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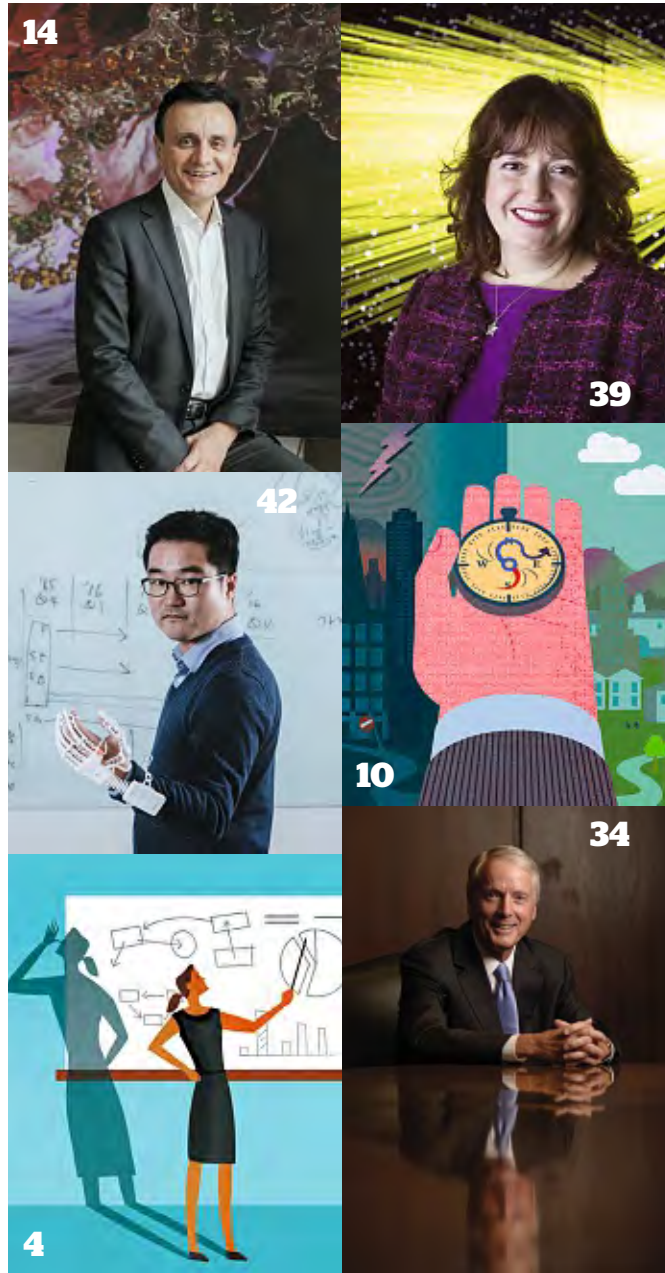
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Do as I say...



As tenured professors enjoy jobs for life, it is disingenuous for them to advise companies on reducing headcount

Business schools too often imperiously dispense advice they are guilty of ignoring

It was nearly a decade ago that Carol Stephenson, then dean of the Ivey school at Western University in Canada, told me of her befuddlement when it came to the loyalties of scholars. Joining a business school following a very successful corporate career, she assumed that the allegiances of professors would be similar to those of executives in the business world.

How wrong she was. A professor's first loyalty was to the faculty members with whom they conducted research, regardless of institution, she explained. Their second attachment was to their students and their third to the other academics at the institution. Loyalty to the business school itself came at the bottom of the list.

As business schools go, Ivey is one that works more closely with business and is arguably less likely to follow this agenda than most. Nonetheless, what has always struck me is the extent to which business schools, which spend their time — and make their money — advising companies and individuals on how to build successful institutions, actually take so little of their own advice.

“Build a strong corporate brand,” say business professors, who then charge corporations large sums to help instil brand loyalty into their executives and create effective cross-cultural teams. But do they do the same themselves? No.

This is just one example of where business schools preach what they fail to practise. Further instances are legion.

Take addressing customer needs, for example. This is always high on the teaching schedule, but if there has been one consistent message from recruiters and corporations in the past decade, it is that MBA graduates are, effectively, not fit for purpose. Executives need more communications and problem-solving skills, says MBA recruiters. Then we will teach them yet more finance skills, comes the scholarly response.

Ask any professor teaching on a



two-year MBA why the degree needs to be so long and the response is always the same: because it takes two years to teach students what we need to teach them. But what about how much recruiters think they need to know?

What is clear with a one-year MBA programme such as that taught at Insead — which this year has become the first one-year MBA to top the FT rankings — is that recruiters are as happy to take students from there as from any of the best two-year programmes.

Even with executive short courses, there are still many professors who are happy to teach what they know, but not what their customers need to know.

Of course, so-called “change management” is one of the hottest topics on the executive agenda and professors are eager to help out. But business schools themselves have barely changed in a century. Even as professors lecture on the increased pace of change, they seem largely oblivious to it.

Then there is international expansion, high on the agenda for many large corporations and a topic on which professors are expert in advising companies, often through teaching well-researched case studies. But do it themselves? With just a handful of exceptions — Chicago Booth and Insead spring to mind — the answer, again, is a resounding no.

Students and course participants come to us, rather than us going to them, has been the elitist response of many business schools.

Perhaps the most important topic for MBA students today is entrepreneurship and creating new business opportunities. I rest my case. With the exception of a brief period more than a decade ago when Duke University proved particularly entrepreneurial and created both the first Global Executive MBA and Duke Corporate Education, the customised training business, schools' entrepreneurial flair has been notable by its absence.

The topic I find particularly unsettling is employment and human resources. As tenured professors enjoy jobs for life, it seems disingenuous for them to advise corporations on reducing headcount or extracting more from the workforce. But you have to ask whether, in fact, the ends justify the means. After all, the biggest lesson corporations need business professors to teach them is how to survive and prosper in a fast-moving, ever-changing environment. Most businesses eventually fail at this. Business schools, it seems, rarely do.

The top US business schools were created more than a century ago and the top European ones more than 50 years ago. They may not have changed much in that time, but at least they are still there. It is very hard to think of any corporations of the same age who have been so successful while adapting so little. Business schools are the great survivors. Perhaps they are on to something after all. **B**

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Elite pulls away from the pack

A fragmenting job market poses tricky questions for business education. By Della Bradshaw

An MBA from an elite business school was traditionally a passport to either a seat on the corporate board or to a very large salary on Wall Street or in the City of London. But all that is changing.

In the past decade the reputation of the financial sector, as well as the changing aspirations of millennials, have meant that many MBA alumni now eschew these roles. The headline data show a shift away from investment banking, once the most coveted job for

elite MBAs, towards technology and entrepreneurship. However, all is not as clear-cut as it seems.

Traditional finance jobs may be proving less attractive, but the world of alternative investments is booming, says Geoffrey Garrett, dean of the Wharton School at the University of Pennsylvania. And these jobs, he says, are vital to successful start-ups.

“People tend to think of finance and entrepreneurship as being at the opposite ends of the spectrum,” he says. “They’re not.” At Wharton, the San Francisco Bay area now rivals

New York as the destination of choice for the school’s alumni.

Further to this, entrepreneurship is about more than starting a company, says Stacey Kole, deputy dean of Chicago’s Booth School of Business. “Not everyone needs to be the guy with the great ideas,” she says. “Students are graduating and going out there and buying a business. I think we’re at the beginning of this new phase.”

But as the job market fragments and the high-bonus banking culture loses its appeal, business schools are facing real questions about the cost of their programmes and whether the full-time MBA addresses the needs of today’s business school graduates.

At Columbia Business School in New York, dean Glenn Hubbard points out that many second- and third-tier schools charge fees comparable with

Top of the class



Top programme, FT Global MBA Ranking 2016
Insead, France

Top for female students
Renmin University of China School of Business (59 per cent)

Top for salary increase
Indian School of Business: 142 per cent*

Top for salary
Stanford Graduate School of Business, US: \$185,939 (weighted)*

Top for international course experience
Ipade Business School, Mexico

‘Not everyone needs to be the guy with the great ideas’
Stacey Kole, Chicago Booth

*Three years after graduation. See key (p25-27) and methodology (p29) for criteria



TOP-RANKING SCHOOLS

those at the very top of the rankings, something he argues is untenable. “I just don’t see the two-year MBA as a product for these schools,” he says.

Even for the top schools he believes the sticker price for a two-year MBA, from which students often graduate with debts of \$100,000 or more, is daunting for most applicants. “The opportunity cost of getting a two-year MBA is going to get achingly high over the next decade,” he predicts. “We can’t expect to raise prices at the rate we have been doing unless we provide service.”

As the small group of elite business schools pulls away from the rest of the pack, there is little agreement on how they will differentiate themselves or even how many institutions will be in this top section. Booth’s Prof Kole believes it will have 20 members or more. Others are less optimistic.

At Insead, ranked number one in the world for the first time this year, dean Ilian Mihov puts the number of elite schools at nine. These are the schools — seven from the US plus London Business and Insead — that since 2000 have occupied the top slots in the rating of schools most recommended by alumni in the FT MBA rankings.

“This [recommendation] is something that is very powerful,” says Prof Mihov. “These [business schools] are our competitors. These schools have managed to separate themselves.

“At some point it becomes a self-fulfilling prophecy,” he adds. “The best students want to go there.”

As they pull away from the group of also-ran business schools, these top-tier institutions still have to justify their price tag as well as try to reduce their costs. Every school has its own agenda, as each tries to differentiate itself.

For Prof Mihov, it is about offering a truly global experience through Insead’s multiple campus format — 750 MBA students a year study on at least two of its campuses, he says. “The content is the same, the context is very different.”

For Prof Hubbard the holy grail is integrated teaching and team teaching between professors from different disciplines. “The problem is that we have been teaching [MBAs] bit-by-bit, not as a whole. It is a bit about the curriculum but it is more about how we

The FT top 25 full-time MBAs

Rank	School name	Weighted salary (\$)*
1	Insead	166,510
2	Harvard Business School	172,501
3	London Business School	154,150
4	University of Pennsylvania: Wharton	177,877
5	Stanford Graduate School of Business	185,939
6	Columbia Business School	169,866
7	University of California at Berkeley: Haas	169,395
8	University of Chicago: Booth	158,259
9	MIT: Sloan	159,909
10	University of Cambridge: Judge	156,323
11	Northwestern University: Kellogg	162,923
12	IE Business School	159,266
13	IMD	157,439
14	HKUST Business School	144,303
15	HEC Paris	134,299
16	Iese Business School	140,185
17	Ceibs	147,716
18	Yale School of Management	152,232
19	New York University: Stern	150,510
20	University of Michigan: Ross	144,961
21	Duke University: Fuqua	144,455
22	Dartmouth College: Tuck	156,652
23	Esade Business School	132,119
24	IIM, Ahmedabad	174,274
25	SDA Bocconi	122,955

* The average salary three years after graduation, with adjustment for variations between industry sectors. Full ranking p24-29.

‘The opportunity cost of getting a two-year MBA is going to get achingly high over the next decade’
Glenn Hubbard, Columbia

teach,” he says. “The only truly successful schools will be the ones that do this on a grand scale.”

At IMD in Switzerland, which has a class of just 90 students, the focus is on a more personalised experience, working with the school’s executive clients to give targeted job placements, says Ralf Boscheck, MBA programme director. “Every bigger player can beat us on scale effect. We need to avoid the commodity trap on placement.”

And for Bernard Garrette, the associate dean in charge of the MBA programme at HEC Paris, it is about specialisation and employers are driving



Top of the table: Ilian Mihov, dean of Insead, the first school to take the number one spot with a one-year MBA programme

the changes. A recent curriculum overhaul with recruiters was a salutary lesson. “We discovered that there were things that professors thought were indispensable that were not.

“The recruiters want students to have a story to tell. General management is not enough,” says Prof Garrette. They want people who have “T-shaped competencies”, with a depth of knowledge in specific areas.

To reduce costs to students, all the top schools are fighting to create an extensive scholarship pool. Here every business school looks to Harvard and Stanford, where about 50 per cent of students receive financial aid. MIT is a case in point, where dean David Schmittlein has been building up the scholarship base to compete with comparative top-tier schools and prevent Sloan losing students to these schools. “If you’re not really competitive in financial aid, it masks who you compete with,” he says.

But, as he points out, at the top schools it takes \$500,000 in endowment to create just one sustainable scholarship.

A bigger question is whether the full-time MBA itself is sustainable. Prof Kole is bullish. “It may be that one day the demand for the full-time MBA goes away, but today it is very robust [at the top schools].”

Christoph Loch, director of Cambridge Judge Business School is less confident. “The MBA is a mature market... the MBA industry has over-expanded.” He believes this will result in a shakeout. But, he adds: “That doesn’t mean the MBA will die.” **B**

Loyal servants?

Employers may wish to reassure themselves about the loyalty of employees who want their company to help finance an MBA. They will tell you that they want to improve their business acumen, enlarge their network and increase their earnings – all laudable aims.

However, data collected as part of the Financial Times 2016 Global MBA ranking show that alumni who graduated in 2012 rated promotion within an existing company lowest out of eight reasons for doing an MBA. With a score of 4.2 out of 10, it came far behind starting their own company at 5.2 – the next least-popular motivation.

“I returned to my initial employer out of loyalty,” said one graduate, who moved to a new job a year later.

‘I was supposed to go back to the family company, but I am now starting my own’

Changing employer and career were among the highest-scoring priorities, respectively rated 7.7 and 8 out of 10. A current piece of MBA jargon is the “triple jump” – when graduates switch to a new employer in a different industry in another country.

About three in five graduates (61 per cent) were working in a different industry three years after graduation to their pre-MBA job. Nearly a third (31 per cent) moved country.

Those who were working in finance before their MBA were the least prone to leave their industry, with only 40 per cent doing so, compared with two-thirds of those in consulting and 91 per cent of those in the military. In terms of international mobility, those who were working in Israel, the UAE and France before business school were most inclined to switch country, with more than 60 per cent moving, compared with 11 per cent of those based in the US.

The lure of entrepreneurship may prove too strong even for those with loyal intentions. About 19 per cent of graduates started their own company. “I was supposed to go back to the family company,” said one graduate from Stanford, “but I am now starting my own.”

– **Laurent Ortman**

Simon Caulkin

Way ahead



Purpose dictates appropriate measures and measures give manageability, the capacity to learn and improve

Why businesses with a clear purpose beyond profit are likely to make more money

One of the paradoxes of business is that the most profitable companies are not those that are most profit-focused.

In a survey titled “The Business Case for Purpose”, a team from Harvard Business Review Analytics and professional services firm EY’s Beacon institute declares “a new leading edge: those companies able to harness the power of purpose to drive performance and profitability enjoy a distinct competitive advantage”. This is a reprise of the findings of Jim Collins and Jerry Porras, who in 1994’s *Built to Last* found that between 1926 and 1990 a group of “visionary” companies — those guided by a purpose beyond making money — returned six times more to shareholders than explicitly profit-driven rivals.

While 90 per cent of respondents in the new study said their company understood the importance of purpose, less than half thought it ran in a purpose-driven way. Why the discrepancy? One reason may be that to many, “purpose” looks like a “black box”, its workings hidden from view. While noting the impact on the bottom line, commentators tend to assume the performance jolt comes from hard-to-pin-down qualities such as inspiration, leadership or the motivational effect of working for a good cause.

Thus, the new survey defines purpose as “an aspirational reason for being which inspires and provides a call to action for an organisation and its partners and stakeholders and provides benefit to local and global society” — hardly something to put into practice on Monday morning. Porras and Collins called their outperformers “visionaries”.

Yet there is an eminently down-to-earth reason why purpose matters to every organisation — if it does not have a definable purpose, it cannot measure progress towards it. In the abstract, measures are arbitrary and unhelpful. Purpose dictates appropriate measures



and measures give manageability, the capacity to learn and improve.

The truth is simple and profound, but not that obvious. As John Seddon of Imperial College London says, in every organisation, whether its people realise it or not, “there is a systemic relationship between purpose (what we are here to do), measures (how we know how we are doing) and method (how we do it)”.

Because satisfied customers are the only source of long-term success, measures need to be related to purpose as defined from a customer point of view. When they are, employees can see how well they are doing and how they might do better. The Toyota Production System (TPS), whose purpose is to deliver an individually specified car to a customer in the shortest possible time, may be the best-known example of such a well-honed, feedback-driven system.

What happens in most organisations that have no overriding purpose other than profit? In a subtle alchemical shift,

the metrics fill the vacuum, muscling out any wider purpose with the imperative of hitting the numbers. This transposition of ends and means is often disastrous because methods, now geared to meeting the metric, are detached from customer purpose — so banks sell payment protection insurance to people who do not need it, or VW managers manipulate emissions readings to meet targets. Look no further for the reason why companies lose their customer focus.

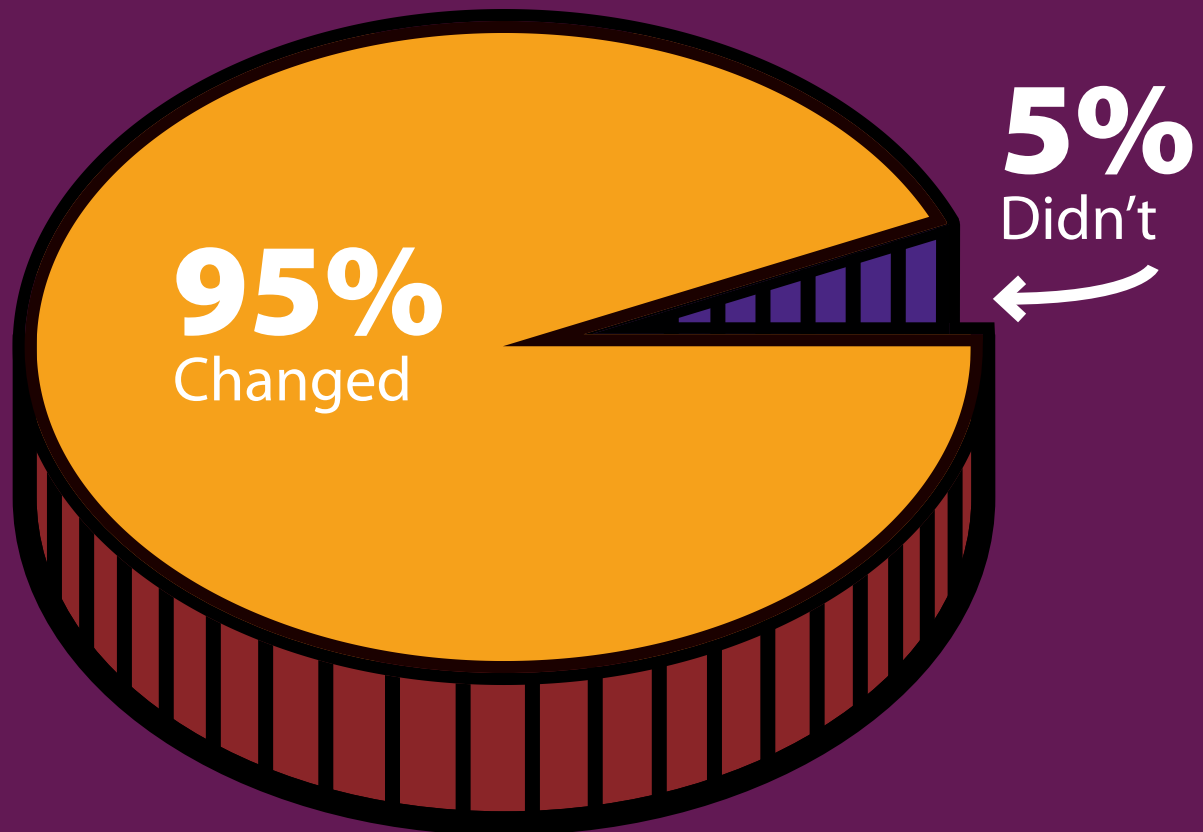
Because of the umbilical link with the way the organisation operates, purpose can be even more powerful than this suggests. Purpose should not be complicated or airy-fairy — but nor is it always as straightforward as the TPS.

When some UK local authorities considered the purpose of local services, they concluded that they were there to help citizens live well, in charge of their own lives. After all, people leading good lives make for happier, more functional communities that make less call on stretched public services.

That required new measures, which quickly established, for example, that most resources were consumed by a few chaotic families using multiple services. This led to a new way of working, in which multidisciplinary teams visit problem families to understand their lives in context. The result was greater welfare at lower overall cost. This has become known as “locality working”.

On its own, purpose is nothing more than an aspiration. It is its sidekicks — measures and methods — that make purpose tangible and keep managers out of the straight and narrow. But it cuts two ways. Last decade, Toyota subordinated its customer purpose to a growth push in an attempt to overtake GM in size. Overexpansion led to quality problems and some spectacular vehicle recalls. Akio Toyoda, grandson of the founder, claims the lesson has been learned, but the jury is still out. Purpose is an unforgiving taskmaster: forget it at your peril. **B**

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Lu Xiongwen

Inside outsider



Running a bank is like a marathon. Applause in the middle means nothing

Jiang Jianqing heads the world's largest lender with a strong entrepreneurial instinct

November 30 2015 was an exciting moment in China's financial history, with the renminbi joining the International Monetary Fund's elite Special Drawing Rights basket of reserve currencies.

This was a milestone in the integration of China into the international financial system. It also brought to my mind Jiang Jianqing, chairman of Industrial and Commercial Bank of China, the world's biggest commercial bank by market capitalisation. One of the most respected bankers in China, he was an early advocate of the internationalisation of the renminbi. Unusually for someone in his position, he also possesses a powerful entrepreneurial spirit.

I first met Jiang a decade ago when the School of Management at Fudan University and the University of Hong Kong launched the second class of a joint MBA for senior ICBC executives. He joined the participants for the opening ceremony. Friendly and easygoing, he was not how people would imagine a senior official to be. I was impressed by his understanding of business education and talent development.

Jiang's relationship with Fudan began in 1995, when he took part in the first executive development programme of Shanghai cadres. His classmates included government officials and top executives from state-owned enterprises. He stays in touch and exchanges ideas with his peers. I have had the chance to join such talks and hear his analysis of China's economy and financial reforms.

As a customer of ICBC, I have also seen it leap ahead in service quality and innovation in the past decade.

Most Chinese MBA graduates aim to be professional managers. Sometimes they find it difficult to make breakthroughs working within outdated business models. Entrepreneurs, on the other hand, tend to be visionary and self-motivated, thinking out of the box and



Breaking the mould: Jiang Jianqing has led reform and innovation at ICBC

taking the lead in reform and innovation.

Top executives of state-owned enterprises such as ICBC are also government officials in their political status. Those who risk their career with changes or innovations are often offbeat and regarded as "strangers". Jiang is one of these "strangers", a banker with visionary insight and an innovative spirit. Under his leadership, ICBC has been transformed.

Internet banking has changed the nature of the sector. Risk management has been stepped up. There have been acquisitions of overseas commercial banks and other financial institutions. He established a new system centred on a culture of "profit, quality, development, management and innovation". This fundamentally reshaped the business model of state-owned banks, which focus on scale and market share.

Jiang pays unusual attention to management. In his eyes, a bank is like a "delicate instrument" and management is key to its smooth

operation. Running a bank is like running a marathon — one needs strength, focus, endurance and speed. Applause in the middle means nothing.

Under his leadership, ICBC has improved governance and developed performance-based appraisal. He streamlined both structure and scale and shifted the business model from being sales-orientated to customer-driven.

Jiang understands the importance of talent management. ICBC has set up training centres across China and at its headquarters. Graduates of the Fudan-HKU MBA are given a further two years of coaching. Meanwhile, a large-scale personnel development project was launched, which includes sending core staff to study or do internships abroad.

An entrepreneur with a global perspective, Jiang was aware from early on of the need to reform ICBC into an internationally competitive bank. His internationalisation strategy has helped the bank to deploy resources globally, reduce financial risk, resist the economic downturn, explore opportunities abroad and develop its brand.

Under Jiang, ICBC has grown into the world's largest lender by market capitalisation, with 400 branches and offices in 42 countries and territories and 14,000 employees abroad, only 900 of whom are from China. There are four main components to the internationalisation of enterprises: learning from international experiences; following international standards; benchmarking international leaders; and attracting international talents. Jiang has achieved all these.

It is rare that a professional banker can also be an entrepreneur. Jiang is one such exception — both a revolutionary against the outdated mechanism of the state-owned enterprise and a leader bringing a local bank to the global stage. **B**

Lu Xiongwen is dean of the School of Management at Fudan University



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Sharp focus:
Pascal Soriot at
AstraZeneca's new
offices in London's
King's Cross

Bold experiments

How Pascal Soriot rose from a tough Paris suburb to chief executive of AstraZeneca

BY ANDREW WARD

PHOTOGRAPHS BY CHARLIE BIBBY

Pascal Soriot does not look like a bare-knuckle fighter. Aged 56 with a trim frame and well-groomed crown of dark hair, the chief executive of AstraZeneca is more easily imagined pursuing his weekend pastimes of horseriding and cycling. Rewind to the 1970s, however, and skirmishes were common among youths on the gritty housing estate where he grew up in the suburbs north of Paris. “I haven’t had a fight in the last 40 years,” he says. “But the first 14, 16 years? I had one probably every week.”

This revelation may startle those who know Soriot as a calm and affable presence at the head of the UK-based pharmaceuticals group. Yet he has also demonstrated resilience in resisting a \$100bn takeover by Pfizer in favour of a high-stakes turnaround effort — the success of which remains in the balance.

Soriot’s CV suggests his training for this challenge started with an MBA at HEC Paris. But he traces some of his most important lessons to those teenage years when he and his friends would rush to each other’s defence. “The thing I learned is the value of loyalty and teamwork and courage,” he says. “People who cannot be relied on are people I really have trouble working with.”

Perhaps this helps explain the sense of mission that Soriot has instilled in AstraZeneca since taking over in 2012. He recalls being accused of committing career suicide by swapping a top job at Roche, one of Europe’s best-performing

drugmakers, for leadership of an industry laggard. AstraZeneca has roots in the now-defunct ICI chemicals conglomerate and when Soriot arrived it looked in danger of following its forebear to the corporate scrapheap.

Three years later, the peril has not passed. AstraZeneca still has to clear one of the industry’s steepest “patent cliffs”, as some of its biggest-selling drugs lose market exclusivity. But whereas before there was pessimism over the company’s ability to replace lost sales, today it boasts a resurgent research and development pipeline.

“I spent the first two months just listening,” recalls Soriot. “I must have run 200 roundtables.” He found a demoralised workforce exhausted by incremental cuts, yet it was obvious more radical surgery was needed.

His response was a restructuring that involved the loss of several thousand jobs and closure of an historic R&D base at Alderley Park in the north-west of England. But at the same time he set out his vision for a risk-taking, science-focused strategy embodied by plans to replace Alderley with a new £330m hub in Cambridge, putting AstraZeneca at the heart of one of the world’s strongest centres for medical research.

“For a long time, people didn’t believe it. They thought, ‘okay, there will be another round [of cuts], or ‘he’s not going to succeed’, and then over time people started believing.”

An important moment was the revival of a drug discarded by the previous management. During gardening leave after quitting Roche, Soriot pored over data to understand what had gone wrong in AstraZeneca’s R&D engine. He was puzzled why a

‘I have not had a fight in the last 40 years. But in the first 14, 16 years? I had one probably every week’

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'I've seen people I wasn't sure were going to do well, and they did'

promising ovarian cancer therapy called olaparib had been scrapped.

"Our scientists were pulling their hair out because they wanted to move forward, but there was a commercial mindset that it was too small and not interesting." So he cancelled the \$285m write-off booked for olaparib and put it back into trials. A year later, the drug was approved by US and European regulators. "Olaparib was really very useful culturally because it changed the mindset and people have accepted, 'yes, we follow the science'."

The son of a tax collector, there was little in Soriot's upbringing to predict a high-flying career in pharmaceuticals. "I had none of the sophistication that some French families have. I didn't have any clue about business." His mother wanted him to become a doctor but, inspired by a childhood love of horses, he opted to study animal medicine.

After his father died of a heart attack he spent three years supporting his mother and three younger brothers as a newly qualified veterinarian. But he soon tired of the equestrian stables of northern France and decided going to business school would open up new horizons. "I learned things I had no idea about. You come from a scientific environment and suddenly get exposed to balance sheets... and think, 'what the heck is this?'"

He lagged behind at first but caught up by working harder than his classmates. The experience influenced his approach to talent development. "I'm careful to not judge people too quickly because I've seen people I wasn't sure were going to do well and they did, and vice versa."

After graduation, he used his MBA to travel. He joined Roussel Uclaf, then a big French drugmaker, and took a post in Australia, where he put down roots. His two children and grandson still live there.

In Australia he had the first of several encounters with big acquisitions when Roussel was bought by Hoechst of Germany. Later he was with Aventis, another Franco-German drugmaker, in the US when it merged with France's Sanofi. His experience of these deals was mostly negative. "Sanofi-Aventis didn't work," he says. "People were telling me, 'you're French, you're going to do well at Sanofi'. But it had nothing to do with being French because the cultures of the companies were so different."

These memories helped stiffen his resolve when Pfizer launched its raid on

CV

Born: 1959, France.
Married, two children

Education:
Veterinary medicine at the École nationale vétérinaire d'Alfort at Maisons-Alfort near Paris; MBA with major in finance at HEC Paris

Career:
1986-2000: Spells in Australia, New Zealand and Japan for Roussel Uclaf, a French pharmaceuticals company, and, after a merger, for Hoechst of Germany
2000-06: Roles at Aventis, including US chief operating officer
2006: Joins Roche as head of marketing and later becomes chief executive of Genentech, the Swiss group's Californian biotech subsidiary
2010: Appointed chief operating officer of Roche's pharmaceuticals division
2012-present: CEO, AstraZeneca

Interests: Cycling, horseriding, skiing



Turnround: investors want to see growth in new drugs outweigh decline in old ones

AstraZeneca in 2014. Giving evidence to a UK parliamentary hearing into what could have been the biggest foreign takeover of a British company, he claimed the deal would cause deaths by delaying life-saving drugs. This angered Pfizer executives, who saw it as a cheap shot aimed at stirring political opposition. But, almost two years later, Soriot says he has been vindicated by the launch in November of Tagrisso, a lung cancer drug, which moved from lab to market in record time. "We could not have done that in a disrupted environment."

Big mergers can work if conducted the right way, he says. While at Roche he was in charge of integrating Genentech, the Californian biotech company, after a \$47bn takeover.

"I got on the plane and I was absolutely shaking because I was thinking, I'm going there to San Francisco and these guys are going to look at me and think, 'He comes from Switzerland, they've just taken over our company. On top of it, he's got this weird French accent. What is this guy?'" But

he won over employees by embracing the culture of 'casual intensity' — informality combined with hard work — which Genentech claims as its ethos.

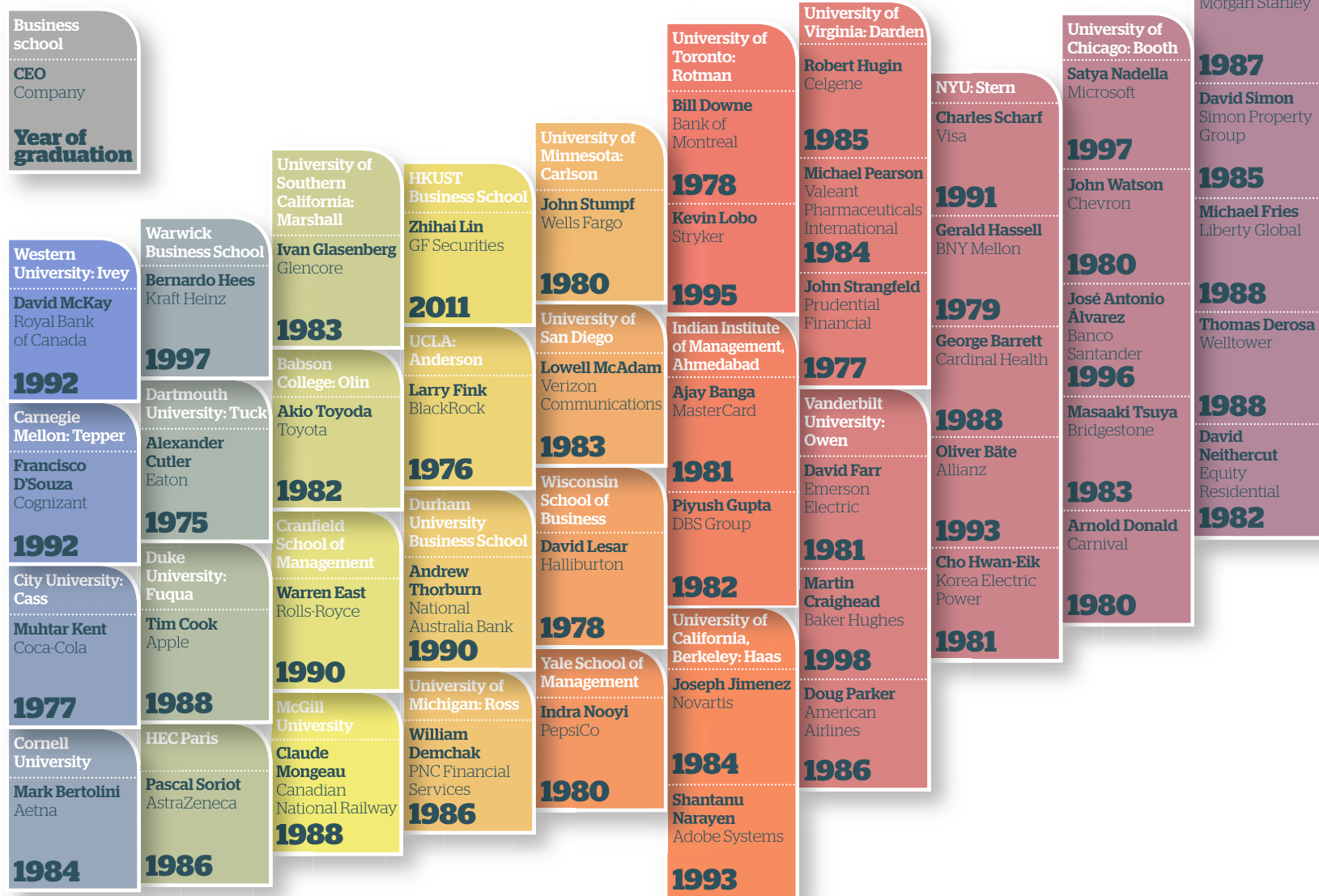
Soriot has tried to bring some of that Californian spirit to AstraZeneca, where he works in an open-plan office with a framed picture of his grandson on the filing cabinet beside his desk. The next two years will determine whether a leadership style forged between the Paris *banlieue* and San Francisco, via Sydney, can succeed in turning round one of Europe's biggest drugmakers. Investors will be convinced only once growth in new drugs begins to outweigh decline in older ones — a turning point predicted for 2017.

How much longer after that will he stick around? "Half of me would like to keep going, the other half would like to spend time with my grandson. I'm not going to be one of these guys who feels like, if he stops working, he'll die. I think I'll do the time needed to get this company in a good place and then, if the board allows me, I'll find a successor and enjoy Australia." **B**

From MBA to CEO

Where did FT500 chief executives go to business school?

By Adam Palin and Russell Birkett



For an interactive graphic with alumni profiles go to ft.com/ceo-mba

MBA students are rarely accused of lacking ambition and there is no shortage of role models who have made it to the very top of the corporate world.

FT analysis, conducted for the third year running, shows that nearly a third (31 per cent) of the world's largest 500 listed companies by market capitalisation, as featured in the most recent FT500, have a chief executive* with an MBA.

Just 10 of the top business schools boast half of this total — 72 FT500 chief executives — between them. A further 26 FT500 leaders gained their MBA from schools ranked within the top 100 in the world in the FT's 2016 ranking. The graphic, left, shows data for all 98 chief executives with MBAs from ranked schools.

Harvard Business School is top, with 22 MBA graduates among FT500 leaders. This is more than twice as many as any other school, despite falling from 28 last year after the retirement of bosses such as Alan Lafley of Procter & Gamble and Jim McNerney at Boeing.

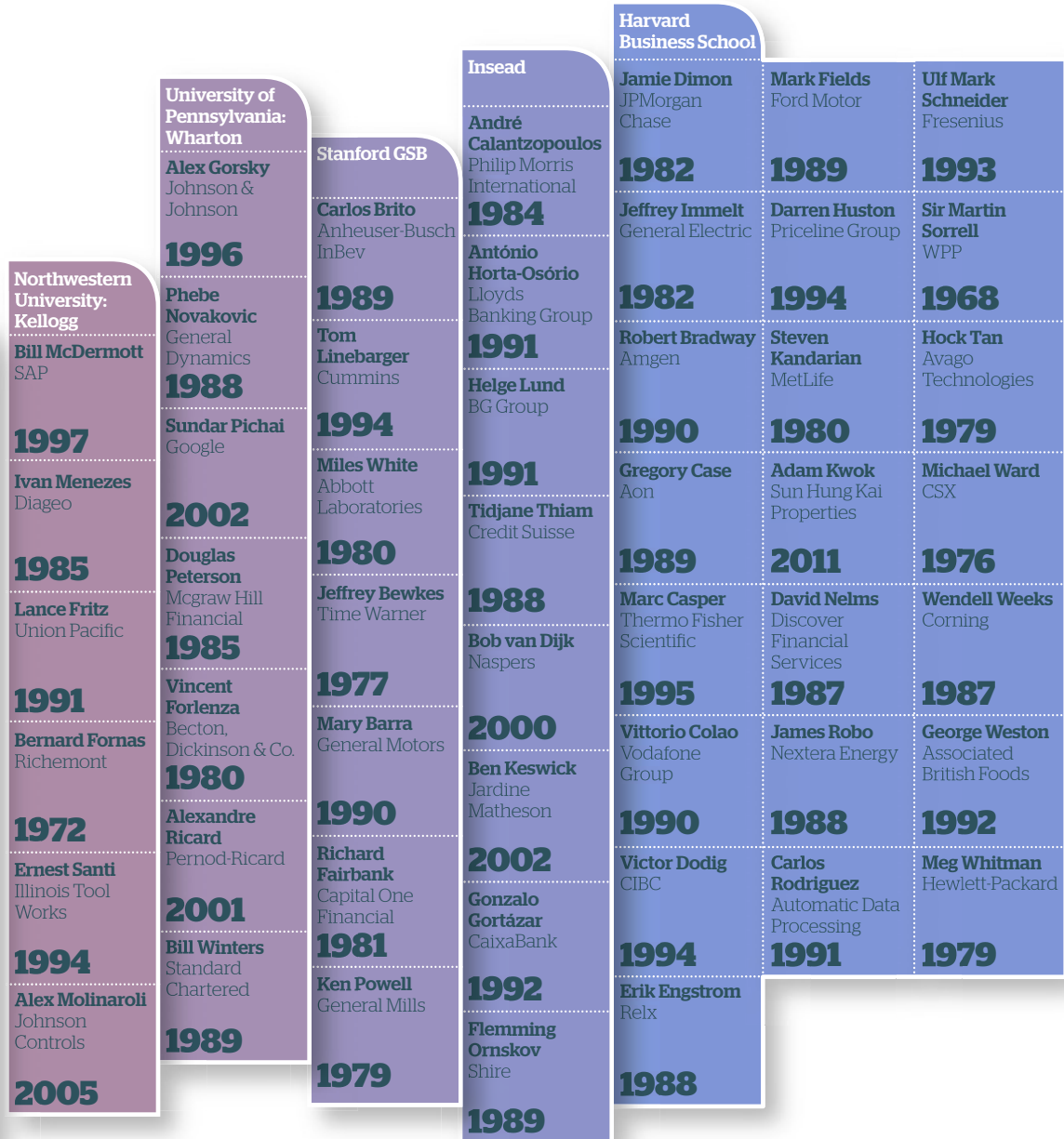
Change is also driven by fluctuating stock markets, which mean almost one in seven companies are new to the latest FT500 index. New entrants mean New York's two top business schools, Columbia Business School and New York University's Stern school, now claim six and five top chief executives respectively.

In addition to Harvard, only three business schools have more than six FT500 leaders among their alumni: Insead (eight), the only non-US institution with more than two; Stanford Graduate School of Business (seven); and the University of Pennsylvania's Wharton School (seven), whose 2002 alumnus Sundar Pichai assumed the top job at Google last year.

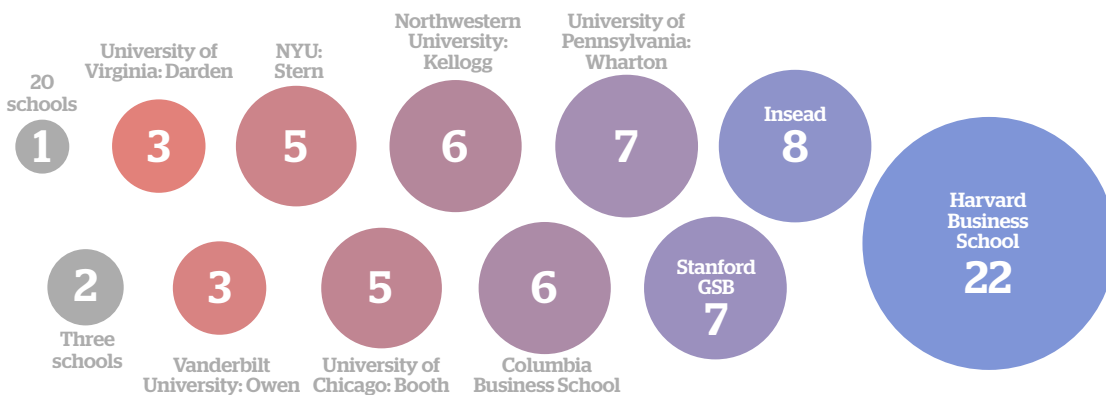
Vanderbilt's Owen school joins the University of Virginia's Darden school on three FT500 chief executives this year. It is also worth sparing a thought for two unranked Texan universities that also each count three MBA alumni among the FT500 leadership; Southern Methodist University and the University of Houston. **B**

Note: This chart includes chief executives*, as of December 1 2015, of companies in the most recent FT500, which lists the world's largest companies by market capitalisation.

*Or equivalent highest-ranking manager.



Number of MBA graduates who are CEOs* of FT500 companies



Dear Lucy...

Lucy Kellaway tackles MBA students' dilemmas

As a female MBA student, I get a strong sense that some male classmates presume I have benefited from unofficial positive discrimination and do not deserve to be there as much as them. This is untrue and irritating, but should I tackle it head-on and challenge them or rise above such pathetic views?

There are two different things here. The first is whether you have benefited from unofficial positive discrimination. As most schools are ashamed of how rotten they are at attracting women, it is possible that you did. The other question is whether you deserve your place. Just because you may have benefited from discrimination does not mean you don't deserve to be there. Throughout my career I have benefited from being female — I have been given opportunities and pushed forward and allowed to be different. At the same time, I think I deserve the breaks I've been given, so I don't feel in the least sheepish about it. Make the most of it and take the opportunities. Women spend too much time trying to prove that they deserve the positions they have been given. I suggest you copy your male colleagues and act entitled. If you do it convincingly enough, they may well end up thinking you are entitled to everything you've got.

I have a PhD in physics and decided to study for an MBA to help turn my specialist knowledge into a career in business. I find that some of the people teaching courses are less qualified than me and I feel short-changed. Is it unreasonable to demand that I am taught by more highly qualified academics for the rest of the course? So how do you see that working? You march up to the dean and point out

that as you have a PhD in physics you need to be taught by smarter people than the other students, who are less brainy and will be fine with mediocre teaching? I guarantee your dean will send you away with a flea in your ear and you will get a reputation for being stuck-up, humourless and insufferable. You are not learning physics now. This is business, and one of the most important things you must grasp is how to work in teams and to pretend to show respect for people you don't actually respect at all.

I work at least as hard as my classmates, but more efficiently than some. I have other commitments and try to keep weekends free as far as possible, and do not want them consumed by panicky emails from group project colleagues — which infuriates them. How can I convince them I am pulling my weight?

You have three options. Number one is to spoil your weekends, which you have already said you don't want to do. Number two is to tell them point blank you don't work on weekends. Finish your bit by Friday night and leave the rest to them. The trouble with this ploy is that

One of the most important things you must grasp is how to work in teams and pretend to show respect for people you don't actually respect

the others will not like you much and they will end up making final decisions on projects on Sunday nights without you. The third option is to take control of the project so that it has to be done on



PHOTO: DANIEL JONES

your terms. Everyone else would surely rather not have to work on weekends either, but are too inefficient to manage it. If you show them the way, you will almost certainly end up doing more than your fair share of the work, but you will be earning their gratitude — as well as teaching them the important life lesson that weekends aren't for working.

If you befriend people from all over the world you will have an international network that will surely stand you in good stead

My partner wants to do an MBA abroad. I realise this may mean a significant salary rise in the long term, but there is a cost too. Together with our children, I would move with him for the duration and would have to give up my job. Is he being unfair?

What do you think would be fair *quid pro quo*?

What he is asking you to do is huge.

To relocate everyone and to lose your job and have to find schools for your children and a new job for yourself — only to have to do it all over again at the end of two years?

How do you feel about the country he is dragging you off to? How important and enjoyable is the job he is making you leave? How certain is he that the MBA will transform his career and earning prospects? It sounds as if he is being utterly unfair. Can't he do an online course or a local one instead?

There are too many students on my MBA with poor English and not enough work experience to fully understand the programme. I fear

this is affecting my education. What can I do? Can I legitimately ask for a rebate?

You can try. I would love to hear how you get on. I don't believe for a moment that you will have any luck. Neither do I believe that it is affecting your education too badly. Can't you just enjoy being a star on the course? And isn't one of the points of an MBA the contacts that you make? If you befriend these people from all over the world you will have an international network that will surely stand you in good stead with whatever you go on to do.

I'm still unemployed 18 months after graduating from my MBA. I keep hearing that I am overqualified but I don't get offers for more senior roles either. The school's career service doesn't seem able to help. I'm considering further education but would that simply make it worse?

No, do not dream of signing up for yet another degree. That will cost you more money and make the situation worse. Instead you need to understand why you aren't getting the jobs. Are you applying to a sector that is too competitive? Is there something off-putting about your CV? Are you getting interviews and the process goes awry at that stage? There must be someone at the career service who can answer a few basic questions. Show your CV to a sensible person. Work out what the gaps are. Broaden your net. Try different things. And, hardest thing of all, try not to get too discouraged. **B**

Lucy Kellaway is an FT associate editor and management columnist, and writes the Dear Lucy advice column in the newspaper and online

All
three agree.

#1 in Asia (2015)

Financial Times, Forbes & Bloomberg Businessweek.

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data reveals

Global MBA ranking 2016



The top full-time programmes and how they compare

Rankings



Top full-time MBA: Insead

It was 58 years ago that Insead was established in Fontainebleau, just outside Paris, to train Europe's business elite. Placing a heavy emphasis on a global mix of students and on multilingualism, the school was very different from the top US business schools that it emulated. The most significant difference was that it taught its MBA in one year, not two.

This year Insead's MBA, which has been ranked by the FT as one of the top 10 MBAs in the world for the past 17 years, has been ranked in the number one slot for the first time.

This is a first not only for Insead but for the one-year MBA, which is proving

increasingly popular worldwide, including among some US business schools.

Ilian Mihov, Insead's dean, believes there are five characteristics of a top business school, including having a global perspective and promoting diversity. The MBA should also be a transformational experience, he says. "If we just teach content then online courses will be a substitute."

And as well as being strong in entrepreneurship he believes analytical and critical thinking skills will prove vital.

"I think the most important skills are problem-solving," says Prof Mihov. "Problem-solving skills will still be in fashion 30 years from now."

– Della Bradshaw

FINANCIAL TIMES GLOBAL MBA 2016

The top full-time global MBA programmes (continued overleaf)

Rank in 2016	Rank in 2015	Rank in 2014	3-year average rank	School name	Country	Audit year*	Alumni career progress								
							Salary today (US\$)	Weighted salary (US\$)	Salary percentage increase	Value for money rank	Career progress rank	Aims achieved (%)	Placement success rank	Employed at three months (%)	Alumni recommend rank
1	4	5	3	Insead	France / Singapore	2015	166,168	166,510	96	10	25	84	59	83 (98)	6
2	1	1	1	Harvard Business School	US	2013	172,275	172,501	94	82	7	85	40	91 (100)	1
3	2	3	3	London Business School	UK	2015	154,830	154,150	100	72	9	87	39	93 (99)	5
4	3	4	4	University of Pennsylvania: Wharton	US	2013	177,287	177,877	84	95	16	84	30	94 (94)	4
5	4	2	4	Stanford Graduate School of Business	US	2015	185,174	185,939	87	83	3	85	29	86 (100)	2
6	6	5	6	Columbia Business School	US	2014	169,679	169,866	99	92	22	84	17	92 (92)	8
7	10	11	9	University of California Berkeley: Haas	US	2012	167,227	169,395	93	69	34	85	18	94 (99)	10
8	9	9	9	University of Chicago: Booth	US	2012	161,182	158,259	107	84	39	85	2	95 (99)	9
9	8	8	8	MIT: Sloan	US	2014	158,736	159,909	90	96	11	83	48	92 (98)	3
10	13	16	13	University of Cambridge: Judge	UK	2012	156,917	156,323	95	4	6	86	24	89 (89)	41
11	14	15	13	Northwestern University: Kellogg	US	2014	161,855	162,923	93	89	23	85	15	94 (100)	7
12	12	13	12	IE Business School	Spain	2014	160,659	159,266	104	23	5	83	73	92 (90)	27
13	20	12	15	IMD	Switzerland	2015	157,436	157,439	83	5	13	88	26	87 (100)	17
14	14	14	14	HKUST Business School	China	2016	143,146	144,303	114	13	19	84	90	88 (94)	37
15	16	21	17	HEC Paris	France	2014	133,301	134,299	108	26	27	84	87	91 (87)	25
16	7	7	10	Iese Business School	Spain	2014	139,714	140,185	121	81	10	85	60	91 (93)	20
17	11	17	15	Ceibs	China	2014	144,884	147,716	157	41	29	81	54	93 (99)	35
18	17	10	15	Yale School of Management	US	2013	154,264	152,232	108	80	20	87	49	92 (99)	16
19	18	17	18	New York University: Stern	US	2014	149,318	150,510	97	98	38	84	9	89 (96)	14
20	24	23	22	University of Michigan: Ross	US	2014	148,056	144,961	107	74	59	85	19	92 (89)	12
21	21	17	20	Duke University: Fuqua	US	2012	143,849	144,455	94	97	51	84	32	94 (98)	11
22	23	20	22	Dartmouth College: Tuck	US	2013	157,545	156,652	95	91	33	85	11	95 (100)	13
23	19	22	21	Esade Business School	Spain	2014	130,806	132,119	117	60	15	86	47	83 (95)	31
24	26	30	27	Indian Institute of Management, Ahmedabad	India	2015	175,146	174,274	96	36	1	80	52	84 (100)	15
25	26	31	27	SDA Bocconi	Italy	2014	123,260	122,955	116	32	80	84	69	85 (86)	55
26	30	-	-	CUHK Business School	China	2016	124,268	124,268	120	34	28	79	74	91 (99)	84
27	32	27	29	University of Virginia: Darden	US	2014	146,417	147,104	109	73	52	85	6	95 (100)	18
28	22	23	24	University of Oxford: Saïd	UK	2013	138,750	136,959	81	19	24	85	58	82 (89)	33
29=	33	36	33	Indian School of Business	India	2015	137,935	138,454	142	45	30	80	57	96 (94)	26
29=	40	38	36	Nanyang Business School	Singapore	2016	119,032	119,032	105	38	35	79	85	92 (97)	68
31	28	27	29	Cornell University: Johnson	US	2012	144,214	142,764	102	78	66	83	10	88 (97)	24
32	31	32	32	National University of Singapore Business School	Singapore	2016	117,142	115,148	121	39	68	80	68	90 (96)	39
33	36	34	34	Carnegie Mellon: Tepper	US	2014	138,420	136,996	108	79	74	84	1	89 (100)	23

Key to the 2016 FT Global MBA rankings

Weights for ranking criteria are shown in brackets as a percentage of the overall ranking.

Salary today: average alumnus salary three years after graduation, US\$ PPP equivalent (see Methodology, p28). This figure is not used in the ranking.[†]

Weighted salary (20): average alumnus salary three years after graduation, US\$ PPP equivalent, with adjustment for variations between sectors.[†]

Salary increase (20): average difference in alumni salary before the MBA to now. Half of this figure is calculated according to the absolute salary increase and half according to the percentage increase relative to pre-MBA salary – the “salary percentage increase” figure in the table.

Value for money (3): calculated using salary today, course length, fees and other costs, including lost income during the MBA.[†]

Career progress (3): calculated according to changes in the level of seniority and the size of company alumni are working in now, compared with before their MBA.[†]

Aims achieved (3): the extent to which alumni fulfilled their stated goals or reasons for doing an MBA.[†]

Placement success (2): effectiveness of the school careers service in supporting student recruitment, as rated by their alumni.[†]

Employed at three months (2): percentage of the most recent graduating class who had found employment or accepted a job offer within three months of completing their studies. The figure in brackets is the percentage of the class for which the school was able to provide employment data and is used to calculate the school's final score in this category.

[†] Includes data for the current year and the one or two preceding years where available. ➤

Top for career progress: IIMA

Created just a decade ago, the one-year, full-time residential PGPX programme from the Indian Institute of Management in Ahmedabad is ranked number one for the career progress of its alumni this year.

Widely regarded as the top business school in India, a reputation earned for its two-year pre-experience PGP programme, and ranked 15th in the world in the FT's 2015 Masters in Management rankings, IIMA is also famous for its 100-acre campus and its teaching space designed by American architect Louis Kahn. The school, founded by local entrepreneurs with Harvard Business School, has followed the HBS lead and favours case-based teaching. — DB



	Diversity									Idea generation			
	Female faculty (%)	Female students (%)	Women on board (%)	International faculty (%)	International students (%)	International board (%)	International mobility rank	International course experience rank	Languages**	Faculty with doctorates (%)	PhD graduates	FT research rank	Rank in 2016
	17	30	24	93	95	81	3	5	2	97	26 (46)	6	1
	28	42	49	38	34	27	51	57	0	91	63 (40)	2	2
	27	37	32	86	93	65	4	7	1	100	31 (26)	5	3
	20	43	17	35	32	50	45	54	0*	100	89 (26)	1	4
	23	40	30	39	36	15	62	15	0	93	45 (33)	14	5
	19	36	12	59	47	34	44	68	0*	94	50 (20)	13	6
	22	41	17	45	43	13	52	33	0	100	35 (23)	11	7
	15	42	12	36	42	43	61	67	0*	96	68 (18)	6	8
	21	41	14	39	48	53	54	31	0	100	50 (40)	6	9
	15	38	22	68	92	44	17	58	0	96	46 (7)	26	10
	19	43	22	36	44	34	70	27	0	100	59 (22)	14	11
	38	29	46	61	90	84	27	44	1	98	19 (0)	62	12
	14	30	13	95	100	87	1	13	1	100	0 (0)	89	13
	21	34	27	59	70	45	9	8	1	97	56 (4)	34	14
	19	28	13	69	90	67	6	2	1*	100	45 (20)	30	15
	20	28	25	57	80	86	8	3	1	100	21 (5)	60	16
	15	37	8	66	32	50	32	18	0	98	0 (0)	71	17
	25	40	20	45	48	39	59	48	0*	100	21 (29)	23	18
	22	35	19	53	36	12	81	52	0	100	52 (21)	3	19
	24	32	20	35	35	9	69	56	0	94	56 (21)	6	20
	17	36	17	41	44	50	60	38	0	100	54 (17)	12	21
	21	42	21	25	39	40	55	35	0	100	0 (0)	37	22
	35	31	20	40	95	87	7	12	1	92	31 (3)	89	23
	19	19	0	3	4	0	35	40	0	100	40 (0)	98	24
	37	30	25	30	76	67	11	10	0	95	46 (9)	37	25
	22	49	31	54	41	69	22	34	0	98	22 (5)	43	26
	25	35	24	20	38	12	66	73	0	97	6 (17)	49	27
	16	31	57	60	96	71	13	51	0	100	32 (16)	60	28
	26	29	6	21	1	60	57	85	0	100	0 (0)	62	29
	35	33	26	65	87	58	15	9	0*	99	31 (6)	49	29
	22	26	21	38	46	36	83	55	0	92	17 (6)	17	31
	32	40	14	59	92	29	14	21	0	90	37 (5)	49	32
	20	26	11	42	41	11	78	60	0	94	47 (13)	37	33

Clustering

Although the headline ranking figures show changes in the data year-to-year, the pattern of clustering among the schools is equally significant. Some 180 points separate the top programme, Insead, from the schools ranked number 98. The top 13 participants, down to IMD, form the top group of MBA providers. The second group, headed by HKUST Business School, spans schools ranked 14 to 42. Differences between schools are relatively small within this group. The 49 schools within the third group headed by Renmin University of China School of Business are similarly close together. The remaining 10 schools headed by Birmingham Business School make up the fourth group.

Footnotes

* KPMG reported on the results of obtaining evidence and applying specified audit procedures relating to selected survey data provided for the Financial Times 2016 MBA ranking for selected business schools. Enquiries about the assurance process can be made to Michelle Podhy of KPMG at mpodhy@kpmg.ca. The specified audit procedures were carried out between November and December 2015. The audit date published denotes the survey for which the specified audit procedures were conducted. ** These schools run additional courses for MBA students for which additional language skills are required. These figures are included in the calculations for the ranking but are not represented on the table to avoid confusion.



Highest new entrant: Renmin

Renmin University of China School of Business is a latecomer to the FT MBA rankings. The school has been offering an MBA since 1991 but became eligible to be ranked in 2010 when it was accredited by Equis (see methodology, p28).

The Beijing school is the highest new entrant, in 43rd place, sandwiched between fellow mainland Chinese schools Antai College of Economics and Management at 39 and Fudan University School of Management at 47. The class of 2012 has an average salary of \$94,000 three years after graduation, up 168 per cent on pre-MBA salary.

- Laurent Ortman



Highest riser: Carroll

The Carroll School of Management at Boston College has featured annually in the FT MBA rankings since it was first listed in 2006. It has enjoyed mixed fortunes during that time, from a high of 47th place in 2010 to a low of 93rd in 2013.

The 18th edition of the MBA ranking has been more favourable to the school. It climbed 21 places to 69th.

The average salary of its alumni three years after graduation went up by nearly \$6,000 to \$120,000 compared with last year's rankings.

The school also registered a strong progression in terms of value-for-money and career progress. - LO

FINANCIAL TIMES GLOBAL MBA 2016

The top full-time global MBA programmes (continued overleaf)

Alumni career progress

Rank in 2016	Rank in 2015	Rank in 2014	3-year average rank	School name	Country	Audit year*	Salary today (US\$)	Weighted salary (US\$)	Salary percentage increase	Value for money rank	Career progress rank	Aims achieved (%)	Placement success rank	Employed at three months (%)	Alumni recommend rank
34	25	26	28	UCLA: Anderson	US	2012	139,474	140,067	89	88	69	83	7	87 (98)	22
35=	34	49	39	Imperial College Business School	UK	2013	112,301	112,301	83	31	45	82	75	91 (94)	49
35=	50	77	54	Lancaster University Management School	UK	2013	106,638	106,638	111	6	36	85	33	82 (94)	81
37	45	41	41	City University: Cass	UK	2012	121,402	121,402	82	28	17	84	62	70 (96)	62
38	35	43	39	Alliance Manchester Business School	UK	2015	119,278	117,918	96	53	12	82	88	72 (95)	56
39	55	77	57	Shanghai Jiao Tong University: Antai	China	2014	113,340	113,340	168	33	49	76	22	100 (99)	82
40	36	52	43	The Lisbon MBA	Portugal	2014	123,584	123,584	100	2	46	82	83	82 (100)	84
41	39	33	38	University of North Carolina: Kenan-Flagler	US	2016	127,633	128,240	97	87	60	83	36	94 (97)	29
42	45	39	42	Rotterdam School of Management, Erasmus University	Netherlands	2016	109,009	107,998	81	20	53	82	91	83 (96)	54
43	-	-	-	Renmin University of China School of Business	China	2016	93,219	94,233	163	29	2	84	12	100 (100)	97
44=	28	29	34	University of Hong Kong	China	2013	112,518	112,518	106	54	55	83	35	72 (87)	70
44=	42	36	41	Georgetown University: McDonough	US	2015	131,444	130,950	95	99	65	85	44	86 (96)	34
46	38	25	36	Warwick Business School	UK	2015	112,287	112,287	70	24	48	79	45	97 (98)	48
47=	40	39	42	University of Texas at Austin: McCombs	US	2015	133,240	134,317	92	75	76	81	25	87 (97)	19
47=	55	83	62	Fudan University School of Management	China	2014	96,884	96,884	170	40	56	80	28	97 (100)	72
49=	51	58	53	University of Washington: Foster	US	2015	120,279	120,279	87	63	83	84	31	96 (100)	61
49=	55	66	57	Mannheim Business School	Germany	2014	109,622	109,622	79	9	78	83	86	93 (88)	69
51	49	50	50	University of Maryland: Smith	US	2015	110,203	109,982	97	90	77	82	13	81 (99)	74
52	58	65	58	University of Southern California: Marshall	US	2015	130,006	128,782	87	101	61	82	42	81 (99)	40
53	43	35	44	Rice University: Jones	US	2014	122,343	126,207	100	65	88	83	46	91 (99)	47
54	62	47	54	Indiana University: Kelley	US	2012	119,126	119,970	103	68	86	84	5	89 (100)	32
55	59	41	52	Emory University: Goizueta	US	2015	128,000	127,938	90	76	73	85	27	94 (99)	38
56	68	-	-	Macquarie Graduate School of Management	Australia	2016	126,736	126,736	58	21	21	80	95	91 (100)	94
57=	45	46	49	Cranfield School of Management	UK	2013	117,960	116,604	64	22	71	81	67	90 (100)	49
57=	43	48	49	University of California at Irvine: Merage	US	2016	113,098	113,098	110	67	92	80	8	89 (100)	78
59	66	-	-	University of San Diego School of Business Administration	US	2016	108,834	108,834	119	56	75	86	20	64 (100)	89
60=	53	51	55	University of Toronto: Rotman	Canada	2015	96,869	96,647	78	100	95	79	94	76 (98)	28
60=	67	88	72	University of St Gallen	Switzerland	2013	112,940	112,940	60	18	41	84	34	79 (85)	64
62	82	68	71	Indian Institute of Management, Bangalore	India	2015	137,294	137,294	84	61	32	74	93	100 (100)	21
63	80	73	72	University of Strathclyde Business School	UK	2015	99,450	99,450	91	7	18	82	53	97 (88)	101
64	63	89	72	ESMT – European School of Management and Technology	Germany	2016	107,234	107,234	62	1	54	84	82	84 (97)	83
65	54	52	57	Michigan State University: Broad	US	2014	103,672	103,672	120	50	101	84	14	91 (100)	46
66=	75	62	68	AGSM at UNSW Business School	Australia	2016	109,273	109,273	61	49	99	83	70	85 (86)	67
66=	79	97	81	Durham University Business School	UK	2012	98,029	98,029	77	14	43	77	99	86 (97)	93

Key to the 2016 FT Global MBA rankings

Alumni recommend (2): calculated according to selection by alumni of three schools from which they would recruit MBA graduates.†

Female faculty (2): percentage of female faculty. For the three gender-related criteria, schools with a 50:50 (male/female) composition receive the highest possible score.

Female students (2): percentage of female students on the full-time MBA.

Women on board (1): percentage of female members on the school's advisory board.

International faculty (4): calculated according to the diversity of faculty by citizenship and the percentage whose citizenship differs from their country of employment – the figure published in the table.

International students (4): calculated according to the diversity of current MBA students by citizenship and the percentage whose citizenship differs from the country in which they study – the figure in the table.

International board (2): percentage of the board whose citizenship differs from the country in which the school is based.

International mobility (6): based on alumni citizenship and the countries where they worked before their MBA, on graduation and three years after graduation.

International course experience (3): calculated according to whether the most recent graduating MBA class completed exchanges, research projects, study tours and company internships in countries other than where the school is based.

Languages (1): number of extra languages required on completion of the MBA.

Faculty with doctorates (5): percentage of full-time faculty with a doctoral degree.

PhD graduates (5): number of doctoral graduates from each business school during the past three years. The figure in brackets is the percentage of these graduates who took up faculty positions at a top 50 full-time MBA school.

FT research rank (10): calculated according to the number of articles published by current full-time faculty members in 45 selected academic and practitioner journals between January 2013 and October 2015. The FT45 rank combines the absolute number of publications with the number weighted relative to the faculty's size.



Best international experience: Ipade

Ipade Business School features once again in the FT MBA rankings after having failed to make the top 100 for the past three years. It is ranked 80th overall, just above Incae Business School, the other school from Latin America.

All students study abroad for at least a month on exchange programmes at one of about 75 partner institutions worldwide. Students are also encouraged to go on an international study trip with the school subsidising about half the cost. Ipade adds two destinations per year based on students' votes. The latest graduating cohort had the option to go to China or Vietnam. - LO

	Diversity									Idea generation			
	Female faculty (%)	Female students (%)	Women on board (%)	International faculty (%)	International students (%)	International board (%)	International mobility rank	International course experience rank	Languages**	Faculty with doctorates (%)	PhD graduates	FT research rank	Rank in 2016
	22	30	19	38	32	14	84	79	0	100	34 (24)	20	34
	32	45	45	90	88	64	25	66	0	100	48 (2)	37	35
	30	43	36	51	98	36	36	30	0	94	94 (1)	66	35
	29	32	42	71	81	50	23	45	0	97	54 (2)	55	37
	33	31	38	39	89	15	21	26	0	89	200 (1)	78	38
	29	45	17	3	19	41	100	36	0	91	131 (0)	86	39
	36	36	50	32	30	50	33	4	1	97	9 (12)	94	40
	25	30	23	37	34	24	89	49	0	85	27 (11)	6	41
	24	37	34	47	98	32	5	69	1	100	63 (6)	26	42
	33	59	13	5	6	27	101	59	1	90	226 (0)	89	43
	28	36	20	34	70	40	18	6	0	96	43 (5)	77	44
	28	31	16	37	42	19	77	74	0*	100	0 (0)	30	44
	32	32	22	78	85	22	29	41	1	100	93 (2)	43	46
	26	32	10	29	29	2	87	63	0	86	50 (8)	20	47
	34	51	4	7	15	41	98	23	1*	95	108 (1)	78	47
	32	33	22	23	34	8	92	80	0	93	33 (18)	16	49
	27	40	20	14	89	20	16	29	0*	100	96 (3)	71	49
	28	39	22	38	37	12	68	92	0	96	47 (17)	23	51
	31	30	13	34	27	10	90	64	0	83	36 (8)	23	52
	29	35	19	15	29	0	65	98	0	96	3 (0)	46	53
	24	29	21	26	36	22	96	65	0	79	37 (14)	30	54
	26	34	17	17	38	3	75	72	0	90	14 (14)	55	55
	26	34	50	65	93	75	40	84	0	100	42 (0)	78	56
	28	29	14	55	84	29	12	28	1	95	47 (9)	89	57
	46	33	20	28	53	5	76	89	0	95	25 (8)	55	57
	43	48	17	26	73	13	91	32	0*	86	0 (0)	78	59
	23	32	55	73	53	27	30	75	0	98	50 (24)	3	60
	10	20	50	79	90	50	2	50	1	100	12 (0)	66	60
	22	26	25	8	0	12	46	39	0	100	38 (5)	97	62
	38	29	35	46	87	47	28	46	0	82	53 (2)	94	63
	20	29	25	80	88	12	26	14	0	100	0 (0)	66	64
	33	40	26	26	39	0	71	100	0	89	31 (6)	52	65
	37	22	23	63	94	41	20	20	0	100	30 (0)	52	66
	35	49	35	56	95	35	43	42	1	98	95 (2)	78	66

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Methodology

This ranking features the world's best full-time MBA programmes. A total of 157 schools took part, all of which are internationally accredited and meet strict entry criteria. We survey alumni three years after graduation so the programmes need to be at least four years old. To qualify for the ranking,

the FT also requires that a minimum of 20 per cent of a school's alumni reply to the FT survey, with at least 20 fully completed responses. Participating programmes must have a minimum of 30 graduates each year to be considered.

This ranking used data collected from both the schools and the 9,800 alumni who completed a full-time MBA in 2012

— a response rate of 43 per cent.

Alumni responses inform eight criteria that together contribute 59 per cent of the ranking's weight. The first two reflect alumni incomes three years after graduation. The salaries of non-profit and public sector workers and full-time students are removed. Remaining salaries are converted to US dollars using

FINANCIAL TIMES GLOBAL MBA 2016

The top full-time global MBA programmes (continued)

Rank in 2016	Rank in 2015	Rank in 2014	3-year average rank	School name	Country	Audit year*	Alumni career progress								
							Salary today (US\$)	Weighted salary (US\$)	Salary percentage increase	Value for money rank	Career progress rank	Aims achieved (%)	Placement success rank	Employed at three months (%)	Alumni recommend rank
68	70	81	73	Wisconsin School of Business	US	2014	112,034	110,745	111	27	87	84	16	90 (100)	59
69=	59	45	58	Sungkyunkwan University GSB	South Korea	2013	107,362	107,362	80	43	31	82	4	92 (97)	100
69=	90	82	80	Boston College: Carroll	US	2014	119,538	119,538	94	71	64	86	80	88 (97)	44
71=	61	59	64	Vanderbilt University: Owen	US	2014	120,437	121,231	95	77	72	84	23	92 (99)	45
71=	65	71	69	Georgia Institute of Technology: Scheller	US	2012	118,900	118,900	92	46	97	84	3	96 (100)	58
71=	83	54	69	University of Minnesota: Carlson	US	2014	114,404	114,404	85	85	81	87	38	96 (95)	62
71=	78	75	75	Boston University: Questrom	US	2013	118,636	118,636	100	64	70	84	71	93 (91)	52
75	69	70	71	Ohio State University: Fisher	US	2015	110,129	110,129	100	52	96	83	51	96 (91)	57
76=	52	59	62	University of Cape Town GSB	South Africa	2013	138,466	138,466	68	8	26	78	100	69 (97)	86
76=	89	-	-	University of Notre Dame: Mendoza	US	2016	121,174	120,721	97	62	79	84	43	93 (98)	65
78	90	99	89	George Washington University	US	2016	112,291	112,291	98	93	93	81	50	93 (91)	66
79	73	91	81	University College Dublin: Smurfit	Ireland	2012	107,185	107,185	73	12	63	78	72	91 (100)	98
80=	72	64	72	Washington University: Olin	US	2015	112,934	114,130	80	94	62	82	41	97 (95)	75
80=	-	93	-	Brigham Young University: Marriott	US	2015	123,410	123,655	120	16	67	82	81	92 (100)	43
80=	-	-	-	Ipade Business School	Mexico	2012	103,506	105,844	190	55	4	77	56	93 (100)	73
83	-	-	-	Incae Business School	Costa Rica	2012	87,596	89,902	145	11	14	76	84	56 (86)	77
84	-	-	-	Edhec Business School	France		106,761	106,761	66	3	47	79	79	80 (87)	78
85	100	84	90	McGill University: Desautels	Canada	2014	88,345	88,345	76	70	42	83	78	84 (92)	42
86	85	55	75	University of Rochester: Simon	US	2016	108,893	109,756	102	86	85	79	66	96 (90)	87
87	90	68	82	Melbourne Business School	Australia	2016	95,356	95,356	72	37	91	81	97	93 (94)	60
88	97	89	91	Western University: Ivey	Canada	2013	99,721	100,209	71	42	82	82	37	89 (98)	36
89	86	62	79	Pennsylvania State University: Smeal	US	2012	105,601	105,601	105	48	98	80	63	86 (100)	53
90	73	95	86	Babson College: Olin	US	2013	118,467	118,458	86	66	8	81	77	86 (97)	30
91	71	44	69	University of Illinois at Urbana-Champaign	US	2015	107,052	107,052	97	57	89	82	64	94 (79)	76
92	95	-	-	Birmingham Business School	UK	2012	103,344	103,344	71	15	44	77	89	94 (84)	78
93	86	-	-	Queen's University: Smith	Canada	2015	95,012	93,761	85	35	94	82	92	84 (97)	51
94=	63	-	-	University of Iowa: Tippie	US	2012	103,058	103,058	113	25	100	83	21	98 (100)	91
94=	-	-	-	Grenoble Graduate School of Business	France		93,680	93,680	80	51	50	79	98	88 (68)	92
96=	81	72	83	University of British Columbia: Sauder	Canada	2016	90,093	90,413	72	59	84	77	96	77 (100)	71
96=	-	-	-	University of Connecticut School of Business	US	2009	103,607	103,607	92	44	57	80	61	81 (97)	96
98=	84	84	89	University of Bath School of Management	UK	2014	97,908	97,908	55	47	37	78	76	98 (83)	99
98=	97	80	92	University of Pittsburgh: Katz	US	2015	97,897	97,897	105	58	90	79	55	91 (100)	90
98=	-	-	-	Leeds University Business School	UK	2015	88,802	89,202	79	17	58	78	65	100 (74)	88
98=	-	-	-	University of Edinburgh Business School	UK	2015	99,144	99,144	66	30	40	77	101	81 (86)	95



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October 2015 International Monetary Fund purchasing power parity rates.

The highest and lowest salaries in each school are removed and factors are applied to reflect income differences between sectors. An average is calculated for each school and this figure, “weighted salary”, carries 20 per cent of the ranking’s marks. “Salary

increase”, accounting for 20 per cent, is determined for each school according to the difference in average alumni salary from before the MBA to three years after graduation. Half of the weight applies to the absolute increase and half to the percentage increase (published).

FT data from the past three years is used for alumni-informed criteria.

Responses from the 2016 survey carry 50 per cent of total weight and those from 2015 and 2014, 25 per cent each. Excluding salary criteria, if only two years of data are available, the weighting is split 60:40 if data are from 2016 and 2015, or 70:30 if they are from 2016 and 2014. For salary figures, the weighting is 50:50 for two years’ data.

“Value for money” is derived from fees, other costs and financial help given to alumni over the past three years.

Eleven criteria are calculated from school data, accounting for 31 per cent of the final ranking. These measure the diversity of staff, board members, students by gender, nationality and the MBA’s international reach. For gender criteria, schools with a 50:50 composition score highest.

With the exception of the “PhD graduates” category (see Key, p27), criteria based on school data use 2015 information only. KPMG, the consultancy, audits a number of participating schools every year.

The research rank, which accounts for 10 per cent, is based on the number of articles by full-time faculty in 45 internationally recognised academic and practitioner journals. The rank combines the number of publications from January 2013 to October 2015, with the number weighted relative to faculty size.

The FT Global MBA ranking is a relative listing. Schools are ranked against each other by calculating a Z-score for each criterion. The Z-score is a statistic that tells us where a score lies in relation to the mean. These scores are then weighted as outlined in the ranking key and added together for a final score.

After removing the schools that did not meet the response rate threshold from the alumni survey, a first version is calculated using all remaining schools. The school at the bottom is removed and a second version is calculated, and so on until we reach the top 100. The top 100 schools are ranked accordingly to produce the 2015 list.

Laurent Ortman

Judith Pizer of Jeff Head Associates acted as the FT’s database consultant. The FT research rank was calculated using Scopus, an abstract and citation database of research literature.

	Diversity									Idea generation			
	Female faculty (%)	Female students (%)	Women on board (%)	International faculty (%)	International students (%)	International board (%)	International mobility rank	International course experience rank	Languages**	Faculty with doctorates (%)	PhD graduates	FT research rank	Rank in 2016
	23	32	33	25	21	12	94	81	0	84	30 (3)	52	68
	15	24	29	55	27	79	63	22	0*	100	0 (0)	71	69
	35	35	8	13	32	0	85	99	0	81	16 (25)	37	69
	17	26	11	19	21	3	97	88	0	100	2 (0)	46	71
	20	17	19	44	30	8	80	76	0	80	26 (4)	43	71
	29	29	29	24	21	5	79	70	0	80	33 (12)	17	71
	34	38	13	28	36	68	86	87	0	70	19 (0)	55	71
	25	23	17	28	37	4	88	71	0	83	26 (19)	17	75
	23	40	18	46	31	32	39	37	0	80	8 (0)	98	76
	26	30	14	19	37	7	99	77	0	83	0 (0)	30	76
	29	40	17	42	56	10	72	61	0	93	23 (0)	71	78
	32	31	17	50	67	64	49	47	0	100	42 (2)	78	79
	23	40	14	36	35	1	73	96	0	94	23 (0)	34	80
	9	19	6	1	22	4	93	95	0	90	0 (0)	71	80
	4	25	7	21	15	20	95	1	1	38	0 (0)	101	80
	9	30	16	44	72	53	48	11	1	95	0 (0)	98	83
	37	28	27	38	96	80	19	16	0	87	15 (7)	86	84
	31	35	19	72	77	33	34	19	0	93	30 (17)	37	85
	17	44	11	29	61	17	50	82	0	84	24 (17)	66	86
	29	25	25	69	84	25	10	24	0	96	49 (2)	62	87
	24	31	50	63	31	75	67	53	0	99	20 (10)	26	88
	23	27	14	22	43	0	56	78	0	81	39 (5)	29	89
	37	32	16	13	67	14	64	91	0	84	0 (0)	86	90
	24	27	25	17	39	4	74	62	0	86	40 (10)	34	91
	32	32	55	46	100	45	38	83	0	94	61 (0)	94	92
	31	31	24	49	48	44	37	90	0	97	27 (4)	46	93
	25	26	15	26	32	4	82	86	0	78	33 (0)	62	94
	41	34	56	45	100	56	24	17	0	82	91 (1)	89	94
	25	35	32	78	67	15	41	43	0	99	33 (12)	20	96
	25	38	0	43	57	0	53	100	0	82	29 (0)	71	96
	33	41	36	67	83	18	31	93	0	99	70 (0)	66	98
	30	33	11	15	50	4	58	94	0	92	27 (11)	55	98
	37	57	40	48	90	50	42	97	0	90	60 (3)	78	98
	38	47	35	57	84	47	47	25	0	91	62 (0)	78	98

Footnotes: page 25

Fast track to the top

Insead's MBA becomes the first one-year programme to reach the number one spot. By Laurent Ortman

This is the first time a "one-year" MBA has led the Financial Times Global MBA Ranking. Insead joins an elite club of schools that have reached the number one spot, including Harvard Business School, London Business School, the Wharton School and Stanford Graduate School of Business. These four schools occupy the remaining top five places with their two-year programmes.

Insead's Class of 2012 have an average salary of about \$167,000 three years after graduation, nearly double (up 96 per cent) their pre-MBA remuneration. Alumni from the four other schools in the top five have roughly similar salaries and salary increases three years after graduation.

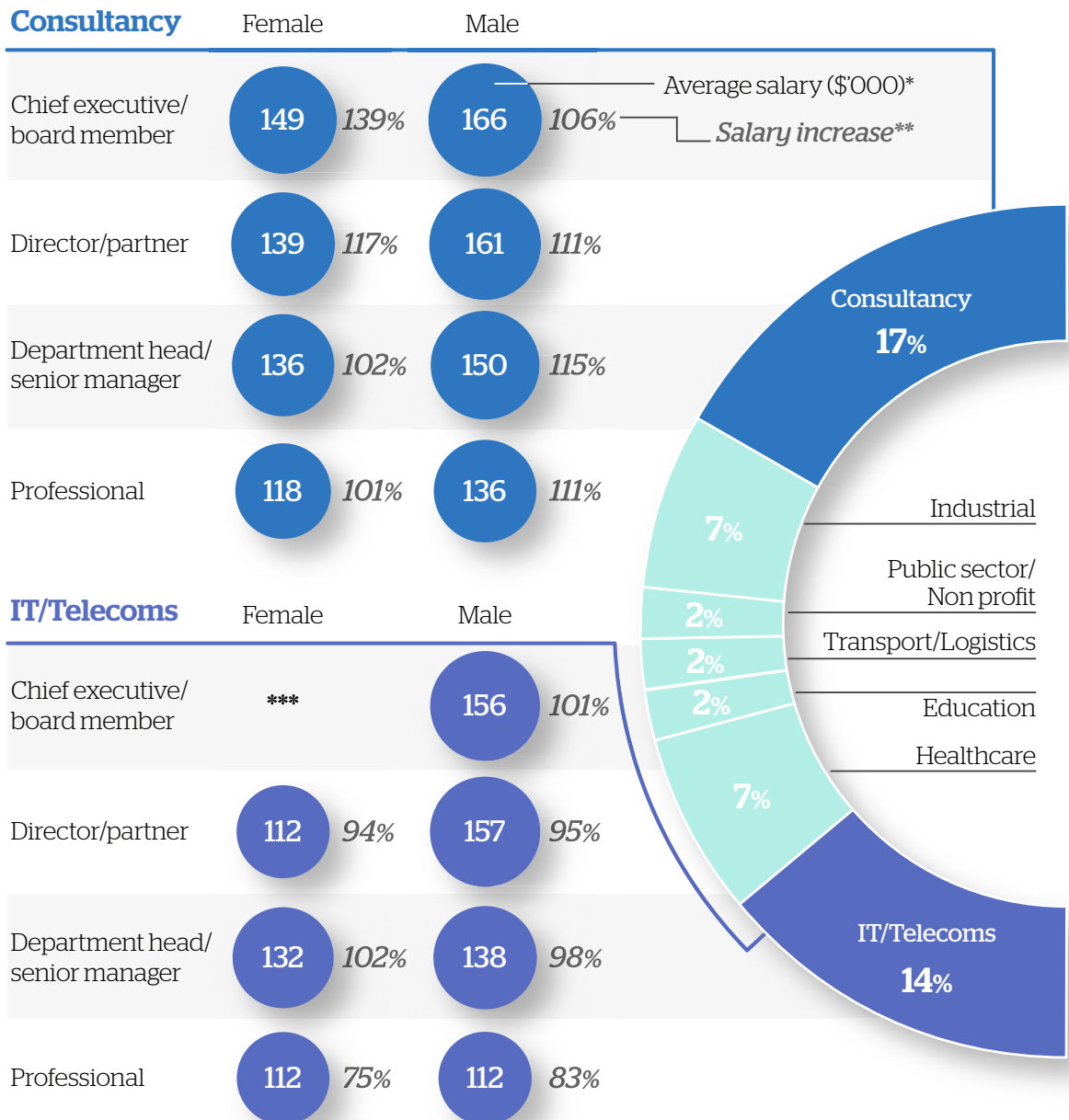
However, Insead is ranked 10th for value for money, way above the four runners-up, which are in the bottom quarter for this criterion.

With a programme half as long, its fees are also lower than those of the top three US schools. As one graduate puts it, Insead gives the "most bang for the buck".

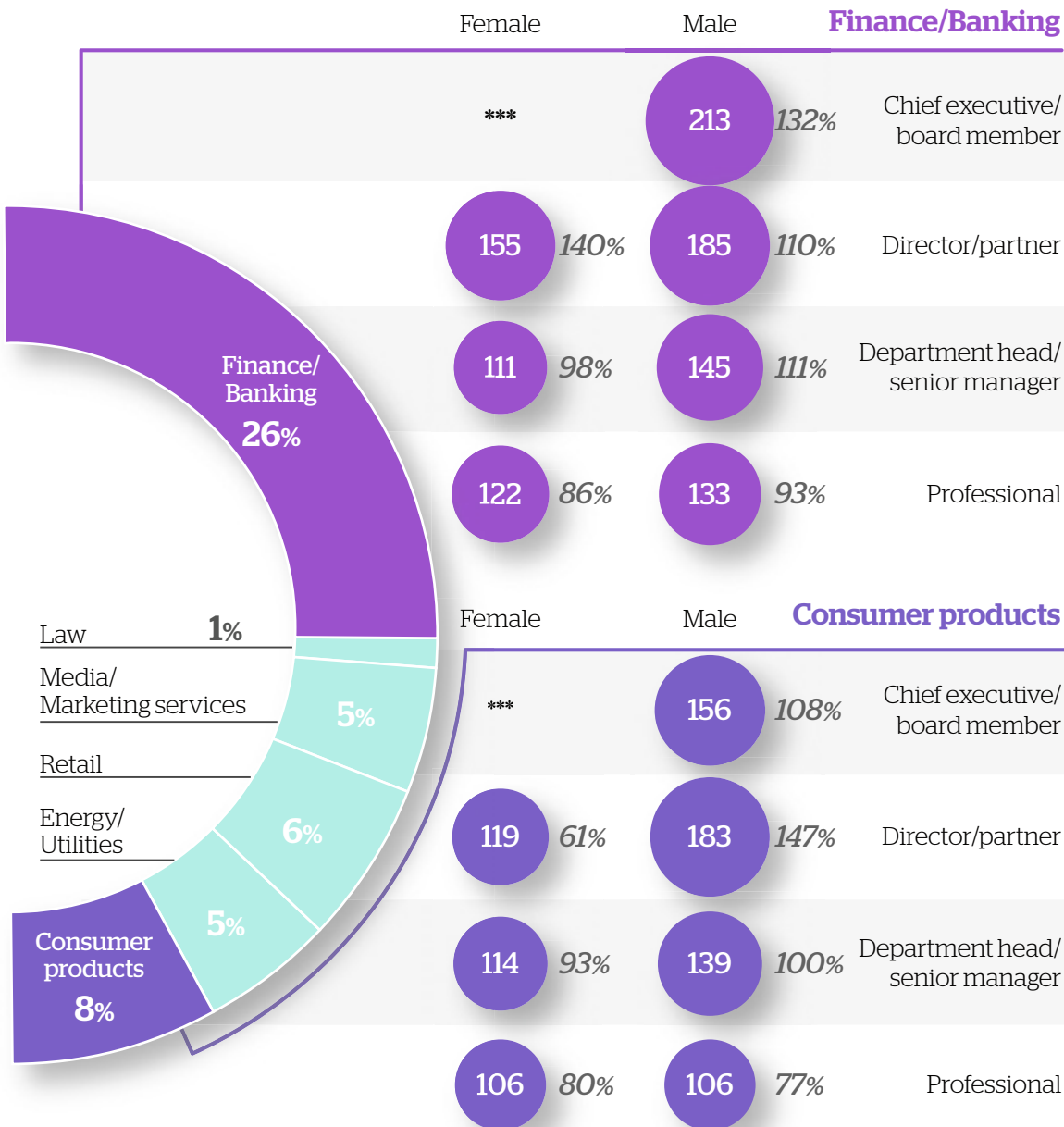
Insead calls itself "the business school for the world" and it does have grounds to claim it is one of the most international. Not only are more than 90 per cent of the professors and students international, but thanks to its campuses in France and Singapore, the school is ranked fifth for international course experience. Its alumni are also ranked third for international mobility.

The 2016 ranking includes nine new schools, two of which appear for the first time. Renmin University of China School of Business is the highest new entrant, in 43rd place. The remaining seven schools had appeared previously but did not make the ranking in 2015. Edhec Business

Employment of MBA alumni 3 years after graduation Class of 2012



* Three years after graduation, PPP adjusted, alumni of ranked schools
 ** Compared with pre-MBA salaries *** Insufficient numbers



GRAPHIC: RUSS BIRKETT; LAURENT ORTMANS

School, in 84th place, was last ranked in 2004, for example.

The proportion of women studying at ranked schools is rising. In 2015, 35 per cent of MBA students were women, up from 30 per cent in 2005. Last year, the proportion of female students topped 40 per cent in 27 schools, a leap from just four schools 10 years ago.

Chinese schools lead the way in this respect, with women accounting for 44 per cent of students overall and 59 per cent at Renmin University of China School of Business.

However, the proportion of female business school faculty remains low overall at about 27 per cent. Merage School of Business at University of California Irvine is the most gender-balanced, with women making up 46 per cent of female faculty.

Greater study opportunities have yet to translate into increased equality at work. Before their MBAs, about 80 per cent of both male and female alumni who responded to the FT survey were “professionals”, one of the lower categories of seniority. Three years after graduation, 40 per cent of the women described themselves as professionals, compared with 30 per cent of men.

The percentage of male and female graduates at department head or senior manager level is almost equal at about 42 per cent, but women are under-represented in the higher levels of seniority, director/partner and chief executive/board member.

The average pay gap between men and women increases from 14 per cent before their MBA to 19 per cent three years after graduation (or from \$9,000 to \$22,000).

The imbalance in seniority may provide one answer for the disparity in pay between the genders. However, the data collected by the FT (see graphic) show that there is a pay gap even within the same sector of industry and at the same level of seniority. **B**



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Interview p34

Northern Trust's
Rick Waddell



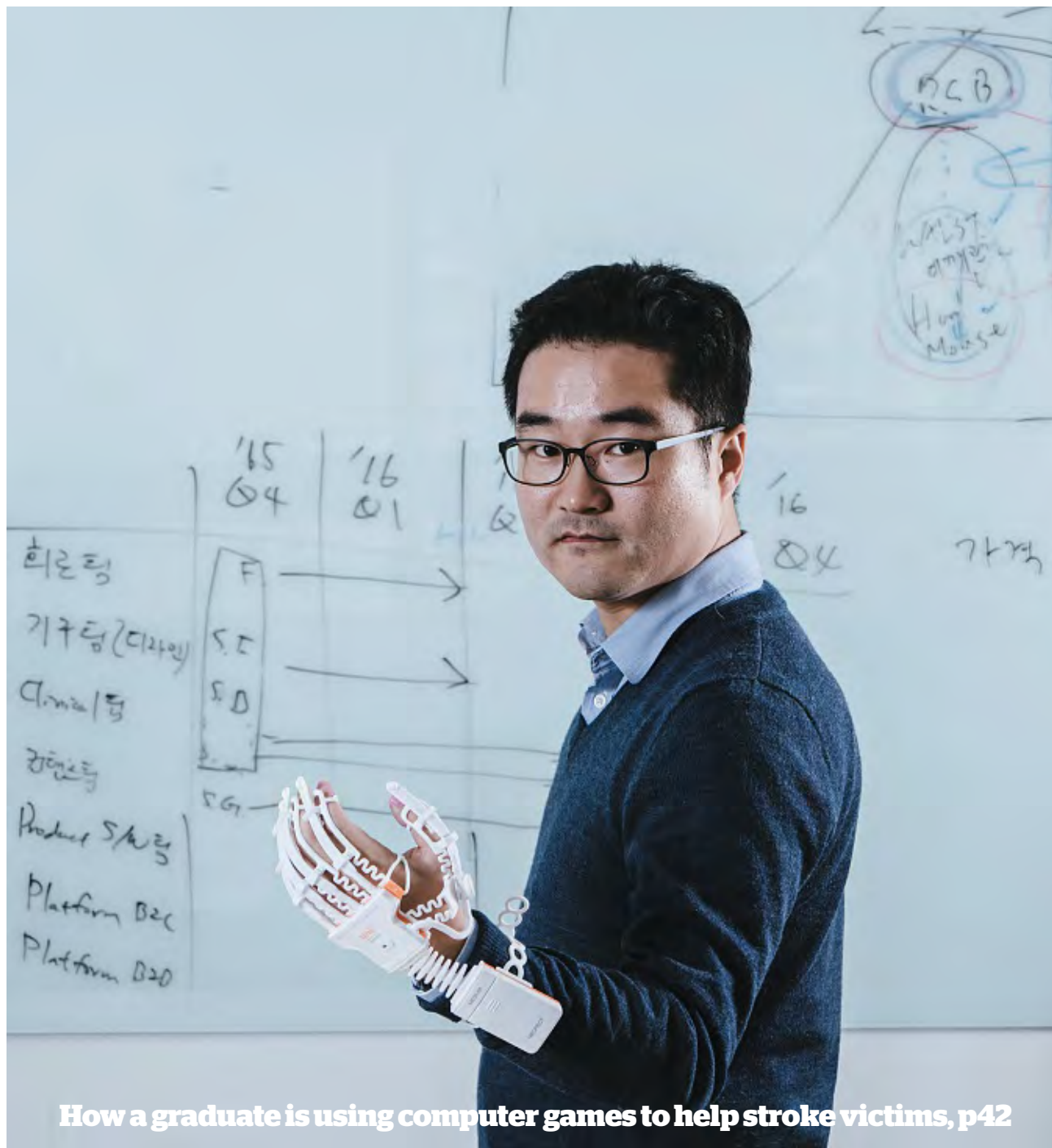
Careers p39

Preparing for a
digital future



Grasping the problem

inside



How a graduate is using computer games to help stroke victims, p42

PHOTOS: JUN MICHAEL PARK; CHARLIE BIBBY; ROB HART

Smart solution:
Neofect founder and
Darden graduate
Hoyoung Ban

Faith, family, friends... then the company

Rick Waddell's personal priorities are at the heart of the way he runs Northern Trust. By Neil Munshi. Photographs by Rob Hart

Rick Waddell never intended to be a banker. He wanted to be a lawyer, but as he neared graduation he realised that an extra three years of schooling to practise law was not for him. He wanted to strike out on his own.

"In 1975 it wasn't a great economy," he says, but "banks were hiring". Though he had no interest in the profession, he thought "banking would enable me to see different industries, so that if I wanted to pursue something in manufacturing or in retail or a service business [I could]".

The second of five children of an insurance agent and a homemaker in Pittsburgh, Waddell graduated from Dartmouth College and received two job offers. "I like to think that was more a function of the bad economy than my résumé or interviewing skills, but I had an offer from Northern Trust and I had an offer from a bank in Newark, New Jersey, which doesn't exist anymore."

Waddell, now 62 years old, took the job at Northern Trust, the US financial services company, on graduation and never left. He followed the traditional route to his job as chief executive of the firm, which has \$887bn in assets under management and \$6tn under custody: he climbed the corporate ladder.

"I've loved my entire 40-year career here — I've had 14 different jobs by my count at the bank, including the one I have now," he says.

But soon after he joined, the political science major realised he needed to round out his banking skills. "I really didn't have any accounting, business or economics background."

He was tired of the academic calendar, so a full-time MBA was out of the question — and anyway "I couldn't afford it". But at the time the bank paid employees' part-time MBA tuition, so he signed up for night classes at Northwestern University's Kellogg School of Management in Evanston, near Chicago.

The part-time course perfectly complemented his day job. "The things I was learning during the day, I could actually talk about and relate at night and the things I was learning at night, getting my MBA — around operations and finance and marketing — I could see in action during the day."

The MBA did not lead directly to a promotion, as is sometimes the case today. "I'm not even sure I got any more money," Waddell says. "I think it matured me, that experience of meeting other people from different companies... I think it was helpful in me developing as a leader here."

Waddell's biggest regret is that he did not forge a stronger network of fellow students during his Kellogg days. But, he says, "my focus was on my job".

He is, in fact, more involved in Kellogg today than he ever was as a student. He is a member of the school's advisory board and worked on its \$350m fundraising campaign for the 415,000 sq ft glass-and-steel lakefront building scheduled to be completed late next year.

He also teaches a few classes each year, delivering lectures on his experience at Northern Trust. The students are "mostly interested in what it takes to be a leader".

But leadership has changed drastically over the course of Waddell's career, he

says. Companies used to have a "very strong focus on hierarchical leadership, meaning top-down, CEO, the boss knows all the answers... and knows basically everything about where the company is going."

But "the world is a much more complex place than it was 40 years ago; it's much more global," he says. "The technology, the regulatory [framework], the client market dynamics have changed significantly, and a guy like me doesn't have all the answers, okay? So I think what leaders need today is to learn how to lead teams, to learn how to be a participant in a team."

"When I came here it was like you never questioned somebody up above — now I want people questioning me. I want people pushing back. I want people to say, 'Rick, have you thought about this?'"

Being able to rely on the expertise of others was handy in his first year as chief executive, as the financial crisis reached its peak. "Seeing how quickly everything was unravelling, that was scary," he says. "I'm eight, nine months into the job and I'm thinking oh my gosh, we just saw Bear Stearns go down, we saw Wachovia go down, we saw Merrill Lynch go down... the thing that was primary to me in facing that challenge was the management team that I inherited."

"I remember a lot of consultants and investment bankers when I



'When I came here it was like you never questioned somebody up above — now I want people questioning me... pushing back'



CV

1975 Political science degree, Dartmouth University

1975 Joins

Northern Trust in the commercial lending division

1979 MBA,

Kellogg School of Management at Northwestern University

2003 Becomes head of corporate institutional services at

Northern Trust

2006 Named president and chief operating officer

2008 Appointed chief executive

2009 Named chairman



was named CEO... advising me to shake the organisation up and get rid of some people," he says. "I didn't do any of that and I'm glad I didn't because... to face that challenge, having yourself surrounded by people who could advise you, give you perspective, it was very, very important."

As chair of the Financial Services Roundtable, a lobbying and advocacy organisation, Waddell knows that the industry's reputation "has clearly been damaged, and to some extent rightly so, because there were some bad things that were done by the financial services industry leading up to the crisis".

The regulatory response, he says, "has been shock and awe, honestly". "Some of it [is] much-needed and good regulatory reform, but other parts of it I think — my own personal opinion — the pendulum has swung too far and will have a dampening effect on the economy for many, many years."

Though rarely in the headlines, in 2009 Northern Trust became a symbol

'I'm a Christian. I believe in doing the right thing and that value that the bank stands on, which we call 'integrity', has really resonated'

of the excesses of the financial services industry when it threw a series of lavish parties at its annual golf tournament in Los Angeles. Gossip website TMZ published videos of guests dancing to live shows by Sheryl Crow and the band Chicago, months after the bank accepted \$1.58bn from the US government's troubled asset relief programme (Tarp).

Then-senator John Kerry called it an "idiotic abuse of taxpayer money". The bank paid back its Tarp money a few months later, along with a \$133m return. Waddell commented later that year that the outrage "might have been a bit misplaced", but conceded the bank "clearly misjudged the political environment". He admitted that the

Experience:
Frederick 'Rick'
Waddell has been
with Northern
Trust for 40 years

scandal, "along with all the other incidents" had been detrimental to public perception of the banks.

But he says the industry's reputation is now improving, despite the fact that rarely a week goes by without one of his peers reaching some sort of settlement with the Department of Justice or paying a penalty.

"I've been a little surprised that with all these fines we haven't seen even more backlash," he says.

While Northern Trust is "not perfect", it tries to "do the right thing", he says, and its values align with his own views.

"I'm a Christian. I believe in doing the right thing and that value that the bank stands on, which we call 'integrity', has really resonated for me," he says. "It's hard for me... to imagine working for a company where you're always in the news with a fine or a regulatory problem."

Waddell is no evangelist. He says he is not a weekly churchgoer and stresses that Northern Trust is an inclusive company even if he makes no bones about his faith guiding his work.

In 2003, Waddell was tapped to lead Northern Trust's corporate and institutional services unit. It was a "very, very big job" and the first major step towards his appointment as chief executive five years later.

A colleague advised Waddell to use his first staff meeting to introduce himself to his new charges before he launched into his strategy for what is a bedrock unit of the 127-year-old financial institution.

"I thought about that and I said, 'Well, who am I?'" says Waddell. He stood before the crowd and said, "I just want you to know what my priorities are: number one is my faith, number two is my family, number three are my friends and number four is the Northern Trust. So that's who I am."

Reflecting on this, he adds a fifth priority to the list: "Then golf... golf is very important to me." **B**



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Riding the data wave



Tech skills now a core requirement

MBA programmes must prepare students to run digital businesses because today almost every business is digital, says Annabelle Gawer, associate professor in strategy and innovation at Imperial College Business School.

"The fusion of business and technology is at the heart of where the economy is going. I think our MBA participants understand that, corporations understand that and entrepreneurs and investors understand that.

"A large proportion of our students go on to work in start-ups. During their MBA they meet people with whom they will form their team – sometimes from the business school, but sometimes from other parts of the college which are developing the technologies," says Prof Gawer.

Other MBA graduates go to big, established companies, often in finance and consulting but also in businesses ranging from engineering to the law. "Companies have realised they need people who are very good at technology, good at business and good at working together," she says. – RT

MBA programmes are being recast to keep up with digital developments. By Ross Tieman

Data will surge through business like the earlier tsunamis of personal computers, the internet and smartphones, predicts Alwin Magimay.

The partner and head of digital and analytics at KPMG says: "We are entering the fourth wave of digital value creation. I think data scientists are going to be to the present time what computer programmers were in the 1990s."

If Magimay is right, then a generation of school-leavers and university graduates must think very hard about how they learn the skills for an era when digital platforms and data are

at the heart of every economic and administrative activity. Many will ask just how relevant is the MBA, long seen as a passport to leadership, in an era of teenage coders and start-ups?

Madhav Rajan is senior associate dean for academic affairs at California's Stanford Graduate School of Business, close to Palo Alto, the focal point of Silicon Valley — home to cutting-edge technology companies. Unsurprisingly, he believes an MBA from the university that educated Bill Hewlett and Dave Packard in the 1930s is an ideal preparation for a digital career.

"The US tech industry was created and stimulated by the university," he

Bright future: Prof Annabelle Gawer, above, of Imperial College Business School; Alwin Magimay, below, partner at KPMG





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says. “We have the best computer science and electrical engineering schools on the same campus as the business school and the students are able to take advantage of all the synergies.

“The other factor is that we have so many alumni who are in this area, who have been incredibly successful and who give back. Many of the courses... are taught by alumni, who act as mentors and advisers,” he says.

Stanford continually recasts its MBA programme content. This year’s electives include digital competition in platform markets; business intelligence from big data; data-driven decision-making; and a slew of courses focused on creativity and entrepreneurship.

As business reshapes, business schools are striving to stay ahead of the game. Prof Annabelle Gawer of London’s Imperial College Business School, says: “The MBA that used to be taught maybe 15-20 years ago in more traditional schools — a bit of strategy, a bit of finance, a bit of accounting — that was appropriate in a different time.

“Today, business is not just transactional,” she says. “It is about engagement. We need to design experiences, not just produce and sell things.” That requires a very different kind of business education.

In the digital economy, start-ups, professional firms and big companies alike need founders and decision makers with multi-layered skills. KPMG’s Alwin Magimay points to the importance of the Ds: a (specialist) discipline, data, design and digital delivery. The would-be entrepreneur or business leader needs a core area of expertise, a discipline that may well be acquired at undergraduate level. In addition, he or she needs design skills (the core discipline for some may be design), mastery of data and the ability to manage digital delivery, Magimay says.

Stanford’s Prof Rajan takes a similar view. “Going forward, having

Digital entrepreneurs, left to right, Sean Rad, CEO of Tinder, Greg Blatt, chairman of Match Group and Sam Yagan, CEO of Match Group, celebrate Match.Com’s IPO; below, Pooja Sankar of Piazza, the online learning platform



an MBA alone may not be what you want. Almost a quarter of our MBA participants now do a three-year joint degree. That spurs this kind of multi-disciplinary mindset.”

Dörte Hirschberg is senior vice-president for venture development and organisation at Rocket Internet, a Berlin-based group building a stable of online businesses. When Rocket recruits people to head its start-ups, she says, “we expect an outstanding degree from a top university and work experience in high-performance environments such as consultancies”.

She adds that “deep technical competency with business knowledge is a rare combination that we value a lot. An MBA is one way to reach this”.

But an MBA is not the only way in. Rocket also hires specialists and runs training programmes. “We highly appreciate entrepreneurial spirit and

candidates who have already started their own business.”

As data-gathering snowballs worldwide, understanding fully the story behind the numbers is vital in every field.

Imperial College is at the forefront of MBA teaching for a digital era and teaches data science as a discipline. Its KPMG Centre for Advanced Business Analytics is underpinned by £20m of funding from the advisory firm and its Data Observatory, featuring an enveloping circular wall of monitors, is intended to enable visualisation of data in ways to help encourage new insights.

Digital entrepreneurship can also be taught, it seems. Stanford says 65 of its 2015 MBA graduates, 16 per cent of the total set out to found a business. Stanford’s entrepreneurial alumni include Nick Hungerford, founder of Nutmeg, an online investment management service; Sam Yagan, founder of OKCupid and now chief executive of Match Group; and Pooja Sankar, creator of online learning platform Piazza.

Critics note that many of today’s most successful digital entrepreneurs, such as Facebook’s Mark Zuckerberg, are college drop-outs. “But everybody isn’t a Steve Jobs or a Bill Gates,” says Prof Rajan. “I think for most of us it is important to understand the general management foundations, before you go into the digital economy.” **B**

Understanding the story behind the numbers is vital in every field

From the drawing board

Helping hand

An MBA graduate is using games and a 'glove' to rehabilitate stroke victims. By Jonathan Moules

Hoyoung Ban was never able to share the joy of graduation with his father, who died after suffering a stroke while he was completing his undergraduate studies at the Korea Advanced Institute of Science and Technology.

Not long after this, two of Ban's uncles suffered strokes. They survived, but failed to finish rehabilitation therapy, largely because of the high cost, and did not recover full use of their hands.

These experiences gave Ban a personal interest in the research into stroke rehabilitation algorithms and robotics conducted by his friend Young Choi for a doctorate from the University of Southern California. As part of this work, Choi had developed a prototype device to help stroke victims regain use of their hands, but the hardware proved too expensive and bulky to commercialise.

Ban had launched companies before, including an online TV business targeting Koreans in Los Angeles, and saw an opportunity to put his entrepreneurial skills to the test again. He was about to begin an MBA at the University of Virginia's Darden School of Business and reasoned that this would bring him into contact with experts who would be able to help him write a business plan.

Marrying his start-up experience with Choi's technical expertise and the support of Darden's entrepreneurship tutors and alumni, Ban saw an opportunity to find a technological solution to the problem of post-stroke paralysis rehabilitation.

Ban and Choi were joined by fellow Korean-born Darden MBA student Sy Hong as co-founders of Neofect. By this point they had a plan: to combine a patented glove-like device with online games to provide fun and accessible physiotherapy. The actions of the game would be tailored to help patients regain and improve movement and strength.

"We develop solutions for patients who are typically old, sick, depressed and unmotivated," Ban says. "It is a tough job convincing them that things can improve. Keeping them motivated

through gamification elements and an easy user interface is, therefore, an essential part of our development."

In the early stages of Neofect's evolution, Darden's teaching staff and former students helped the founders to focus the strategic direction of their new venture as well as advising them about raising finance.

By the time Ban and Hong graduated in 2011, the business was well under way. "Understanding of [the] financial market and the venture capital investment process helped me think what VCs [would] expect from the founders of the company," Ban says.

"Talks from alumni taught me several lessons about the challenges when starting a company and how to overcome them. Those business insights became a foundation for the successful growth of Neofect."

The business was launched with \$30,000 of seed funding from friends and family. This was later boosted by \$120,000 following a successful application made in 2010 for a research and development grant from the South Korean government.

The biggest challenge for such a new market has been to keep up with regulation by an understandably conservative medical profession.

"Digital healthcare is a new area and doctors and regulators are always cautious about trying new methods, so it takes a long time to get things started," Ban says. "Going through clinical trials took us a year and writing a paper about those trials took us another year. Fortunately, the results were excellent and the paper will be published soon."

Ban says his running of Neofect has benefited from lessons learnt during his first attempt at a start-up in the interactive television market, which by his own confession "didn't work out



Gripping: Hoyoung Ban (right) with Neofect's 'glove' (also above). The device works with online games to help people recover from strokes

well". A key mistake was to outsource development of hardware, he admits, which prevented him from changing the core product as soon as he wanted. "Active communication and constant feedback is the key when developing [a] product but that part was not going smoothly," he says.

To avoid a repeat of this, Ban made sure Neofect's core product was developed entirely in-house by design, hardware and software teams. About 50 people now work at Neofect's offices in San Francisco and Seongnam, South Korea, including experts in engineering, software development and rehabilitation therapy as part of an R&D team.

In a little more than a year since it launched its first product, the company has sold about 20 units of the Rapael Smart Glove to hospitals in South Korea and China. A further funding round is planned for 2016 to help expand the company's global presence by increasing the marketing effort, hopefully with the support of VC companies in the US.

Neofect has already started marketing and distribution to build a global business-to-business operation and it is in talks with distributors in the US, Europe, Middle East and Japan.

"As our ultimate vision is to deliver affordable at-home rehab for stroke patients — all the patients who need rehab exercises — we plan to eventually move towards [the] business-to-consumer market," Ban says. "We plan to gradually expand to the global B2C market within the next year." **B**

'Our ultimate vision is to deliver affordable at-home rehab for stroke patients — all the patients who need rehab exercises'



Warszawa



Yong-in



San Francisco



Jargon buster: 'Leverage'

Like Americans and the British, entrepreneurs and the rest of society are sometimes separated by a common language, with neither understanding what the other is saying. A case in point is the word leverage.

For an employee of an investment bank, for instance, leverage is the ratio of a company's debt to the value of its equity. For a builder or gardener, it is something you apply with a spade to dig up soil or a crop of potatoes.

For an entrepreneur, leverage has taken on a new meaning, to "take maximum advantage of" whatever you are doing at the moment, as in "I am trying to leverage my use of social media to further my entrepreneurial vision".

Entrepreneurs like leverage a lot if the number of entrepreneurship books with the L-word in their titles is anything to go by. According to the titles of two recently published entrepreneurship self-help books, you can "leverage the future" or "leverage your laziness".

Behind the reinterpretation of the word leverage, it seems, is the desire common to all entrepreneurs to find new ways of defining how positive life can be. A lot of start-up teams want to show others how they have been able to "effectively maximise" the resources and opportunities given to them by their fellow investors and friends.

They also want to frequently portray themselves as the casual-yet-professional entrepreneur. Basically, they leverage every occasion to drop the word leverage into their conversations and funding pitches. — **JM**

Meet the Dean

Full circle



VIDEO
 Prof Isabelle Bajeux-Besnainou talks to the FT's Jonathan Moules. www.ft.com/bized-video

Isabelle Bajeux-Besnainou of McGill's Desautels on going back to her old school as the boss. By Jonathan Moules

It was with a sense of déjà vu that Isabelle Bajeux-Besnainou arrived at work last September to take up her post as the first female dean at McGill University's Desautels Faculty of Management.

The Montreal business school — where in the autumn of 2015 nearly 20 per cent of the total intake spoke French as their mother tongue — provided the Paris-born and raised Bajeux-Besnainou with her first north American teaching job almost a quarter of a century ago.

Back then she was trying to fit her work around her husband's career and had secured a job transfer from France to the US.

Bajeux-Besnainou's position at Desautels was a stopgap post while she looked for a permanent position closer to her husband's office in New York, and necessitated a long and complex round trip each week from the family home.

"We were living in New Jersey and I was commuting to Montreal to teach," she recalls. "This time, my husband kind of followed me."

Aside from Desautels, Bajeux-Besnainou has known only one other employer — the George Washington University School of Business, where she spent 22 years rising up through the ranks, most recently serving as associate dean of undergraduate programmes.

Teaching as a faculty member is her first love, she insists, adding that

a passion for leadership is a recent discovery. "For the longest time, I was really not involved in administration — on the dark side of academia — and I was very happy being a professor and a researcher," she explains.

"Then it happened that... I became chair of the finance department. Somebody has to do it. Usually professors are taking turns to do that and I really loved it, which was a real surprise for me."

Bajeux-Besnainou was not looking to up sticks and cross the border to Canada when the top job at Desautels became vacant last year.

"I was contacted by a headhunter and I said, why not," she recalls. "It was a great fit."



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PHOTO: GUILLAUME SIMONEAU

Her predecessor Peter Todd, who left to take the helm at HEC Paris, was known for dramatic change, making the MBA programme self-funding and increasing tuition fees from C\$1,700 per annum to C\$39,750 (\$28,558) between 2009 and autumn 2015.

“I am trying to implement a very different managing style,” Bajoux-Besnainou says, noting that she is not in a rush to implement further changes.

“I feel that a new dean, especially when you come from outside, can be very isolated and not get a good understanding of what is going on.

So I have been meeting with faculty members and other staff individually and in groups.”

This personal approach at Desautels is easier given it has fewer than 100 academic staff and about 240 postgraduate students. One of the reasons Desautels students often

‘Canadian schools have suffered a lot in the rankings for different reasons. One of them is the Canadian dollar’

CV

Born and raised in Paris, where she graduated with a bachelor’s degree in mathematics. She then applied to study economics and finance at the École Normale Supérieure de Paris. In 1989 she completed her doctorate in mathematics applied to finance at the Université Paris-IX, then taught finance at Essec Business School until 1993. From 1994 to 2015 she worked at the George Washington University School of Business, where most recently she was associate dean of undergraduate programmes, overseeing interdisciplinary curriculum design.

Human touch: Bajoux-Besnainou prefers a personal management style

cite for choosing the school is the small class sizes.

Bajoux-Besnainou also identifies the course content as an offering that differs from other institutions.

“We are trying very early on in the curriculum to make sure that the students have a very comprehensive view of management and are not being too siloed,” she says.

“This is something that is very important at the student level, but it’s also important at the faculty level because, as they are required to co-teach some courses, there is some more collaboration that happens between faculties in different areas, which I think is very healthy.”

One of the concerns for Desautels in recent years has been its MBA programme’s drop down the global rankings. Over the three years to 2015 it slipped from 61st to 100th place in the FT’s MBA rankings, though it rose to 85th in 2016. It is a problem Bajoux-Besnainou acknowledges, although she claims that there have been factors outside the school’s control.

“Canadian schools have suffered a lot in the rankings for different reasons. One of them is the Canadian dollar, which has dropped a lot in value relative to other currencies.”

Bajoux-Besnainou argues that survey data fail to acknowledge that many students choose Canadian schools for reasons other than money.

“A lot of our students are coming and want to stay in Canada and would be very keen on getting their first job in Canada, even if it doesn’t pay very well to start with, because they want to stay in Canada,” she says. “I think that is probably a good position for me to start with because it means we can only go up when the exchange rate changes in our favour again.”

I want to know if she thinks being a female dean brings anything fresh to the role. She replies that she feels women have “a more human grasp” on matters and that the staff at Desautels are aware of her management style being very different. **B**

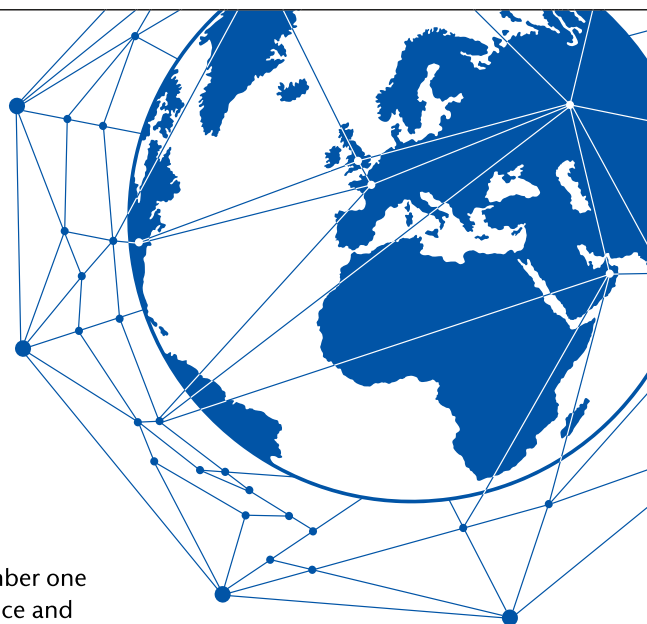


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Paying for pricey programmes

how to...

choose an MBA

Picking a degree in a packed market requires research, says Sarah Murray

For Santiago Mijares, the location of New York University's Stern School of Business influenced his choice of MBA, giving his wife a chance to pursue a career in education, providing access to Wall Street and offering a stimulating urban lifestyle. By contrast, Meghan Curran was not worried about location when picking Indiana University's Kelley School of Business. Working in the social sector, she was more concerned about gaining business skills and reducing a big debt because a scholarship covered her tuition.

The contrasting factors considered by Curran and Mijares, who came from insurance and investment banking, underline that the process of selecting a school is highly individual. Everything from your professional background to your goals will shape the decision. However, for Mijares, Curran and a growing number of prospective students, one factor trumps all others: culture.

Culture and values

Beyond a school's ranking, location, programmes and faculty, it is important to understand whether its culture will fit your learning style, lifestyle and professional goals. Since fellow students remain important members of your network long after graduation, you should feel confident that the school attracts professionals whose approach and values match yours. "I was really interested in the culture of the school," says Curran, now senior talent associate at Acumen, a New York-based social impact investment fund. "I knew a lot of the more typical MBA



How to...

programmes might not be a good fit for me in terms of being very competitive, so I was trying to explore schools with more of a collaborative feel.”

To investigate a school’s culture, you can attend networking events or arrange to meet students, staff and alumni. Their willingness to engage is in itself revealing. “If the students do respond that’s a good sign,” says Indian-born Ravi Maniar, a second-year MBA student at University of North Carolina’s Kenan-Flagler Business School. “I was blown away by UNC when I visited because everyone was so friendly — I knew I’d come to the right place.”

This approach is widening the choices beyond the traditional top-ranked schools. “Now there are all these other schools that were not on the radar rankings-wise but are coming on strong because of their cultures,” says Judith Silverman Hodara, director at Fortuna Admissions, an MBA coaching team.

Technology and social media make it easier to find out about a school. “It’s no longer about waiting for an introduction,” says Hodara, former acting director of MBA admissions at Wharton. “Within two clicks, you can find someone to talk to.”

Student diversity is also a consideration. “For me that was very important,” says Hermes Peraza, a Venezuelan who studied at Alliance Manchester Business School, and chose from among European rather than US schools because of their larger international student intakes. “That’s a huge factor because you learn a lot from different perspectives and different ways of working,” he says.

Programmes, faculty and teaching

While the network you build at college is as important as the teaching, it is nevertheless critical to explore a school’s programmes, how much emphasis is put on core courses versus electives and whether faculty members are also business people.

Of course, you may be drawn to individual professors. For Mijares, this was part of the appeal of Stern. “I’m a big fan of [professors] Aswath Damodaran and Nouriel Roubini and I knew both of them were teaching here so that got me really excited,” he says.

Whether or not faculty also work in business is important, says Mijares. “When you have classes with practitioners, you learn so much more because you’re learning about things that are happening right now.”

Kyle Jacobs says that while he did not look into this before choosing Warwick Business School in the UK, he now

realises the difference it makes. “Having someone who is well established in their field teaching you through cases and their own experiences is great learning,” says Jacobs, previously an analyst at Huron Consulting Group in Chicago.

The need to acquire practical experience can influence your decision on whether to take a one- or two-year course, since the longer option offers greater scope for an internship.

A two-year programme may also appeal if you want to change careers. This was the case for Maniar, who had been a merchant marine officer. “It was clear I needed an immersive experience for as long as possible,” he says.

Location, location, location...

The location of your school is important for a variety of reasons, from the lifestyle

Students and graduates all stress the importance of thinking about what you want to get out of an MBA before selecting a school

it offers to the possibility of staying on and working after graduating, in which case investigating the local job market and, for overseas students, the visa regulations is important.

Do you want to be in a large city or a college town? In selecting UNC Chapel Hill, Maniar chose the latter. “It’s a more close-knit community,” he says.

For Hermes Peraza, who joined PA Consulting’s financial services practice after his MBA, the city was less important than the country, in his case the UK, and its work opportunities. “You need to know, within your market, how that country is doing and what is the supply versus demand,” he advises.

And, of course, you may want to enjoy a vibrant cultural experience in a city with theatres, galleries and restaurants. This was important to Mijares, who worked in Mexico City before heading to Stern. “I come from a big city and I wanted to stay in a big city,” he says.

Know where you are going

MBA students and graduates all stress the importance of thinking about what you want to get out of the MBA before even starting the process of school selection. “Knowing what you’re going to business school for is a big part of what enables you to get the most out of the experience,” says Curran. **B**

how to... apply

Candidates need to do the groundwork. **By Janina Conboye**

Applying to a top business school is tough. The level of competition is fierce.

The process of applying can range from a few months to two years depending on the applicant, but candidates need to do a lot of groundwork, which can be stressful and time consuming.

Applicants need to consider which schools they like, which courses they want to do, the culture and opportunities on offer, as well as doing the Graduate Management Admission Test (GMAT) or Graduate Record Examination. Recommendations must be found and additional essays are often required.

Cast your net wide

Getting into a top school “is like winning the lottery”, says Chioma Isiadinso, chief executive of Expartus, an admissions consultancy, and author of *The Best Business Schools’ Admissions Secrets*. She adds that acceptance rates can be as low as 6 per cent at Stanford and 12 per cent at Harvard Business School. Many programmes admit fewer than 20 per cent.

Given the increasing competition, Isiadinso recommends “casting a wide enough net to ensure admission success. Applicants can target schools with differing admission rates to give themselves the best odds of securing admission.”

Dawna Levenson, director of MBA admissions at MIT Sloan stresses the importance of thorough research, visits and online “webinars”. “Some schools will clearly feel a better fit than others,” she says.

Testing times

One of the most important aspects of an application is the GMAT.

Benoît Banchereau, director of communications, development and admissions at HEC Paris, says the GMAT is a good indicator of how successful a student will be on an MBA course “but it is much more than that”.

“Let’s be honest, the test is hard. If you want to succeed, you have to put the work in to study.” He says the difficult





questions combined with the strict time limit test more than just reasoning skills. “They show us how well a person is able to respond to stress and manage their time. These skills are vital during an MBA programme and beyond.”

Isiadinso says applicants need to do everything they can to prepare for the exam. Self-study is one way, but applicants who have below-average scores — top schools look for about 700 — can take a test prep course or hire a private tutor.

Although the GMAT carries significant weight, John Colley, associate dean for the MBA at Warwick Business School, which requires a score of 650, emphasises that this is far from all that is required.

“Most schools are looking for a diverse

cohort so will go out of the way to attract people with interesting or unique backgrounds,” he says.

Essays and questionnaires

In addition to the GMAT there may be other tests or essays. Some MBA programmes require applicants to answer questions that cover a wide

‘Let’s be honest, the test is hard. If you want to succeed, you have to put the work in. Tests show how well a person responds to stress’

range of subjects. In the past, candidates applying to US business schools often had to write six essays or more, but Isiadinso says most American business schools have reduced this to two or three. Stanford requires two essays, for example, while Harvard asks for one and Columbia requests three.

Applicants can use the essays to distinguish themselves, but they must also ensure their true personality comes across. Levenson suggests applicants ask two people to read their essays so they can judge that “it is really you”.

“Sometimes you can get buried in the words and you need to take a step back,” she says.

“The application and the interview are about a school getting to know you and you getting to know them.”

Language and leadership

For those who do not have English as their first language, tests are required since business schools' student bodies are international. "[At Warwick] one of the largest barriers for overseas students is English," Colley says. "You need to make sure it is up to scratch as you need to gain high marks in the tests to gain a place in programmes."

Banchereau says that the tests ensure "each candidate has the intellectual agility to fully participate in class discussions". But he adds that high GMAT and English test scores alone are not enough. "We look at a variety of additional criteria to assess a candidate's success in the programme, including previous academic performance, professional

'Business schools want leaders and the earlier you can start to demonstrate this, the better. They also value diversity'

accomplishment, international exposure and leadership potential."

There is no correct number of schools to apply to, but if a candidate has done the legwork, they can concentrate on a few. This means he or she can better tailor applications to each individual school.

Referrals and your USP

Recommendations must also be relevant, so they need to be given by people who are familiar with the candidate's business achievements. And like applications, references need to be tailored to the specific school. It is worth remembering that business schools want leaders and the earlier you can demonstrate this, the better.

Business schools also value diversity, says Isiadinso. "Know what your unique selling perspective is. You can have 10 investment bankers doing the same types of deals but the schools will only take one or two. Those are the people who show how they add value beyond just doing a good job... Know your difference and how you add value," she says.

Colley says it is important to be open minded. "You will have skills, but so will everybody else. Be ready to act like a sponge and soak up as much as you can. Never again will you spend such an intense year with people from so many different countries, so many sectors and so many professions." **B**

**how to...****pay for an MBA**

If the 'bank of mum and dad' is not an option, there are other ways to overcome the financial barriers to study, writes Wai Kwen Chan

Candidates applying for an MBA are likely to have plenty of motivation and big ideas about their careers, but not necessarily a large bank balance to fund them. One of the most common barriers to study is a lack of finance.

The cost of degrees at top schools can be in six figures. At Stanford Graduate School of Business in the US, for example, tuition fees for its two-year programme are \$128,100.

If the "bank of mum and dad" is not an option for you, what funding choices are there?

Scholarships and fellowships

The good news is that there is a diverse range of scholarships available based on need and merit that are used to attract the best and brightest students. Some 45 per cent of the class of 2012 graduates who took part in the 2016 FT MBA ranking survey received a grant or scholarship.

At Stanford, half of the MBA students in the 2015-16 academic year have received awards based on financial need, paying for an average 59 per cent of their tuition. For this year, the school has given out \$16m worth of fellowships. Students from around the world are welcome to apply.

Loans

It is possible to get loans from banks. For those applying to Ceibs in Shanghai, for instance, the China Merchants Bank offers loans of up to 80 per cent of tuition at an interest rate of about 5.8 per cent.

Some schools have joined forces with credit unions (not-for-profit financial co-operatives) to fund student loans. For example, in the US the University of Rochester's Simon school launched loans that do not require a co-signer for international MBA students starting in the autumn of 2016.

In partnership with Elements Financial and Credit Union Student Choice, the school offers loans ranging from \$1,000 to the entire cost of tuition. Rebekah Lewin, assistant dean of

admissions and financial aid at Simon, says priority will be based upon financial need as well as merit.

Crowdfunding

As it is uncommon to get a bank study loan from the high street, crowdfunding is becoming an attractive option.

A pioneering lending scheme, Prodigy Finance, offers alumni-funded loans to students from about 150 countries. Students accepted on a full-time MBA are eligible to apply and no co-signer is required.

Many schools give students access to this loan including France's HEC Paris, Insead and the UK's Oxford Saïd Business School.

There is no repayment during the grace period — the study time plus six months from graduation — and the loan is then paid back over seven years.

There are options for US citizens or permanent residents. One is CommonBond, which offers loans to students studying at 20 US schools including Wharton and Kellogg. Interest rates are currently 5.59 per cent fixed for a 10-year loan and 5.95 per cent for 15 years. The minimum amount that can be borrowed per year is \$2,000 and the maximum is \$110,000 or the cost of attendance (which generally refers to expenses such as tuition and room and board), whichever is lower.

Another option is SoFi, which provides loans at some US schools including Columbia and Yale. The minimum loan amount is \$10,000 and the maximum is the school's cost of attendance.

Sponsorship

It is worth talking to your employer about whether they will invest in your business education.

About 10 per cent of students who took part in the 2016 FT MBA ranking said their employers offered partial or full sponsorship. But be aware of any conditions. There may be a lock-in period during which you will be required to stay with your employer. If you decide to leave, you might have to pay back some of the tuition fees.



Earn while you learn

Despite the intensive nature of an MBA degree, some students resort to part-time work during their studies. But look out for restrictions.

First-year MBA students at London Business School are advised not to take a part-time job because of the study workload and extra-curricular activities, says David Simpson, MBA admissions director.

For two-year programmes, it is feasible to undertake a paid internship during the summer break. At the



It pays to research ways you can save money. If you apply early, it is possible to secure on-campus accommodation, which is generally cheaper

University of Toronto's Rotman school of management, some 80 to 90 per cent of full-time MBA students work during the summer. Average pay is about C\$5,000 (\$3,540) a month.

One benefit is that work experience can boost your bank balance as well as enhance your CV.

Budget and cuts

It is usual for students to use multiple sources of funding, as well as learning to cut back on their spending.

Ceibs MBA student Jongwook John Hong, a lawyer from Germany, says he had to change his lifestyle, travel less and go to fewer parties.

"Personal savings made the biggest portion of my funding — about 50 per cent," he says.

"Fortunately, I received support from my parents, about 30 per cent. Since the

euro was decreasing rapidly and I still needed to cover 20 per cent of my costs, I decided to take a loan from Prodigy Finance."

It pays to research ways you can save money. For example, if you apply early, it is possible to secure on-campus accommodation, which is generally cheaper than in the private sector. Check with the school about other potential costs you may have not factored in, such as international study trips.

Participants may study financial forecasting during their MBA but it is also essential they apply it to their own budget from the start.

Nicole Tee, director of graduate studies at Singapore's Nanyang Business School, notes that if graduates successfully complete their MBA but do not fulfil their financial obligations then they will not graduate. **B**



“WE WERE SOLVING A PROBLEM,
BUT WE WEREN’T BUILDING A BUSINESS.
CHICAGO BOOTH SHOWED ME HOW TO BUILD
A BUSINESS.”

Matt Maloney, '10, CEO, GrubHub Inc.

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TAKING TAKEOUT INTO THE 21ST CENTURY

By 2004, the Internet had already revolutionized the way consumers bought music, asked questions, and communicated with one another. But ordering food was another story: most customers still used paper menus. And if restaurants offered online ordering, their sites were often clunky and inconsistent.

Hungry and overworked one evening, then-software engineer **Matt Maloney, '10**, and a colleague dreamed up the idea: an easy-to-use online ordering site with abundant nearby options to choose from. They got started right away, collecting menus from local restaurants

and trying to sell the idea to them in a way that worked for both parties.

But how far could he take this promising hypothesis? “We were solving a problem, but we weren’t building a business.”

Using the analytical frameworks of **The Chicago Approach**, Maloney and his business partner developed a two-sided data model to both persuade skeptical restaurant owners to buy in and encourage consumers to place their orders on their laptops and phones instead of the old-fashioned way. The idea, dubbed **GrubHub**, won **first place in Chicago Booth’s Edward L. Kaplan,**

'71, New Venture Challenge in 2006. Less than a decade later, Maloney, as CEO, led GrubHub through an IPO.

The company now represents 35,000 takeout restaurants in more than 900 US cities and London, and is on track to report a 2015 net revenue well over \$350 million—success that Maloney can trace back to the New Venture Challenge and The Chicago Approach.

“Chicago Booth showed me how to build a business.” ■

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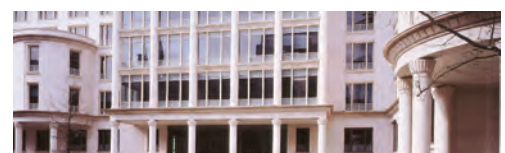
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Technology p58

The Internet of (strange) Things



Hopes & Fears p66

Shaped by adversity



books

The trouble with robots...

Andrew Hill on what the rise of the machines means for our working lives

Given the strength of the field, it was never a sure thing that a technology title would be business book of the year in 2015. But it was a safeish bet.

In the 11 years of the Financial Times award, which is backed by McKinsey, only one book on technology had won before, *The Everything Store*, Brad Stone's account of the rise of Amazon, which took the prize in 2013, and was as much a book about Jeff Bezos's entrepreneurial drive as it was about the technology behind it. For years, authors, publishers and the prize's judges seemed to prefer analyses of the build-up to the financial crisis of 2008-09 and its cataclysmic aftermath.

But since the damaging high tide of the financial crisis started to ebb, the business bookshelf has increasingly been crowded with titles documenting the rapid rise of tech companies, profiling tech entrepreneurs and describing the impact of automation on the economy.

The 2015 longlist of 15 titles was dominated by books on these themes. The £30,000 prize duly went to Martin Ford's *The Rise of the Robots*. One of the judges was the leadership professor Herminia Ibarra (herself author of the excellent *Act Like a Leader, Think Like a Leader*, another of my favourite business books of 2015). "I'm a strong believer that the theme is important and people should pay attention to it," she said of the book.

"As a reasoned piece of argument on a really important topic, I think it's superb," added Rik Kirkland, another judge and McKinsey's director of publishing.

As a ready-made manual for how to deal with the future of business, the

Looking ahead: technology themes are dominating the business bookshelves

selection on page 57 is hard to beat, containing practical advice, cautionary tales and vivid visions of the future. Offered a seventh or eighth slot, I would also have mentioned *How Music Got Free*, Stephen Witt's page-turner about how piracy nearly destroyed the established music industry. I could also easily have included, in a completely different vein, Anne-Marie Slaughter's heartfelt *Unfinished Business*, about the obstacles that continue to hold back women's advancement in the workplace, a theme that she makes clear is as political as it is personal.


Business books are inevitably a lagging indicator of trends — a lag exacerbated by the long lead times of traditional publishing, even in a world of ebooks, self-publishing and instant opinion.


But it is possible to discern some future trends in the 2015 crop. For one thing, many books (including *The Rise of the Robots*) directly addressed the human element in fast-automating organisations and economies. My colleague Gillian Tett, for example, applied her anthropology qualifications to business in her 2015 book *The Silo Effect*, looking at the internal walls that often hold back organisations. Interest in the advancing frontiers of neuroscience was reflected in some titles. Last year's *Neuroscience for Leadership*, co-authored by a neuroscientist, an executive coach and a psychologist, is a good primer of more to come on the subject. Both trends

suggest the rise of the machines is making management and business authors re-examine our human identity.

Still, it is Martin Ford's bleak prognosis that sticks in the mind. As he told an audience in his New York acceptance speech: "Even people that do everything they are supposed to do [to get a good job] may find it difficult to get a foothold in the economy," once automation accelerates. If there is a silver lining, at least they will have more time to write books. **B**






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books

The next page


Andrew Hill picks some of the best titles from a crop written with an eye to the future

The Rise of the Robots: Technology and the Threat of Mass Unemployment, by Martin Ford, Basic

This was the deserved winner of the 2015

FT and McKinsey Business Book of the Year Award, for the importance of its message and the clarity of its explanation of what will happen as machines take on more tasks. Ford's prognosis is that a less labour-intensive economy will be miserable, even dangerous, as inequality, technological unemployment and climate change collide. His radical solutions, notably a guaranteed minimum basic income for everybody, underline his pessimistic outlook. Even if this were feasible, Ford warns that "the future may arrive long before we are ready" — and professionals will not be exempt.

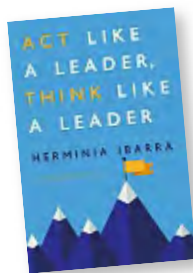

Losing the Signal: The Untold Story Behind the Extraordinary Rise and Spectacular Fall of BlackBerry, by Jacquie McNish and Sean Silcoff, Flatiron

Two contrasting figures, a genius engineer and a hard-charging salesman, built the emblematic business communications device of the late 1990s and early 2000s, the BlackBerry, and then squandered their lead. This book provides an object lesson for managers and entrepreneurs everywhere. McNish and Silcoff lay out how Mike Lazaridis and Jim Balsillie oversaw Research in Motion's breakneck growth. They got a lot right. But when the iPhone appeared in 2007, they proved unequal to the task of matching its innovations.


The Second Curve: Thoughts on Reinventing Society, by Charles Handy, Random House

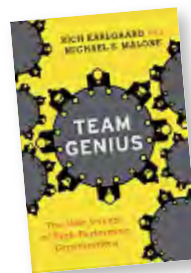
The octogenarian management writer could be resting on

his laurels, having correctly predicted developments such as outsourcing and the danger of an obsession with shareholder value. But his latest book is a warning against just such complacency: a fierce manifesto for radical political, corporate and social change. Handy ranges widely. He has long held that people should leap to the "second curve" of their lives and careers, before the first curve turns downwards. Here he applies the same idea to companies, governments and organisations, revisiting some of the striking ideas that first made his name.

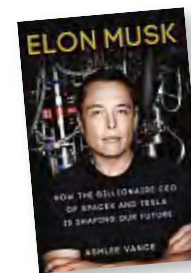

Act Like a Leader, Think Like a Leader, by Herminia Ibarra, Harvard Business Review Press

If your first reaction on being appointed to a leadership role is

to plan how to do it, think again. Ibarra, an Insead professor, points out that the best way to learn how to be a leader is to lead. She lays out four important responsibilities: building bridges between a leader's team and others; crafting and explaining a vision of the future; engaging people in change; and "embodying the change". The transition to leadership will be "unpredictable, messy, nonlinear, and emotionally charged", she warns. She includes great advice about networking, authenticity and storytelling, areas that in other hands can seem like hopeless fads.


Team Genius: The New Science of High-Performing Organizations, by Rich Karlgaard and Michael Malone, Harper Business

Bookshelves are crowded with titles about heroic leaders, so the premise here is a good, and rare, one: a team's contribution to success is usually underrated. The authors draw on a host of examples, from Silicon Valley start-ups to the US Navy's aerobatics unit. The book includes advice on scaling up and building diverse teams (more successful, but less harmonious, than homogeneous groups). It features good explanations of how to dismantle a team and analyse its successes and failures, an often neglected skill. But in the end, you have to conclude that assembling the best team is still more art than science.


Elon Musk: How the Billionaire CEO of SpaceX and Tesla is Shaping Our Future, by Ashlee Vance, Virgin

Still in his early forties, Elon Musk

will merit many more biographies if he achieves only a fraction of his goals, but this is a wonderful start. It would be easy to be drawn into the charismatic entrepreneur and space pioneer's sphere of influence, but this is no eulogy. Vance paints an unvarnished picture of the would-be world changer, even if Musk's motivation (childhood trauma? Christ-like urge to save humanity?) remains elusive. Like the late Steve Jobs, Musk sets outrageous goals and pushes his staff hard. Whether he realises his bold vision or not, the book outlines the drive needed just to get to the launchpad.

'The future may arrive long before we are ready'

technology

Too much information



The 'internet of things' makes strange – and worrying – connections, says Kate Bevan

Being inclined to sloth, especially at weekends, I love being able to turn on my kettle via an app from the comfort of my bed or the sofa and have it keep the water at the perfect temperature until I am ready to get up and walk to the kitchen to make coffee.

Smart kettles, fridges that keep tabs on when the milk is going off, tweeting catflaps, connected keyless locks that let your cleaner in but keep your mother-in-law out — the internet of things (IoT) is, as they say, most definitely a thing.

The basic idea is a great one: give a device the ability to collect data and metrics, to work with other devices and to be able to connect to the internet and you can turn an ordinary item into something much more useful.

It is an exploding market. Last November, technology research group Gartner predicted that there would be 6.4bn connected devices this year — a rise of 30 per cent on 2015 — with 20.8bn devices expected to be in use by 2020. Other estimates are even bigger. Juniper Research said last July that it expects there will be 38.5bn connected devices deployed by 2020. IDC, the consultancy, said in June that the global IoT market will be worth \$1.7tn by 2020.

But what precisely are all these connected devices? In the consumer space, they range from the moderately useful and just plain fun to the thoroughly ridiculous and pointless. There's the Kisha umbrella, for example, which comes with an associated app that will alert you if you walk out of a restaurant without it. If you do leave the brolly behind, you will be able to track its whereabouts on a map, while the app will also helpfully let you know if rain is forecast. Alternatively, you could continue buying cheap umbrellas that you won't mind losing.

For us ailurophiles, there is Tailio, a \$199 device you put under your cat's

litterbox that measures your furry housemate's visits to the box and collates the data into information about its habits and weight, which are then run through a cloud analytics platform to produce reports you can share with your vet. And of course it is controlled by an app, which will also remind you that it is time to clean out the litterbox — assuming your nose doesn't do so first.

Meanwhile, Samsung said in September that all of its devices, including TVs and washing machines, would have IoT support by 2020. Cosmetics group L'Oreal said, also in September, that it was exploring the

idea of connected makeup. Yes, really.

Whether connected lipstick comes to pass or not, such devices will of course be brilliant for manufacturers who want to collect data about how we use even the most quotidian items, but less so for those of us who would prefer not to deliver ever more detail about our lives. However, IoT devices have made a significant difference in industry and agriculture, helping to manage supply chains and machinery more efficiently.

Farmers are using smart sensors to keep tabs on farm machinery and buildings, track livestock and manage fields in minute detail. One such system, from SAP Digital Farming, uses sensors to track water and nutrients in the soil, allowing the farmer to zoom in on tiny parts of a field and adjust watering and fertilising accordingly. The system can send those details to farm workers, while sensors on farm vehicles can track their progress and keep an eye on the efficiency of the farm worker as well as on fuel consumption, wringing every last drop of productivity from machinery and land.

Other devices put WiFi repeaters on sheep to create a mesh network that extends internet connectivity where there is no mobile signal or WiFi connectivity, while dairy farmers can put smart accelerometers on their cows that monitor how the animal moves and warn of any change in pattern that could indicate illness.

However, while IoT devices can be fun and useful, there is growing concern about their security. Devices that use machine-to-machine data, information generated by the sensor that does not identify the (human) user, are not covered by data protection laws. Graham Cluley, a computer security consultant, says: "The foundation of everything on the IoT is to start by making it secure and then make it useful. I worry that these devices will be made cheaply and not with the future in mind."

'Hello Barbie, which uses speech recognition and machine learning to have 'conversations' with a child, has sparked privacy fears'



Apps for travel, typing and picture editing



Polarsteps, iPhone, free

This is a nice app for business travellers who want to keep in touch with family and friends while they are away but do not have time to do so manually. Create an account, via email or Facebook, tell the app your trip dates, turn on the tracker and it will automatically log where you are. You can add pictures and notes and it is all presented on a gorgeous website that you can keep private or share. However, the app asks if it can track you when you are not using it and there is no indication of what the developers might do with all that juicy data the app has collected.



Swiftkey Neural Alpha, free (in-app purchases), Android

Fans of the Swiftkey replacement keyboard might like to give this a go. It uses neural networks and AI to learn how you write – your style, your syntax and your subjects – to provide more useful predictive text. It is an unfinished app, so expect it to be bumpy. I gave up after a few days with it on my Nexus 9 tablet running the latest version of Android, Marshmallow. But as the latter is flaky on my device anyway, the app may not be to blame. I like Swiftkey in general and plan to give it another go when it is beyond alpha stage. Worth a look.



Adobe Lightroom, iPad, free

Adobe has made its excellent photo-editing app free for iOS users: no longer do you need a Creative Cloud membership plan to use it. The app imports from your camera roll – or your images stored in the Creative Cloud if you do have an account – and offers several quick presets, from simple colour correction and vignetting to more creative ones. Once you are done, export the edited image back into your iPad's gallery. For more advanced editing, you can open the image in Photoshop Fix, which is also free and does not require a Creative Cloud account. It is intuitive, but you will need to spend a few minutes finding your way around the gestures and controls. Android users still need a Creative Cloud account to use this. - **KB**



There are many alarming examples of IoT devices posing security problems. Fiat Chrysler recalled 1.4m cars last year when two hackers proved they could take control of a Jeep remotely. They managed to manipulate the car's transmission, air conditioning and radio over the internet as it was being driven.

Mattel's Hello Barbie, a doll that uses speech recognition and machine learning to have "conversations" with a child, has sparked security and privacy fears more than once. Most recently, Matt Jakubowski, a security researcher, announced that he had hacked the

Things change: Sheep can help to spread WiFi in remote areas, (above) while internet-compatible dolls face scrutiny over privacy (left)

doll and gained access to "system information, WiFi network names, its internal MAC address, account IDs and MP3 files".

Hackers have also found vulnerabilities in a smart toothbrush (which provokes the question of why you would want a smart toothbrush in the

'Connected devices have made a significant difference in industry and agriculture, helping to manage supply chains and machinery'

first place) and in 2014, Hewlett-Packard reported in a survey of IoT devices that 60 per cent of those had user interfaces with security vulnerabilities, while 90 per cent collected at least one piece of personal information.

Not even my smart kettle is safe – it was found to have a vulnerability that could cause it to reveal WiFi passwords. The makers breezily assured me that they would have a patch by the end of November, though none had arrived by mid-December. Meantime, I have gone back to the old-fashioned way of making coffee. **B**



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THE FT MBA QUIZ

Calling all business school students... test your knowledge of the world of business with the third FT MBA Quiz.

The FT MBA quiz will take place on March 10 and will test participants' knowledge of topics written about in the FT, from business and politics to technology and the arts.

Go to ft.com/mba-quiz-2016 to enter your team - the deadline to enter is February 26

If you have any questions, or require more information, please contact mba.quiz@ft.com



Missed chances



**We asked readers:
what should business
schools teach that
they don't – and why?**
By Wai Kwen Chan
@waikchan

The 'internet of things' is a concept that is rarely tapped in MBA classes. Technology, and therefore our lifestyle, is changing at a rapid pace and students should discuss the impact of the internet and anticipate trends in the sharing economy.

Audit leader, MasterCard

Business Schools should teach students how to code. IT touches every part of every business and everyone needs to understand how to leverage its value. The logical thinking required to write code helps deconstruct and solve problems in new ways. IT isn't just good for geeks, it helps us all.

Head of IT operations, John Lewis
(UK department store chain)

Building relationships. Most MBAs believe that being a jerk and appearing tough is key to success. The opposite is actually true. You do need to be firm and tough when needed, but you need to reach out and talk to people at all levels in the organisation.

Anonymous

Business schools should teach students how to have quick and productive meetings. I am in six hours of meetings a day, at least. They vary in productivity, yet are a necessary evil the more advanced I am in my career.

Marketing director

Teaching students how to fail fast is vital when starting a company. Too many entrepreneurs stress over every detail of their business, only to learn they solved the wrong problem upon launch. If you're not embarrassed by your first public-facing beta, you've waited too long to launch.

Executive at an investment group

By conforming to the same techniques and tools, business schools fail to teach their candidates about how to be different or creative in real life. Schools adopt the one-major-fits-all approach when success in life is about developing singularity. How many Bill Gates, Mark Zuckerberg or Steve Jobs do we have?

Practice leader of management consultancy

Read on, online

ft.com has a wealth of resources and content to help you navigate the world of business education

In addition to a live Ask the Experts online advice session on Wednesday January 27 (see right), the FT offers news, features, videos, interactive rankings, a Mooc (massive open online courses) tracker, student blogs, email alerts on relevant stories and much more at ft.com/business-education



Ask the Experts: Does the full-time MBA still have value in the workplace? Do recruiters value it and is it worth students' time and money? Guest experts will answer queries 2-3pm GMT on January 27. Questions to: ft.com/ask-the-experts



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School reports

What is it like to study for an MBA? Meet some of the FT's student bloggers



Initiation rituals
Bo Zhang
Columbia Business
School, US
October 2015

As we sheepishly followed each other into the room, we were welcomed by a group of chanting, grinning, arm-waving second-year MBAs dressed in hippie 1960s fashion. They gave each of us a Greenpeace necklace, a colourful hippy jacket and a bright yellow headband with flowers printed on it and told us to wear them for the next two weeks. Wearing my jacket and headband while sitting in a classroom covered in pink paper flowers, I watched Dan, one of the second years, skip to the tune of The Beatles' *Yellow Submarine*. It felt like a dream given that only a few weeks ago I was in a tailored suit and Joseph Cheaney shoes, sitting in morning conferences and analysing company performance. It was a long way away (3,459 miles to be exact) from corporate life in London.



Big in Japan
Laura Melina Loeven
Nanyang Business
School, Singapore
November 2015

At the prospect of spending a week on a business study mission in Tokyo, I felt slightly nervous about offending senior Japanese managers. Being European, the manifold unwritten rules of Japanese business culture were still a mystery to me. Thankfully, before my first MBA study trip I was able to attend a crash course on Japanese business culture and the dos and don'ts

of socialising, hosted by my Japanese classmates. For one evening, I was fully drawn into the Japanese lifestyle while enjoying sushi and sake, admiring a traditional Japanese dance, learning bowing ceremonies and practising the correct exchange of business cards.



The end of the affair
Stephen Morse
Saïd Business School,
Oxford, UK
November 2015

More than two years ago I fell in love. Today, the romance is over. Last week, I quit drinking coffee; cold turkey. The highs were high, but the lows were too low... My first day without coffee was sluggish. But I made it to my strategy class on time and even contributed a couple of things to the discussion, despite feeling a bizarre paralytic and catatonic feeling in both my brain and body... Working on my MBA, I know that this is a time for "personal development". This translates into kicking bad habits. My bad habit was coffee. And today, as I mourn the gallons of lattes, fraps, flat whites and more I will not consume, I am thankful I have more time to right my wrongs.



Three 'anti-lessons'
Owen Woolcock
London Business School
June 2015

In a number of airport bookshops these past few months, I have seen two books next to each other in the business section: *What They Teach You at Harvard Business School* by Philip

Delves Broughton and *What They Don't Teach You at Harvard Business School* by Mark McCormack. Their demand is a symptom of a question that can never definitely be answered: is business school worth it? What is my view? As long as the working world demands new perspectives and as long as people get stuck and feel the need for professional renewal, people will continue to go to business school. Years after, a majority will look back with fondness; a minority will say it changed their lives; and (thankfully) a small minority will believe it was a waste of time and money and they could have learnt it all from airport bestsellers.



Ten random questions
Brenden Sheehan
Thunderbird School of
Global Management, US
August 2015

Here's a list of 10 random questions that I often wondered about before I went to business school:

- 1) Why the heck does Ikea make me walk through its entire store? I'm trapped!
 - 2) How can Walmart afford to have such low prices and still be so profitable?
 - 3) How are interest rates adjusted?
 - 4) How did Starbucks become so popular? It's just coffee, right?
 - 5) What caused that horrible financial crisis in 2008?
 - 6) Why does Southwest only fly 737s?
 - 7) What's up with the IMF bailing out all of these countries?
 - 8) How can a profitable company go bankrupt?
 - 9) Why is Zara so successful?
 - 10) Why are Real Madrid fans so gung-ho?
- See the answers online: www.ft.com/wild-card

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The Financial Times and McKinsey & Company are delighted to announce the 2016 Bracken Bower Prize. Now in its third year, the award aims to unearth new talent by encouraging young authors to tackle emerging business themes.

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For further information on the prize, visit:

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FT MBA Challenge

Expose a hidden crime

Use your business skills to help spot the signs of human trafficking. By Della Bradshaw

Behind the political arguments now raging about migrant workers and refugees, there is an alarming and more distressing form of migration that often goes unnoticed. It is the human trafficking of tens of millions of poor, vulnerable people into slavery — kidnapped children, forced labourers and women coerced into prostitution. The International Labour Organisation has estimated there are almost 21m victims of human trafficking worldwide.

In a bid to raise awareness of this, one of the world's fastest growing crimes, the Financial Times is working with Stop the Traffik, an organisation that seeks to raise awareness about human trafficking.

For the 2016 FT MBA Challenge, Stop the Traffik is asking teams of business school students to help the movement build bridges with the business world in order to tackle the issue.

As part of its campaign, Stop the Traffik is launching the "STOP app", a smartphone application that will enable people to report the signs of human trafficking and forced labour that they see in their day-to-day lives.

"We have now reached the firm belief that only through the co-ordinated gathering and sharing of data at 'street level' can we begin to outsmart the traffickers and create an impactful, intelligence-led prevention strategy," says Ruth Dearnley, Stop the Traffik's chief executive.

The 2016 challenge

The 2016 FT MBA Challenge is to convince corporate partners to promote the STOP app for collecting grassroots data and then develop the wherewithal to analyse it. If the app is widely adopted, analysts will be able to establish real-time trends on the activities of traffickers and equip those working to prevent trafficking with timely actionable data.



'Only through the co-ordinated gathering and sharing data can we outsmart the traffickers'

Registered teams for the MBA Challenge will submit a short proposal on how to convince corporate partners to engage with the STOP app at each stage of its life cycle.

Shortlisted teams will then be asked to create a 12-page business plan on their proposal. They will tackle fundraising, marketing communications efforts and data collection and analysis.

The challenge is open to teams of between three and eight students. As human trafficking is a global issue, one student from each team must be studying at a university or business

school in Europe, a second in the Americas and a third in Asia or Africa. At least one participant in each team must be studying for an MBA at the point of registration, but teams could also include other business students or those studying data analysis, international politics or other topics.

Solutions are desperately needed to help Stop the Traffik raise awareness and equip communities, governments and businesses to spot the signs of people trafficking and forced labour.

Past challengers

This is the fifth year that the FT has run the MBA Challenge. In previous years the Challenge teams have tackled: the social stigma attached to wearing glasses for young people in developing economies; the problems faced by children and young people in education worldwide; and the logistical problems of delivering life-saving cancer drugs to children in developing economies.

In 2015, the MBA Challenge teams worked with the International Rescue Committee to address issues of child vaccination. In Uganda one in five children miss being vaccinated against preventable diseases and the 2015 winning team developed a way of using data collected through pregnancy and birth rates to help anticipate the demand for vaccines. "With this data, it is possible to schedule children in need of vaccination to go to their nearest health centre at a set time," the group's business plan said. "Schedules will ensure that the rural populace will get the service they need." **B**

To enter:

The deadline for team registrations is April 29 2016. Winners will be announced in October 2016.

The FT is running a matching service for individuals seeking to join a team. For more information, visit ft.com/mba-challenge or email mba.challenge@ft.com

Vulnerable:
a victim who is
being helped by
Stop the Traffik

Masahiro Okumura

Beyond adversity

'Pursuing my dream has been a driver to push myself further and a compass in my life'

How a difficult childhood fostered the drive to become a top business leader in Asia

The future, said Eleanor Roosevelt, the campaigner and long-serving former US First Lady, "belongs to those who believe in the beauty of their dreams".

Growing up, my childhood was far from hopeful. My family faced \$12m of debt after Japan's economic bubble burst in the 1990s, leaving us to live in fear of sometimes threatening creditors, while my mother fell severely ill. I felt hopeless and powerless about the future and struggled with low self-esteem.

Determined to turn my life around, I studied hard to get into the high school I dreamt about and later obtained my bachelor's degree in the US. Pursuing my dream has been a driver to push myself further and a compass in my life.

Because of my parents' struggles, I wanted to make them happy by becoming a capable businessman. My past led me to see the importance of developing business skills and insights, and I chose finance as a way to do so. After two years in the investment banking industry, I switched to a private equity fund focusing on the energy sector, where liberalisation was expected.

I worked day and night, but most of the deals we had hoped to complete in the changing energy market did not happen and within a year more than half of my colleagues became disillusioned and left. My closest friends were now gone and I felt isolated. However, it was through this job that I felt the strong growth potential in Asia and found myself wanting to become someone who creates business with his own hands. Yet because of my focus on finance, I lacked the knowledge and experience needed to become a business leader in Asia.

I wanted to learn practical marketing skills, develop networks and gain insights about business in fast-growing Asian countries, so I decided to do an



MBA. Singapore is the hub of south-east Asia, where money, people and opportunities flow in. The National University of Singapore Business School, ranked by the Financial Times among the top schools in Asia and with its diverse student body, seemed the best option. I woke before 5am every morning to study for the GMAT, the graduate management admission test, hoping to again change my life.

Once on the MBA, I began a new journey, and its impact on me was far greater than I expected. The diversity of my classmates forced me to develop a proactive attitude and leadership skills in order to reach agreement amid the varied opinions in team meetings.

My favourite class was marketing, where we suggested solutions to

Masahiro Okumura, who grew up in Japan, has a bachelor's degree in business from Boston University. He has worked in investment banking and a private equity fund focusing on the Asian energy sector. He completes his MBA at National University of Singapore this month

business challenges faced by the Singapore Symphony Orchestra and had the general manager and his team evaluate our proposal. This enabled me to apply theories we learnt in class to real-life situations and made me ponder what a realistic marketing plan should be. These skills and the leadership experience helped me to succeed in my internship at Johnson & Johnson and to get a full-time offer from the company.

Most students lived on campus and we often exchanged business insights and stories about rapidly changing Asian countries. It was incredible to learn from my classmates, who were entrepreneurs or came from large family firms, about how they conduct business and what made them successful, as well as visiting them in their home countries across Asia. These insights inspired me to commit to my career and to become an inspirational leader in Asia.

NUS also has great partner universities such as Tsinghua University in Beijing (pictured), where I spent the final term of my MBA. There, I met world leaders including François Hollande, the French president, Tim Cook of Apple and Mark Zuckerberg of Facebook. These encounters deepened my conviction that Asia is the right place for my career and inspired me to think big and aspire to be a game-changer.

I believe that the next innovation will emerge around the intersection of information technology and healthcare and I decided to pursue my career in this field to help people who have health problems, as my mother used to. The MBA not only gave me practical business skills and strong networks, but also offered me a vision for my future.

Just as Eleanor Roosevelt advised, I will keep believing in my own potential and continue to pursue my new-found dreams — to contribute to the world as a business leader in Asia. **B**



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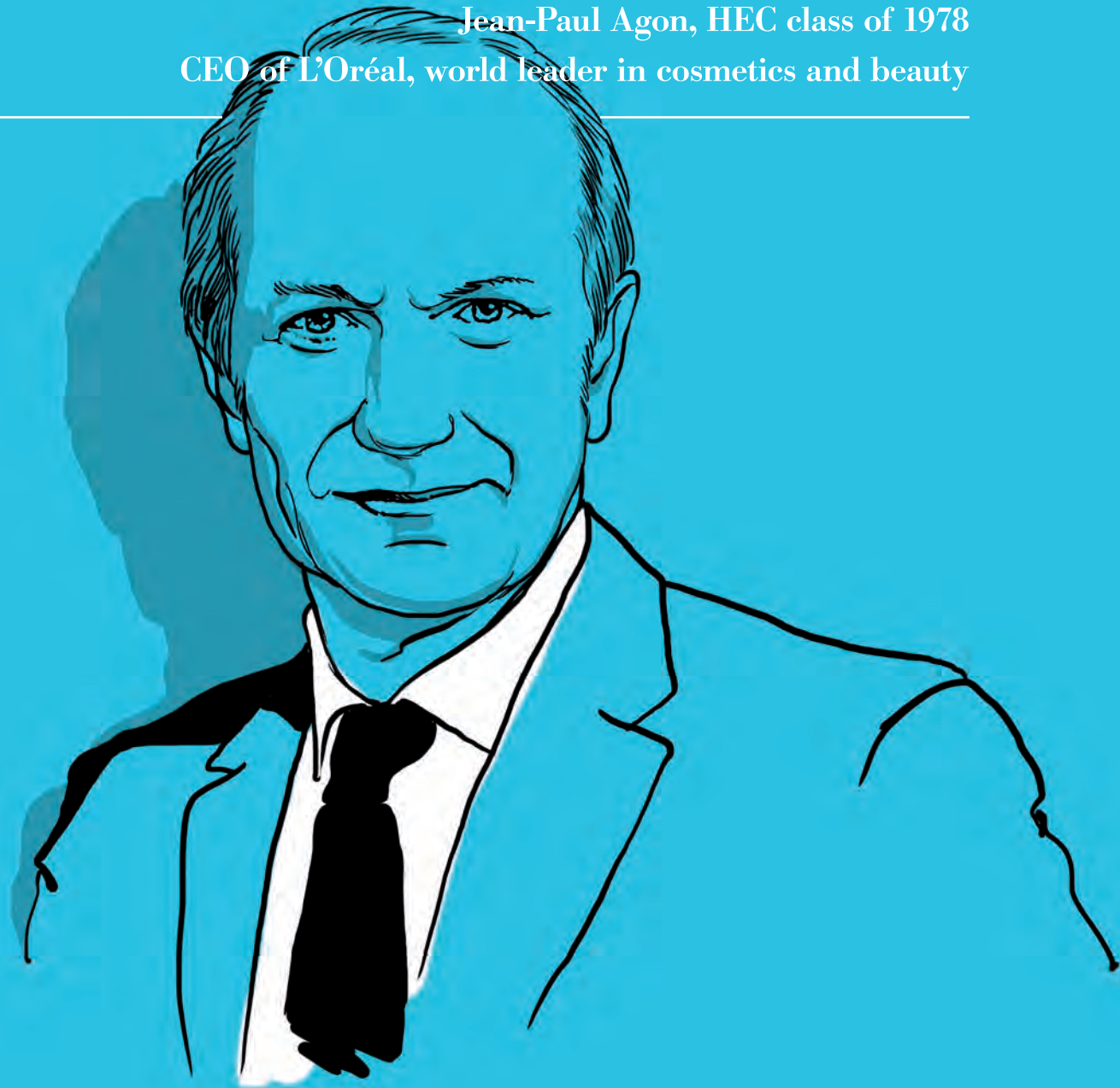
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