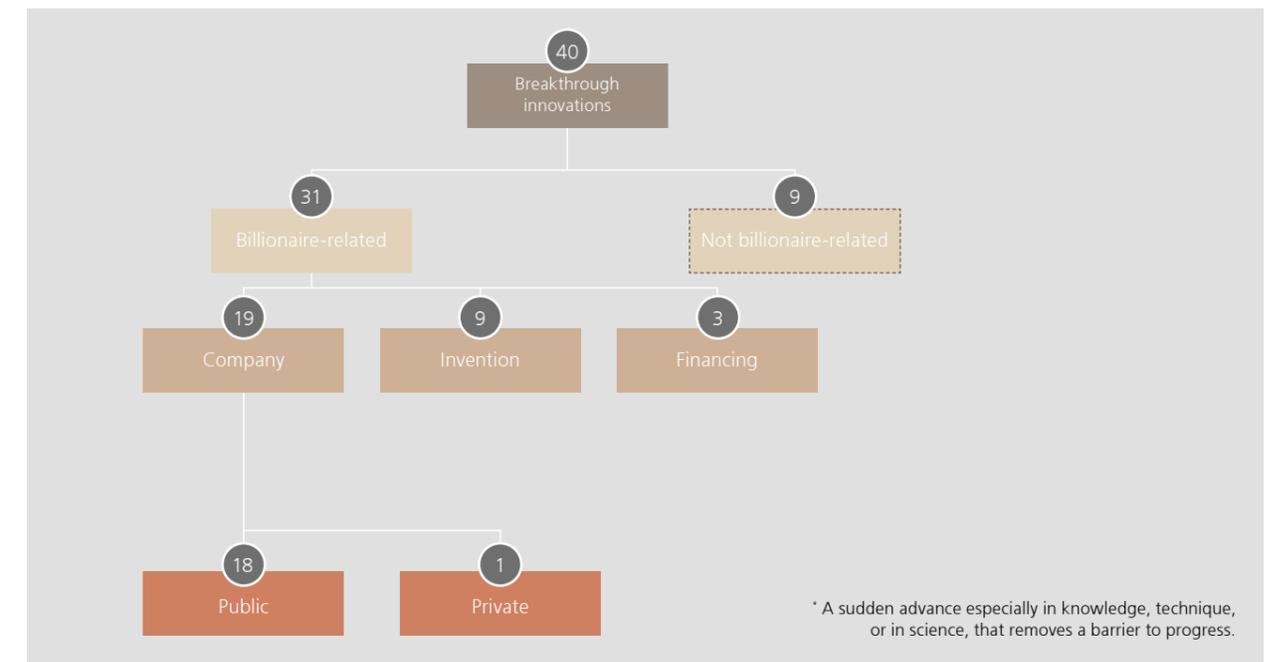
What unites these generations is their commitment to innovation – not necessarily product innovation but innovation in their operating models and services. They are quicker to seize business opportunities than Western peers, often doing less rigorous business planning in the desire to get to market quickly.

"The Chinese culture is different from the rest of the world, especially the EU," explained one Asian billionaire. "In China people work harder and are more willing to experiment by trial and error while Europeans work in a more structured way. By the time people in the EU have come up with a structured plan, the Chinese have already developed a solution."

Many of the early entrepreneurs – in their 40s, 50s and 60s today – had little formal education. They "were crossing the river by feeling the stones," as Deng Xiaoping characterized his approach to economic reform. The fourth generation, by contrast, are often the children of middle-class parents. Some have been educated in the West, or have worked there. They might be business school graduates or engineers.

It used to be said that the Chinese excelled in pirating products and business models developed in the West. No longer. In e-commerce and other areas of technology, they are rapidly disrupting business processes and operations, jumping between business sectors. In this sense, China's billionaires may well be setting the model of the future.

Billionaires involved in the majority of breakthrough innovations* over 40 year



¹¹ CB Insights, 26 September 2018

¹² Global Startup Ecosystem Report 2018.

¹³ Global Startup Ecosystem Report 2018.

They say that the first generation makes it; the second generation preserves it; the third generation squanders it. Yet the cliché no longer appears to be appropriate.



Section 3

Managing family wealth in the 21st century

The past 30 years have seen far greater wealth creation than the Gilded Age of the late 19th Century. That period bred generations of families in the US and Europe who went on to influence business, banking, politics, philanthropy and the arts for more than 100 years. With wealth set to pass from entrepreneurs to their heirs in the coming years, the 21st century multigenerational families are being created.

A major wealth transition has begun. Over the past five years (2012–2017), the sum passed by deceased billionaires to beneficiaries has grown by an average of 17% each year, to reach USD 117 billion in 2017. In that year alone, 44 heirs inherited more than a billion dollars each (56% Americas, 28% EMEA, 16% APAC), totaling USD 189 billion (the discrepancy with USD 117 billion is assumed due to growth of assets in probate and revaluation of assets).

Over the next two decades we expect a wealth transition of USD 3.4 trillion worldwide – almost 40% of current total billionaire wealth. The calculation is simple. There are 701 billionaires over the age of 70, whose wealth will transition to heirs and philanthropy over the next 20 years, given the statistical probability of average life expectancy.

But given the small number of people involved and skewed wealth distribution, the trend from year to year will be far from linear. For example, the 30 wealthiest above 70 years of age have accumulated a total net worth between them of about USD 1 trillion (i.e. 30% of the wealth likely to be transitioned over the coming two decades). Eight of them are US business figures with, between them, an aggregate net worth of about USD 500 billion from sectors such as Financial Services, Technology, Consumer & Retail, Real Estate and Materials.

So far, this changeover between generations is happening almost entirely in the Americas and EMEA, where almost 90% of the transition is occurring. The total size of the inheritances is slightly higher in the Americas than EMEA. Within APAC, India's high number of elderly billionaires leaves it set for the highest imminent transition, followed by Hong Kong.

It's clear that in the US, Europe and Asia's older economies, succession planning should not be deferred. In Asia, the most fragmented and diverse region, those Chinese billionaires still in their 30s are too young to start planning seriously, preferring to focus on continuing to build and diversify their wealth.

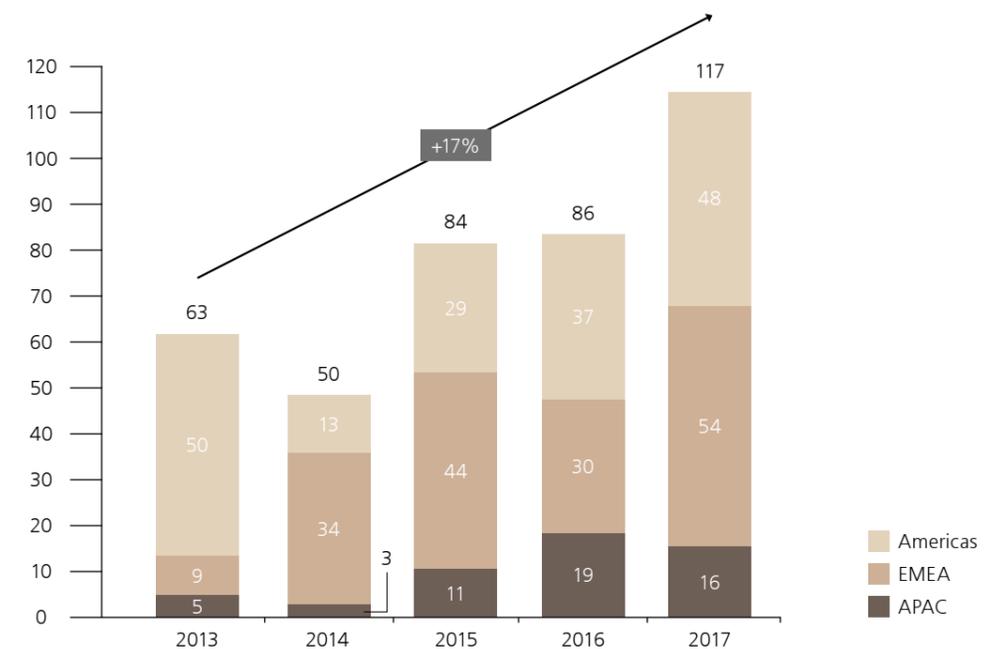
From family businesses to business families

They say that the first generation makes it; the second generation preserves it; the third generation squanders it. Yet the cliché no longer appears to be appropriate. As we work with our billionaire clients, many of the next generation seem highly motivated, committed to their chosen careers, the family business and/or doing social good. For sure, there are exceptions, but there is a tendency for the next generation to approach the responsibility of wealth extremely seriously, even becoming entrepreneurs in their own right.

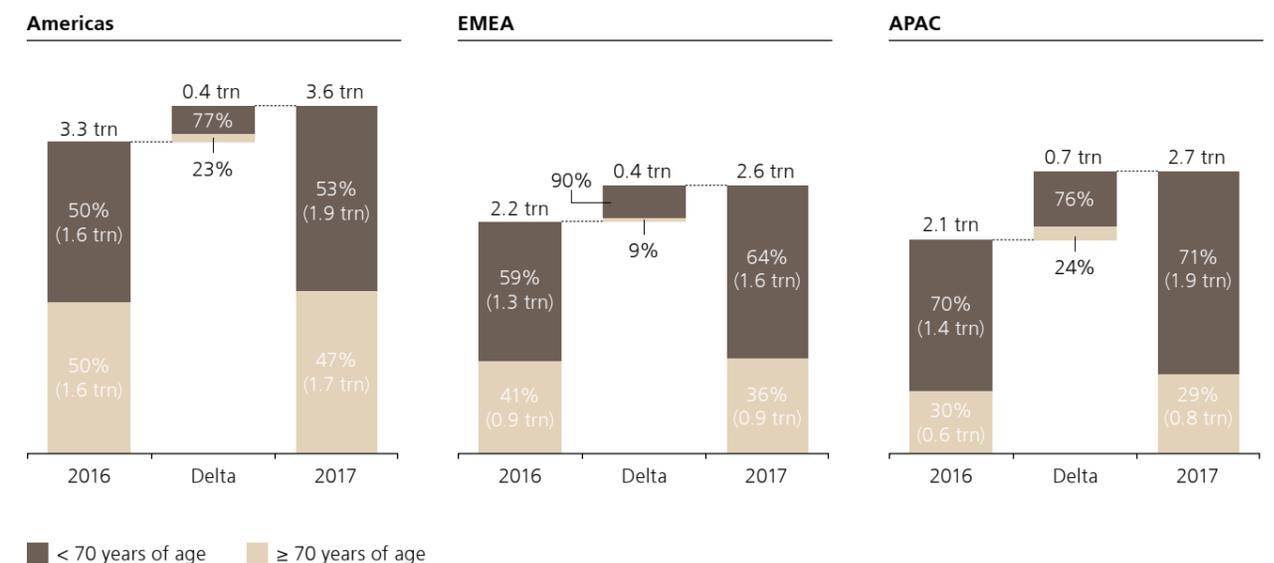
"The new generation, born in the internet era, are more willing to take risks," said one billionaire. "They have more information and can be more courageous about trying new ideas and being entrepreneurial."

Business families are emerging, not just family businesses. The family business is a good nursery for entrepreneurs. Of those multigenerational billionaires who inherit a family business, almost two thirds (62%) then start entrepreneurial ventures themselves. By comparison, only 42% of those who inherit assets do so. This is further evidence

Wealth of deceased billionaires across regions 2013–2017



Share of wealth of billionaires over 70 years of age across regions in 2017



of the wisdom of keeping the original business. As shown in our 2015 Billionaires Insights report,¹⁴ in Consumer & Retail (the largest billionaire sector) the original business has proved the most effective store of wealth down the generations. Our new data shows that keeping the original business also sustains a family's entrepreneurial spirit.

In many cases, families understand the advantages of giving the next generation business experience early. They are seeking to perpetuate the entrepreneurial spirit through supporting sons and daughters, both financially and in other ways, in their efforts to set up new businesses. For example, families in countries such as Bahrain and France have set up venture capital funds to support the next generation's projects.

Sustainability: changing the game

It is well known that sustainable investment is becoming mainstream. In the case of billionaires, many report on sustainability in their businesses as a matter of course and see how this creates value, so it is logical for them to extend this approach to their investments. For example, one Malaysian billionaire has seen how his company's productivity has gained from a drive to improve employee health. "Investing in employee well-being is a long-term investment and one which must receive priority as there are both tangible and intangible benefits in doing so," he said.

Sentiment from UBS's network of client entrepreneurs (UBS Industry Leader Network) reinforces this, with the view that operating sustainably and ethically is a must. They cite many reasons, including consumer preference for ethically produced discretionary products, risk of falling foul of strict environmental and energy efficiency regulations, and that displays of business integrity help retain employees and attract new talent. They also say that business ownership comes with an increased responsibility to society, and so promote social good within their organization. This is especially so when employees represent a significant portion of the local community, as is often the case when the business operates in less developed or remote areas. Indeed, network members have found innovative ways to give back to the local community, for example, using excess energy produced from company solar panels to provide power to it.

Consequently, more than a third (38%) of family offices are now engaged in sustainable investing,¹⁵ and almost half (45%) plan to increase their sustainable investments in the next 12 months. However, as the millennial generation assumes roles in family offices and philanthropic organizations, this trend is likely to grow stronger. Looking to the future, 39% of family offices anticipate sustainable investing increasing still further when the family's next generation takes control.¹⁶

"I think that my generation wants to achieve a more holistic life and shed some of the hypocrisies of previous generations," asserted the 30-year-old son of a German family that sold its business 10 years ago. "We want to have a return but with impact. Our investments should reflect who we are and what we believe."

"If I look at the future of capitalism, I think impact investing signals the way forward."

Some young billionaires are leveraging the power of technology and the internet. In China, for example, higher education rates are still far below those in the developed world. Entrepreneurs are seeking to alleviate rural poverty through online learning, which reduces education costs for students. They are also backing microbusinesses that can sell products on thriving online marketplaces.

Five fresh principles for succession

As entrepreneurs get older and their heirs come of age, wealth preservation and succession are of utmost importance. While not at the top of the agenda for most of China's billionaires, who are relatively young and focused on business growth, in the rest of the world it is becoming an urgent topic. How do you plan, in collaboration with the next generation? And how do you make sure that they are ready for succession?

Wealth planning is entering a new age. The great transition to come, different characteristics of the next generation and increasing influence of women all point to a need for new principles in successful succession planning.

¹⁴ The Changing Faces of Billionaires, 2015.

¹⁵ The Global Family Office Report 2018. UBS; Campden Research. Not all of these are billionaire family offices.

¹⁶ The Global Family Office Report 2018. UBS; Campden Research. Not all of these are billionaire family offices.

¹⁷ Adapted from Transforming Family Businesses report, May 2018, UBS Global Wealth Management and PwC Singapore.

Europe's old families are often cited as the model for succession planning. They have used the foundation stones of family governance, values and business continuity to pass wealth down the generations. Today, wealth planning strategies are increasingly sophisticated to match increased regulation, but they remain built on these foundations.

Preparing the next generation takes insight and thought. More than anything, it is about priming them to manage the family's assets in a way that suits their ambitions and interests. In our view, doing so involves the following five principles:¹⁷

1. Involve the next generation early

When complex businesses and assets are at stake, it is important to involve the next generation early. By planning the structure of succession together, families can make sure it works for the next generation, reflecting their goals while finding common ground with the current generation.

2. Prepare women to excel

Wives and daughters are increasingly inheriting and taking responsibility for businesses, investments and philanthropic endeavors. Just as women are increasingly creating wealth in their own right, there is a global trend of women

stepping up to lead their family businesses, family offices and philanthropic foundations. An increased recognition of gender equality has encouraged them to do so – they should be prepared.

3. Embark on a family project together

Many families embark on family projects together to cultivate the spirit of joint decision-making and shared purpose. These may be common philanthropic or entrepreneurial ventures.

4. Encourage entrepreneurship

Families should consider a mechanism (e.g. private fund or structure) to encourage new businesses. Giving potential successors power over new product lines or markets will help to develop business acumen.

5. Think about sustainability

Evidence is emerging that sustainable businesses often achieve steadier profit growth. At the same time, the millennial generation is passionate about working for businesses with strong social purpose. Integrating sustainability into business strategy can serve the interests of the business and succession.

Family businesses sustain entrepreneurial spirit

Inherited family business 69%	Steward 27%	Focus on protecting the family firm/wealth, and ensuring its long-term sustainability and preservation
	Transformer 9%	Take on the task of driving significant change in the family firm, with the scope and support to do so
	Intrapreneur 2%	Also have transformative ideas, but they choose to carve out a specific venture within the firm, rather than overhaul the entire business
	Entrepreneur 62%	Set up their own separate venture outside the family firm
Inherited assets 31%	Steward 58%	Focus on protecting the inherited portfolio/wealth, and ensuring its long-term sustainability and preservation
	Entrepreneur 42%	Set up their own venture with the inherited portfolio/wealth

Section 4

Looking ahead

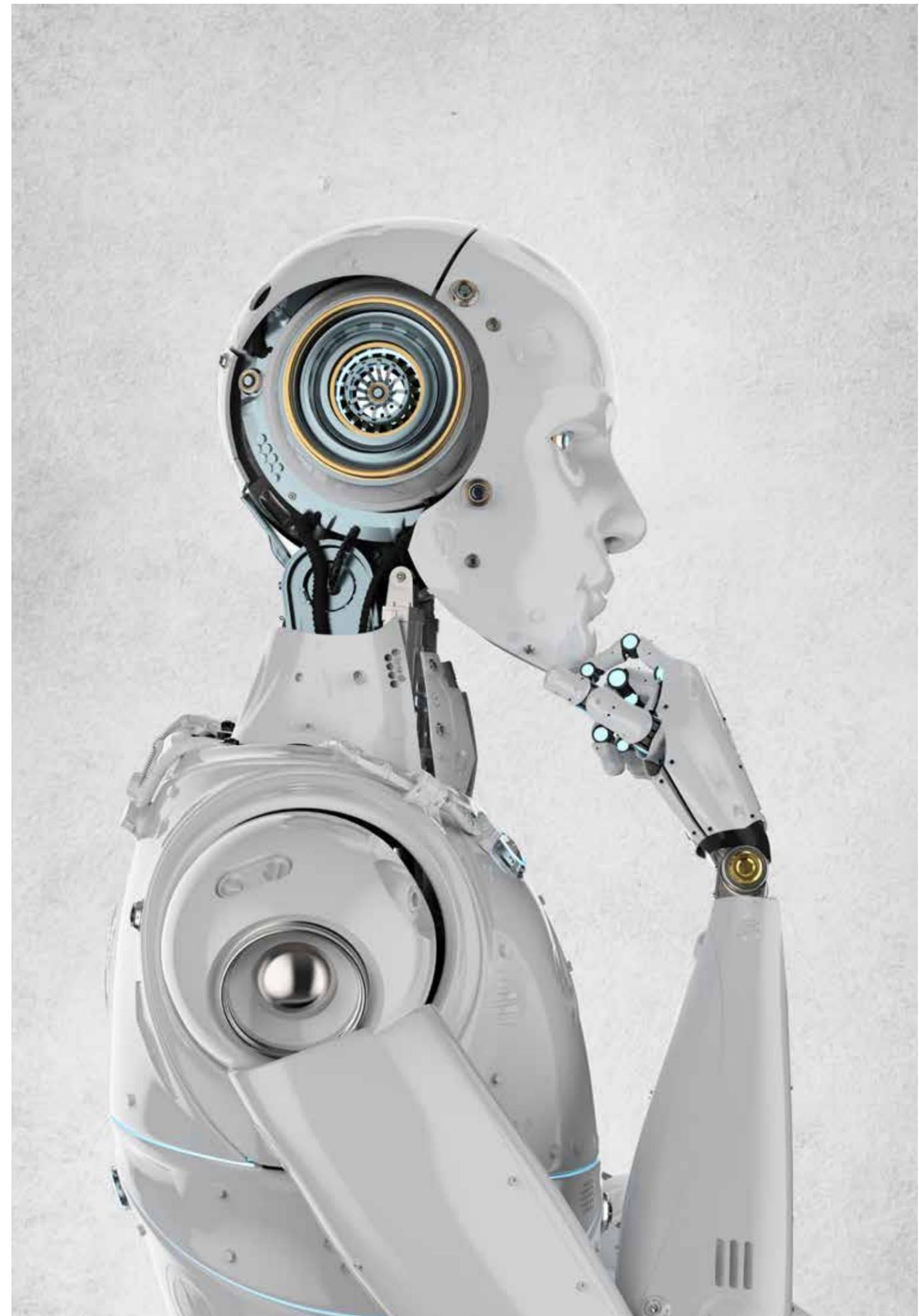
Just as the risks for the global economy appear to be rising, so too are the risks for businesses and asset values, including those belonging to billionaires. For a start, the US business cycle that started at the end of the financial crisis in 2009 is maturing, and this the second longest period of expansion in modern US history. The passage of time may lead to imbalances in the system that eventually lead to a recession. Furthermore, if US/China trade tensions escalate to an all-out trade war,¹⁸ UBS foresees significantly lower economic growth in both countries before policy responses (245 basis points in the US and 233 basis points in China). We also estimate that US and Asia ex-Japan equities could fall by more than 20% from their mid-summer 2018 levels. Such a dramatic outcome would have knock-on effects for billionaires' businesses and investments.

Highlighting the degree of uncertainty, one billionaire commented: "I love volatility since that is the basis of making money as a trader. But what we are talking about is very different. It is fundamental instability with political leaders who are astray. That is very unpredictable."

While a trade war or any other source of instability would slow the structural transition of China's economy, it would be unlikely to halt the plans of the country's young new entrepreneurs. Fluctuations in the country's economic growth will alter their rate of progress, but urbanization and the catch-up in productivity due to technology will continue to offer fertile conditions for entrepreneurs to grow and monetize their businesses. To a certain extent, the same will hold true in India and Indonesia.

Turning to philanthropy and sustainability globally, as the ranks of new multigenerational families continue to increase, many see their wealth as a responsibility rather than a blessing. Their energy and dollars devoted to philanthropy, sustainable investing and impact investing will grow substantially. Not only will the sums of money directed at solving social and environmental problems rival the budgets of governments in some areas, but also the characteristic smart risk-taking, obsessive business focus and dogged determination of these families is likely to transform the effectiveness of giving and investing. Entrepreneurial families will seek to disrupt philanthropy, just as they do business generally.

¹⁸ Trade Wars – What is the impact on growth, inflation and financial markets? A Top-Down View. UBS. 11 July 2018. (Trade War is defined as (i) across-the-board tariffs of 30% on all Chinese imports (excluding smartphones); (ii) a proportional Chinese response; (iii) a 25% tariff on US car imports.



A few words about the research and sources

A number of sources were utilized to research and profile the characteristics of wealthy individuals. These were blended into a mosaic analytical framework from which we conducted extensive modeling and analysis. This information and data are part of PwC proprietary data and analytics structures and are noncommercial in nature and specifically nonattributable regarding the identity of any underlying individual or family.

PwC acts as a supplier of data and analysis for the purpose of this report. In addition, the following were specifically leveraged as a part of our research:

- PwC has a significant body of research drawn from publishing studies on Wealth and Private Banking, and Family Businesses including current and future perspectives on a number of industries from which we were able to derive insights. These include but are not limited to Transforming family businesses (2017), PwC Next Gen Study 2017: Same passion, different paths, 21th Annual Global CEO Survey: The Anxious Optimist in the Corner Office (2018), PwC Study: Swiss Champions 2017, PwC Family Business Survey 2016: The 'missing middle': bridging the strategy gap in family firms (2016). Further, UBS's body of research and insights in Wealth and Private Banking were leveraged. These include but are not limited to the UBS House View Year Ahead 2018, UBS Investor Watch Return on Values, UBS Partnerships for the goals: Achieving the United Nations' Sustainable Development Goals Transforming family businesses, Singapore Chinese Chamber of Commerce & Industry, PwC and UBS, 2018, UBS Family Office Compass.
- Other analysis is based on our proprietary PwC databases that cover non-client-specific detailed bottom-up data on approximately 2200 billionaires from more than 40 countries. This is a private, non-commercial data structure designed to support analysis of specific market segments.
- Specific interviews with a number of billionaires and a number of next gen's of billionaires in various geographies were conducted by PwC and UBS separately and the information from those qualitative discussions were incorporated on a nonattributable basis without regard to any business-client relationship with any person, firm or organization. Further, we conducted 25 interviews with billionaire advisors.
- For the long-term series of the MSCI and GDP data we used the MSCI AC World gross data (accessed on 04/2017) and the World Bank's Global Economic Prospects database (accessed 04/2017) respectively. The UBS Industry Leader Network is a global network of entrepreneurs and business leaders in privately held companies.

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