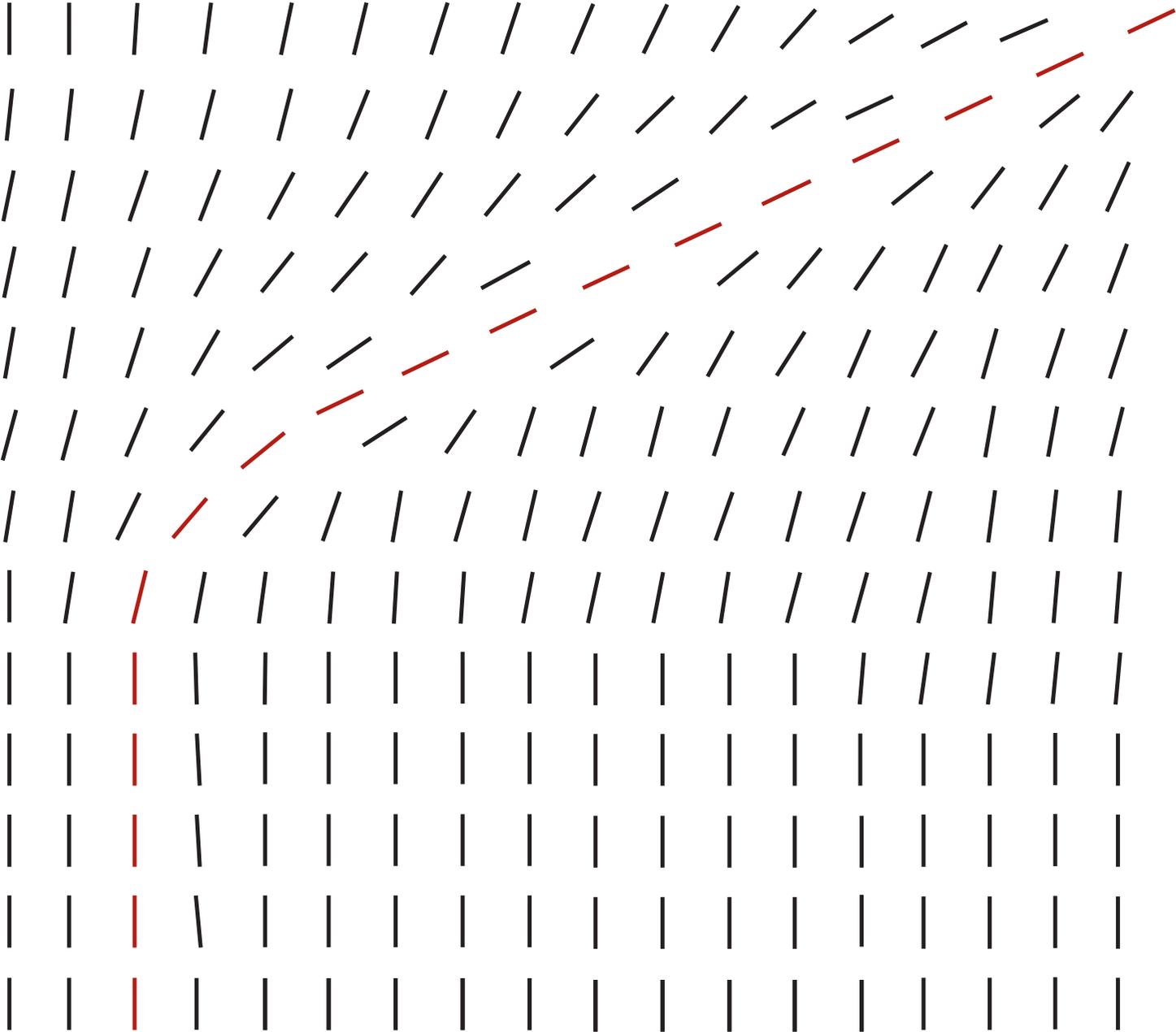


# ALLEN & OVERY

**LEADING IN  
UNCERTAIN TIMES**  
ANNUAL REVIEW 2017



# BUSINESS TRANSFORMATION AND POLITICAL CHANGE

Technology is transforming the corporate landscape at an accelerating pace. New businesses are being propelled into positions of global leadership while more established players are consolidating and adopting alternative delivery systems.

The challenges of achieving societal acceptance and new regulatory frameworks for emerging technologies and business models are huge at a time when the political and economic consensus is shifting towards protectionist and nationalist agendas. As a global business we share these pressures with our clients. That's why, as the corporate and political landscape is redrawn, we are working ever more closely with them to find ways to sustain our success in a disrupted, hyper-competitive and increasingly complex world.

02

**A&O IN NUMBERS**

## ADVANCED DELIVERY

Wim Dejonghe and Andrew Ballheimer describe a momentous year for the firm

04



07

## THE GREEN BONDS BOOM

As the market for green bonds continues to expand who will benefit from the growing opportunities?



12

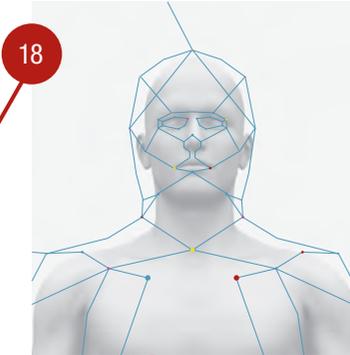


## INVESTING IN DISRUPTION

A look at corporate venture investment in dynamic start-ups

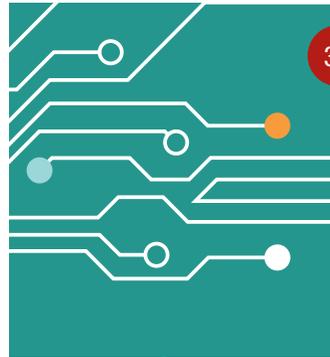
**CRISPR: HOW WILL IT CHANGE OUR LIVES?**

One giant breakthrough;  
a mass of complexities



**A FUSE HAS BEEN LIT**

Harnessing the power of disruptive  
technologies to transform business



**RIDING THE CHAOS**

Raising finance in  
volatile times



**DISPLACED PEOPLE**

The biggest humanitarian  
crisis of our time

**AWARDS AND ACCOLADES**

**OUR CONTRIBUTORS**



**SOUTHEAST ASIA'S DIGITAL BREAKTHROUGH**

The rise of home-grown  
tech disruptors



**LEADERSHIP FOR AN UNCERTAIN WORLD**

# A&O IN NUMBERS

Our global reach and local depth have allowed us to achieve outstanding results, not only for ourselves but also for our clients.



**44**

OFFICES

**31**

COUNTRIES

**12,000+**

INDIVIDUAL AOSPHERE USERS

**1**

FIRM WITH A SINGLE  
PROFIT POOL

**350**

INSTITUTIONAL SUBSCRIBERS  
TO AOSPHERE

**GBP307M**

RISE IN REVENUE  
SINCE 2013

**55%**

OF OUR TRANSACTIONS  
INVOLVED THREE OR  
MORE JURISDICTIONS

ACTED FOR  
**83%**

OF FORBES  
TOP 100 COMPANIES  
WORLDWIDE

**GBP16.4M**

EQUIVALENT VALUE  
IN BILLABLE TIME

**81%**

OF PEERPOINT CONSULTANTS HAVE  
OVER EIGHT YEARS' PQE, AND 71%  
HAVE SIGNIFICANT IN-HOUSE  
EXPERIENCE BEFORE JOINING US

**200+**

PEERPOINT CONSULTANTS GLOBALLY

**GBP1.72M**

CONTRIBUTED TO AMREF HEALTH  
AFRICA THROUGH OUR GLOBAL  
CHARITY PARTNERSHIP, MADE UP  
OF PRO BONO, IN-KIND SUPPORT,  
FUNDRAISING AND DONATIONS

**36,649**

HOURS RECORDED GLOBALLY  
ON PRO BONO AND COMMUNITY  
INVESTMENT WORK BY OUR  
LAWYERS, UP BY 15% SINCE 2016

**44%**

OF OUR LAWYERS RECORDED TIME  
ON PRO BONO WORK

**5,400**

PEOPLE

**554**

PARTNERS

**74%**

OF OUR WORK INVOLVED  
TWO OR MORE A&O OFFICES

**430+**

RELATIONSHIP LAW  
FIRMS IN MORE THAN

**100**

COUNTRIES

**99%**

OUR NETWORK OF OFFICES,  
COMBINED WITH OUR RELATIONSHIP  
FIRMS, GIVES CLIENTS ACCESS TO  
99% OF THE WORLD'S ECONOMY

# ADVANCED DELIVERY

Determination, a long-term strategy, staying close to clients and remaining highly agile has helped A&O steer a steady course through a time of great uncertainty. Here Wim Dejonghe, Senior Partner, and Andrew Ballheimer, Managing Partner, describe a momentous year for the firm.



**Andrew Ballheimer**  
Managing Partner, Allen & Overy

“When there’s no change, you can just passively manage your business,” Wim Dejonghe observes with a smile as he and Managing Partner Andrew Ballheimer describe their first year in office and a momentous 12 months in the firm’s history.

“As a business, we’ve always thrived when faced with change. Sure, unpredictability is intimidating, and change can create uncertainty. But we’ve faced these challenges with confidence and embraced them as opportunities.”

The past year has been dominated by the Brexit vote and its somewhat chaotic aftermath, Donald Trump’s election, ongoing worries about global economic growth, worsening conflict in the Middle East, and the continued challenges unleashed by the disruptive forces sweeping businesses across sectors. It’s hard to imagine a more challenging environment.

Yet, despite global, political and economic turmoil, A&O has experienced a year of record-breaking growth crowned with a July announcement of a 16% increase in revenue to GBP1.52 billion. The firm’s performance, although flattered by currency fluctuations, has been built on a foundation of solid underlying growth.

Curiously, perhaps, the firm’s ability to deal with such a huge amount of change is, in part, down to continuity – a determination to stick to a well proven strategy that has served A&O increasingly well over the last ten years.

It’s that strategy that saw the firm invest through the downturn following the financial crisis to build its network of offices around the world – there are now 44 in 31 countries – at a time when competitors were halting expansion or actively retrenching.

It’s about creating what both leaders call a “hedged” and “diversified” business that can balance its leading financial practice with other top tier practice groups like litigation, antitrust and corporate, and a business that can remain strong both in the world’s main financial centres and, crucially, emerging markets as these mature.

## Forging new paths

Since taking office, Wim and Andrew have set a number of new priority areas for investment.

“When you look at what the four largest economies might be in say the next 25 years... market commentators believe these will be the U.S., China, India and Indonesia – so again we’re talking about a long-term vision,” says Wim.

The U.S. is key and the firm has invested heavily in building its practice, recruiting 13 new partners from other firms. Revenues have grown by 32% and the firm has taken market share, but A&O remains a “collection of boutique practices” rather than the full service offering Wim and Andrew want to build.

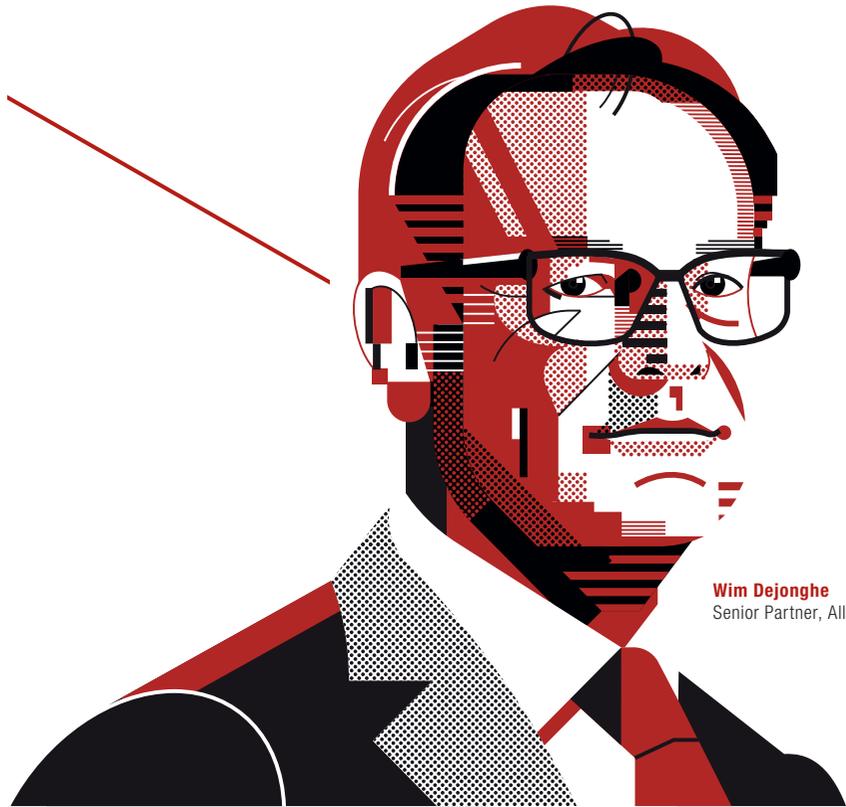
“We have the quality,” says Andrew. “We now have to build scale because the U.S. is a big market, half the world’s legal market, in fact, as well as being extra-territorial in its regulatory reach. We’ve done very well so far, and we’re definitely looking to expand much further.”

That’s all the more important, they say, as there is growing competition between English law and New York law as the two legal systems that are most exportable and A&O needs to have a world-class and deep capability in both.

China and other emerging markets are a priority too. “We’ve been in emerging markets for 30 years and we’ve learned a few lessons,” says Wim.

“There is much more volatility in those markets, but if you take a long-term view the growth potential is substantially bigger than in the more established economies. So the future of the firm depends on building a credible presence in these diverse markets.”

A&O’s third priority is to continue to build-out its top continental European presence, notably in Germany and France, replicating the leading position it has already achieved in countries such as Spain and Italy.



**Wim Dejonghe**  
Senior Partner, Allen & Overy

# GBP1.52BN

REVENUE

## +16%

FROM 2016

### Advanced Delivery solutions

While continuity has obviously been key to the firm’s success, there’s always a need to develop our strategy and forge new paths.

Nowhere is that more evident than in A&O’s development of its Advanced Delivery offering which has seen it build the Belfast Legal Services Centre, the Peerpoint contract lawyer business, MarginMatrix™, the aosphere online legal services offering, the project management office and, this year, its tech innovation centre, Fuse.

In the past, client general counsels had to break up projects between different suppliers to achieve efficiency and get more service for less budget. Advanced Delivery means that A&O can bring all those elements back under one roof in a cost effective way – “a one stop shop solution” – with no loss of quality.

The Advanced Delivery offerings have grown rapidly in a very short space of time. They are all now profitable and, if taken together, generate revenues equivalent to the firm’s fifth largest office.

More importantly, this is a market-leading approach, stresses Andrew. “I’m not sure many or any of our competitors are doing anything on this scale, or this breadth. With each of the offerings profitable on a standalone basis, this is good business. More importantly, it is helping clients address their issues and agendas by giving them a composite offering of uniquely different solutions.”

### A Fuse of ideas

The launch of Fuse is an extension of that solutions approach, bringing together A&O’s own legal technology experts with early stage tech companies and clients →

*“The pace of change is accelerating and that means the quality of our leadership has to follow. We need to make sure the next generation does even better than we do.”*

to work together in a dynamic working space within the London office to create relevant solutions in the closely connected worlds of legaltech, regtech and dealtech.

Since its announcement in April this year, nearly 90 early stage tech companies have applied to join the first cohort when Fuse launches in September. Separately, A&O has invested in Nivaura, a fintech start-up working on a bonds solution for small and medium sized companies using blockchain technology, which has since agreed to be entrepreneur-in-residence at Fuse.

"I would struggle to find an industry that is not subject to huge change because of technology," comments Wim. "As a lawyer that creates challenges and opportunities, and we've seen a lot of interest from clients because Fuse is a great opportunity to get a different, deeper perspective on the innovations that can change business. I'm really excited about the opportunity that this will generate in the next couple of years."

Both are incredibly proud that the partnership with Nivaura and the development of Fuse and MarginMatrix™ were ideas that people within the firm identified as opportunities. The key, they say, is to create a culture where people feel confident to bring ideas forward and know that, if they look promising, the firm will back them.

Andrew emphasises the importance of this to a global law firm. "We've strived to encourage a culture where people feel empowered to voice their ideas, and to build successes for themselves and the firm, even if that occasionally means having the courage to fail. This spirit of innovation creates a fantastic energy in the firm and we want to keep encouraging it."

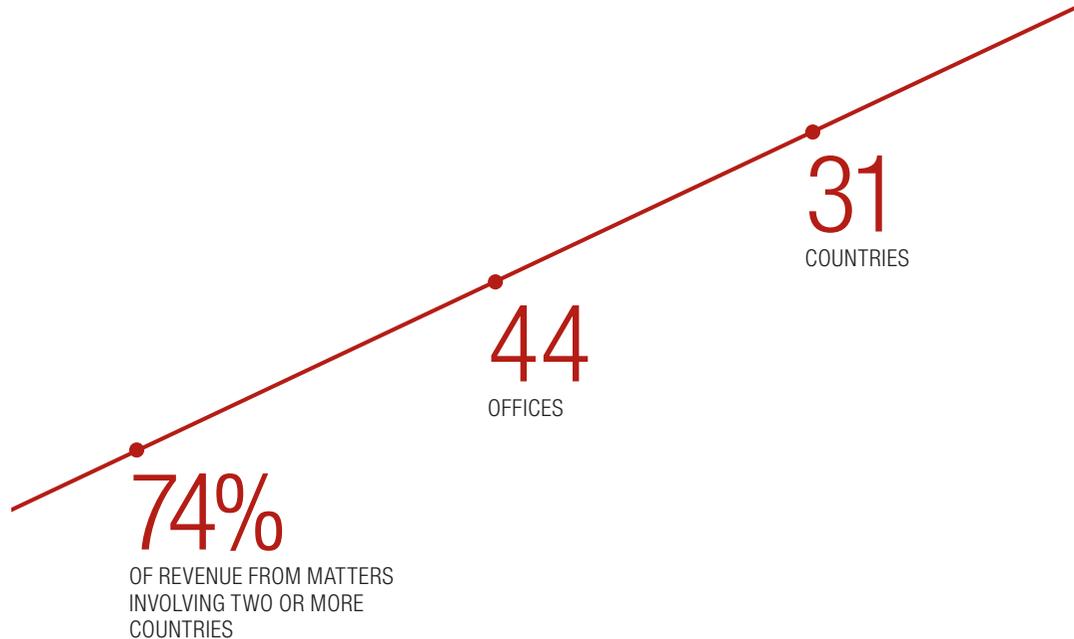
37 [Read more about Fuse](#)

### New ways of working

Getting the working environment right takes innovation too.

"Our business is all about our clients and our biggest asset is our people," says Andrew. "We want to have the best people, the happiest, the most supported, the brightest, clearly, and we want to be as inclusive and as diverse an environment as possible."

He readily admits there are huge challenges here – particularly in terms of gender balance at partnership level – and that finding answers is taking longer than is ideal. "Our partners are split 18% female, 82% male, and yet our intake is 50% female. That means we are losing a lot of talent which is both wrong and bad business. There is no easy fix. So we have a whole series of initiatives to help us get to the root of the issue, find sustainable solutions and action change. We are determined to turn this around."



"But what brings it together", says Wim, "is that constant opportunity to develop people. We need to make sure that the platform remains attractive by offering the best training programmes, both in legal and non-legal skills, and I think it's essential to be the best in class in our industry in doing that."

One key area for development is leadership, and, in partnership with the international graduate business school INSEAD, A&O has launched its new A&O Leadership Centre, headed by Wim's predecessor, David Morley. The focus is on developing the skills, qualities and abilities that leaders of the future will need to thrive in an uncertain world.

"The pace of change is accelerating and that means the quality of our leadership has to follow. We need to make sure the next generation does even better than we do," says Andrew.

### Pro bono

Another proud area of achievement for both leaders is the growth in pro bono work being done by the firm (up by 15% during the year) and the fantastic support people across A&O have given to the staff-selected refugee charity, War Child. The GBP500,000 fundraising target was quickly overshot and raised to GBP1 million.

"A&O is a major employer, a major institution, and we have a social obligation to put something back into the community," says Andrew. Seeing that in action is very powerful.

"I was privileged enough to go to a couple of refugee camps that War Child looks after in Jordan – truly inspiring in terms of its work and truly humbling, frankly. Our GBP500,000 is literally transformative for hundreds of families. It is very important to both of us," he says.

### Outlook

So how does the year ahead look?

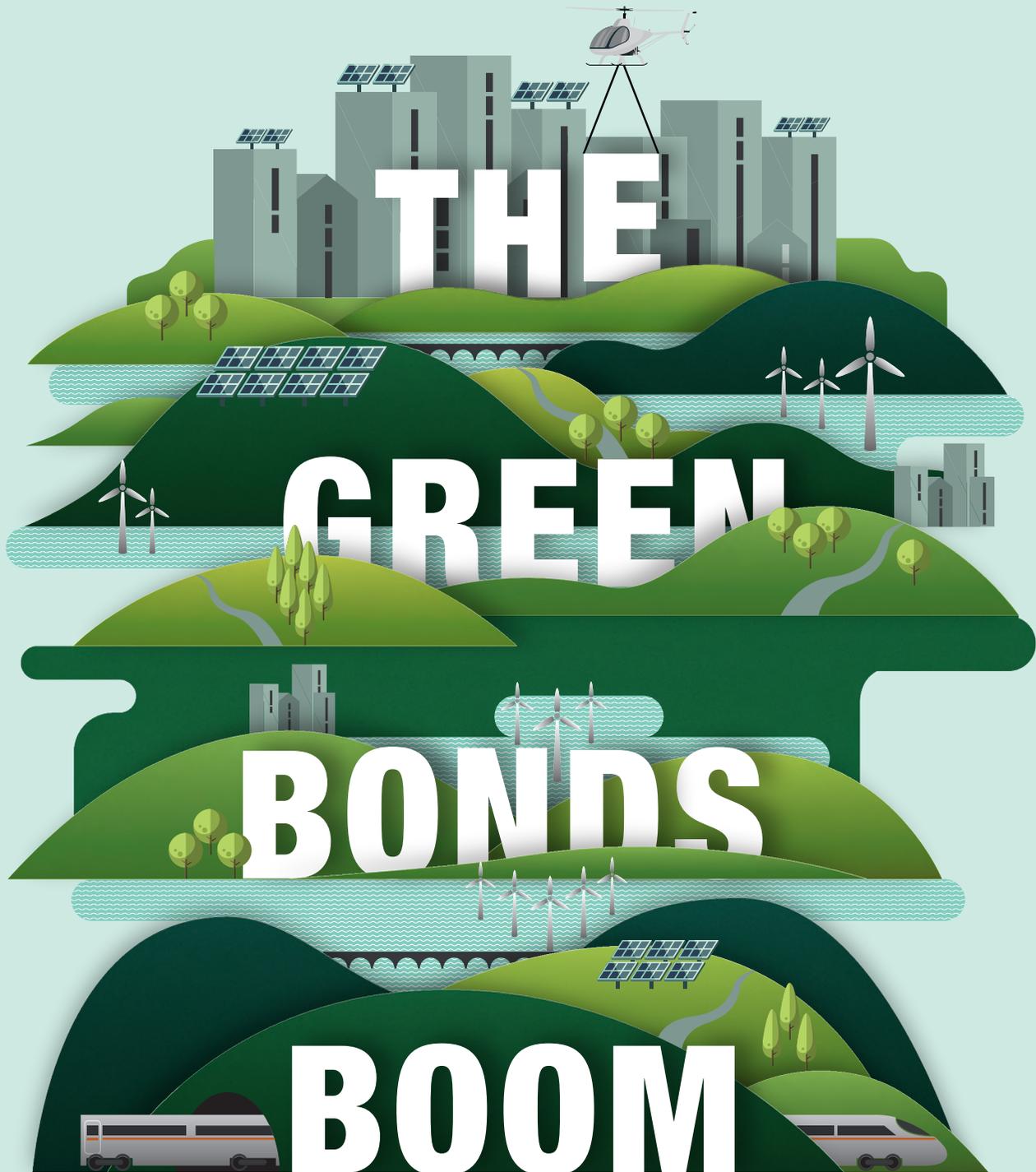
"Exciting, but remaining volatile," says Andrew. But he is convinced the 2017 results prove that the firm has the right presence across markets, the right product mix and the right mindset to remain highly agile. "A&O is in good health, happily."

Wim agrees and says there is no reason why the underlying growth achieved by the firm this year should not continue.

"We don't have a crystal ball but it's quite clear that the uncertainty just becomes part of day-to-day life – it's political, economic, it's there.

"The performance of the business in the first couple of months of the new financial year gives me confidence that we are on track. But we need to remain vigilant and agile to make sure we are not caught by a surprise somewhere and are ready to seize opportunities as they arise." ●

Wim and Andrew were interviewed by Simon Beavis in July 2017.



**AS THE MARKET FOR GREEN BONDS CONTINUES TO EXPAND  
WHO WILL BENEFIT FROM THE GROWING OPPORTUNITIES?**



**Yousuf Syed**  
Head of International Debt Capital  
Markets, Axis Bank Limited

# GREEN FUTURES

India's first certified and internationally listed green bond was certainly a ground-breaking transaction for both Axis Bank and Indian markets. Axis Bank announced the landmark USD500m transaction in May 2016.

"Though being a ground-breaking transaction, the issuance was not a one-off for Axis Bank, one of India's largest private sector banks", says Yousuf Syed, Head of International Debt Capital Markets.

"Instead, it presents the continued evolution of an approach to finance, invest and conduct day-to-day operations that are both socially and environmentally responsible. As a bank we are one of the earliest to finance green assets. Over time our views about the environment and society have evolved and now laid out explicit plans to meet some key objectives," he says.

The bank has a clear stance on the assets it will finance – determined to boost green investment and refusing to fund projects that are detrimental to the environment. It has an active policy to support the communities it works in to reduce its own environmental footprint. These ongoing efforts within the bank converged with the development of the green bonds market.

The transaction also conveniently coincided with the unveiling of ambitious new renewable energy targets by the Indian Government to raise capacity from just over 30GW (gigawatts) today to 175GW by 2022 and to target 40% of all power produced by renewable sources by 2030.

Although Prime Minister Narendra Modi has called for private sector banks to play a growing role in funding this rapid expansion of the renewables sector, the timing of the Axis green bond issuance is not a direct response to any government pressure or incentive.

However, it has had an impact on the wider market, insists Yousuf Syed. With the Axis issuance gaining a dual listing both on the green segment of the London Stock Exchange and on the Singapore exchange, the confidence of other Indian issuers to tap the international market for green finance has been boosted.

"I think our issuance has helped pave the way for other Indian issuers, including smaller ones, to issue green bonds in the international market. Since our transaction, we have seen a number of other issuances, especially from corporates."

## Reaching green investors

Axis Bank has been a regular issuer of conventional bonds and the USD500m green bonds form just a part of the USD5bn medium-term note programme.

However, stepping into the green bond market has allowed the bank to reach a wider investor base by attracting dedicated green investors. Many of these were first time investors in any green bond issuance from India.

In the green bond issued by Axis Bank, 22% of the investors who subscribed were 'green only' investors, which at the time was the highest proportion of dedicated green investors to participate in a green bond issuance from India, a record that Yousuf believes still holds.

"I think we have not only diversified our own investor base but also attracted some of the them to the Indian market, helping subsequent green bond issuances here," he says.

## Extensive dialogue

Structuring the transaction in order to make it attractive to green investors meant the bank had to work hard to understand their expectations. Helped by lead adviser Credit Agricole, the Axis team engaged in an extensive programme of dialogues with green investors. The activity was fruitful in understanding that investors wanted to prioritise three areas of investment – renewables, low carbon transport and low carbon buildings. The green bond framework for the transactions is independently assured by KPMG to be in compliance with strict environmental guidelines from the Climate Bonds Initiative (CBI).





Although hydro-electricity is a renewable energy source and is permitted under Green Bond Principles, some projects have proved to be contentious in the past and the CBI is yet to develop certification standards for them. Considering this, Axis Bank decided to leave hydro projects off its list of acceptable projects for financing until CBI standards are published.

Similarly, Axis Bank specified that verification and reporting standards will be much more rigorous. As proceeds are deployed, each project will be independently reviewed and verified by KPMG to ensure it is delivering promised benefits to the environment.

Details of some of the projects will be published in the annual disclosure made by Axis Bank to its green bond investors and some of those details will also be included in the bank's annual social and environmental responsibility report.

### Clear benefits

Yousuf believes that completing the first certified green bond issue has delivered significant benefits to the bank.

It has increased awareness and knowledge within the bank about the green bond market and, thanks to regular interaction with investors, has given the bank's teams a much deeper understanding of their demands and expectations.

It will, he thinks, make the bank much better at reporting its wider environmental achievements and goals, bring a new focus to financing green projects allowing it to better showcase its achievements in this area, and build a clear reputation as an environmentally responsible organisation.

"Issuing the green bond has helped cement our reputation and has sent a strong signal that, as an organisation, we will not finance or invest in projects that damage our environment, but want instead to encourage investment in green assets," says Yousuf.

"This is going to be business as usual for us in the future. It was not just a one-off issuance, but part of how we operate day-to-day. As our broad approach continues to evolve, we will certainly look for the right opportunity to do further green bond issuances in future."

*"Issuing the green bond has helped cement our reputation and has sent a strong signal that, as an organisation, we will not finance or invest in projects that damage our environment, but want instead to encourage investment in green assets."*



**Tim Conduit**  
Partner, Allen & Overy



**Amit Singh**  
Partner, Allen & Overy

## HOW GREEN IS MY BOND?

The market for green bonds has taken off, with India and China emerging as major players. With that growth has come an increased emphasis on certification – to give certainty that capital raised is being put to work on truly green projects.

It has been ten years since the European Investment Bank launched the first-ever green bond, followed a year later by the World Bank.

The idea, though ground-breaking, was relatively simple – to create an investment vehicle that would look like a conventional bond but with the express purpose of financing environmental projects, particularly those tackling climate change.

At the time, few could have predicted how quickly the market would grow, attracting an increasingly diverse range of issuers, investors and underwriters. →

Estimated to be just USD800m in 2007, the market has surged ahead with Moody's forecasting that it could reach USD206bn in 2017, more than double its 2016 level – which was itself a record-breaking year.

An important turning point came in 2013 with the issue of the first corporate green bond. Companies continue to embrace the market with some significant issuances, including record-breaking ones from Toyota (USD1.45bn) in 2014, Apple (USD1.5bn) in 2016 and Iberdrola (EUR2.4bn) in April this year.

Although a global market, the green bond segment is one that has been significantly boosted by the rapid growth of China and India as both countries look to overhaul their energy industries and invest heavily in renewable technologies, such as solar and wind. Moody's estimates Chinese banks and companies accounted for a staggering 35% of the global green bond market in 2016.

The Paris Climate Change Treaty has also acted as a spur to growth in the market, with the U.S. decision to withdraw its support from the agreement showing no sign, so far, of having an impact on the green bond market.

As Amit Singh, an ICM partner in our Hong Kong office, observes: "The market has been growing in leaps and bounds and is driven, interestingly enough, by issuances from China and India, certainly in Asia. Both countries, which have traditionally been accused of being the worst polluters, have committed to sourcing their energy needs from green sources."

As a firm, we've seen that growth at first hand, particularly in India, where A&O advised on the inaugural green bond issue from India in 2015 – a USD500m issuance by EXIM Bank. Since then, A&O has worked on the vast majority of green bond issuances out of India, including transactions for Indian banks such as IDBI and Axis Bank, and corporate issues such as India's biggest power producer, NTPC Limited, and the renewable energy company, ReNew Power, among others.

In that short time there have been some significant developments in the market, not least growing moves to provide investors with certainty that these bonds are being put to work on truly green projects.

In the absence of any formal certification process, early issuances tended to be un-assured. But progressively issuers are now adopting the Green Bond Principles (GBPs),

*"The greatest stick remains reputational... But I'm hopeful that, as more hedge and pension funds set aside money to be specifically used to invest in green bonds and projects, we may see some pricing advantage down the line to further underpin growth."*

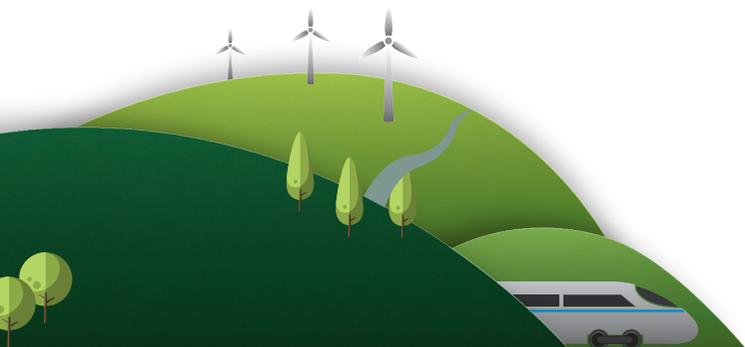
a set of voluntary guidelines developed by a representative group of issuers, investors and intermediaries in the green bond market and getting the issuance verified by independent third parties such as the Climate Bonds Initiative, a non-profit organisation working to mobilise debt capital markets for climate change solutions, which has developed assurance standards for the green bond market. The GBPs require issuers to identify how the proceeds will be spent, to evaluate how investment targets have been identified and how the project is subsequently managed and funds tracked, and finally setting out a programme of (usually annual) progress reporting.

"The reality is that initially there weren't a lot of onerous restrictions placed on issuers and, if you think about it from a policy perspective, that makes sense," argues Amit. "If you make it too restrictive people aren't going to be incentivised to do it, particularly if there isn't an obvious pricing advantage in issuing a green bond over a conventional one," he adds.

"Despite the recent issuances being certified by independent reputed third parties, arguably the greatest stick remains reputational. Issuing green bonds often accords with the company's good stance on corporate social responsibility. But I'm hopeful that, as more hedge and pension funds set aside money to be specifically used to invest in green bonds and projects (and we are increasingly seeing more of this), we may see some pricing advantage down the line to further underpin growth."

Tim Conduit, ICM partner in London who this year advised on the first-ever green bond issue by a railway rolling stock company, the EUR250m fundraising by Alpha Trains, has seen similar developments in the European market.

The world of green bonds is, he notes, "a very broad church" with some issuers looking to have very transparent green credentials and others simply keen to label their transactions as green bonds with the minimum of effort.





He identifies another important reason for growth. “One of the key drivers for the growth of the sector is undoubtedly as a means of accessing a different investor base,” he says.

Recent issuers include Transport for London and Lloyds Bank, he observes, adding: “From a corporate perspective, there are CSR motivations and the views of stakeholders and shareholders are also important. But equally there are very pragmatic incentives and it always comes back to diversifying the investor base. Investors who wouldn’t normally buy a bond issued by a particular corporate or financial institution will buy the green bond because it’s green.”

Diversification is an issue for investors too, says Amit. The issuances from NTPC Limited and Axis Bank both attracted a very strong base of ‘dark green’ European investors, particularly Scandinavian funds, specifically interested in investing in certified green bonds. “But we’re also talking to insurance companies, pension funds and hedge funds that are required to, or have set aside a proportion of funds to invest in green bonds.”

Both partners predict that the market will become increasingly institutionalised and harmonised. They note that issuers looking for a listing for a green issuance can now choose the green segment of the London Stock Exchange or other exchanges, which typically require independent third party certification.

Both emphasise the continuing role that national governments and public policy will play in directing and incentivising this market in many, if not most, jurisdictions.

As Amit puts it: “I think there will be a growing role for corporates because governments alone simply can’t meet the energy demands – there has to be a public/private partnership. There is a huge role for government to play. Take India. One of the reasons we are seeing so many independent power producers in the renewable sector is because the government is encouraging them to participate through tax breaks and other incentives.”

Tim agrees. He notes that renewable energy is one segment of the European infrastructure market where the appetite to invest is matched by plenty of investment opportunities – elsewhere a surplus of capital is chasing a relative paucity of assets.

“Renewable energy is one of the few areas in Europe where we are seeing significant government-backed infrastructure investment through incentives or subsidies for the sector. And the investor base has grown in part because ‘green’ capital is also in play.”

With governments under pressure to meet their climate obligations, and with the private sector recognising that it has a key role to play, it is likely the green bond market will continue to grow strongly. ●

*“Renewable energy is one of the few areas in Europe where we are seeing significant government-backed infrastructure investment through incentives or subsidies for the sector. And the investor base has grown in part because ‘green’ capital is also in play.”*

# INVESTING IN DISRUP- TION

**A GROWING NUMBER OF BUSINESSES ARE SETTING UP CORPORATE VENTURE FUNDS TO INVEST IN START-UP COMPANIES IN AN EFFORT TO GET A UNIQUE VIEW OF WHERE KEY TECHNOLOGIES ARE GOING AND GAIN MARKET DIFFERENTIATION.**



**Jim Adler**  
Managing Director, Toyota AI Ventures

## DEFEND AND ATTACK

As a ‘serial entrepreneur’ with extensive experience working in both start-ups and more conventional corporate settings, Jim Adler now heads Toyota AI Ventures, the carmaker’s new venture capital fund. Here he sheds light on Toyota’s approach and what can and should happen when a giant company invests in a nimble start-up.

Jim Adler, managing director of Toyota AI Ventures, the carmaker’s newly formed corporate venture capital fund, describes the disruption currently sweeping not just auto manufacturing, but industries across sectors: “As Marc Andreessen famously said, ‘Software is eating the world.’ I would argue that the auto industry is now on the menu. Furthermore, data is now also eating software. So, there are several disruptive forces at work.”

And it is not, Adler says, all about technology. “Many of the forces changing our industry are often about ways of doing business,” he explained. “Small, fast, agile cultures are so different from the deliberate, predictable, waterfall-design cultures that industries, like automotive, have relied upon for years.”

An engineer by background – he began his career as a rocket engineer at Lockheed Martin – Adler became a ‘serial entrepreneur’ leading a range of start-ups through creation, funding and sale –

intermittently moving back into more conventional corporate settings. One of the companies he led, the cryptographic secure voting business VoteHere, was launched in the midst of the controversial ‘hanging chads’ U.S. Presidential election in 2000, and attracted investment from Cisco and HP, eventually raising more than USD25m.

That background offers a unique vantage point from which to judge the opportunities and the pitfalls that lie in the way of the corporate venture capitalist and, now, how disruption is impinging on the car industry.

### **We don’t have all the answers**

“Toyota is at the top of the market and doing amazingly well, but that won’t always necessarily be the case. So how do we prepare for and thrive in this rapidly changing environment?” he asks.

The answer, he says, lies in the fact that, for all its size and success, Toyota remains a ‘humble’ organisation, comfortable to admit it doesn’t have all the answers. And it has become increasingly convinced that the best way to confront disruption is to invest in it.

That is the rationale behind Toyota AI Ventures, a subsidiary of the Toyota Research Institute, which has raised a USD100m fund to invest in robotics, AI, autonomous mobility, data and cloud technology. Usually targeting companies at the Seed and Series A stages of fundraising, it has announced three investments to date – SLAMcore, a UK maker of visual tracking and mapping systems, Intuition Robotics, an Israeli company working on social companion technology for older adults, and Nauto, a U.S. company working on collision prevention technology.

Toyota’s President, Akio Toyoda, gave the best explanation of the company’s strategic approach to disruption in a recent speech that particularly resonated with Adler. “He said that Toyota had to defend and attack at the same time. We had to defend our market position by continuing to make the best cars in the world, and we had to attack new technologies, bring them to market, and integrate them into Toyota.” →

### Strategic and financial returns

The fund has both a clear financial and strategic focus. First, any investment it makes must deliver benefits to the start-up. The start-up's success will translate into the fund's financial success and, ultimately, to Toyota's strategic success.

Beyond much-needed capital, Toyota can tap into its own technology or expert partners. With Toyota's help, Intuition Robotics quickly integrated new motor technology into its robots and quickly got a better, quieter system out to market – a lesson for Toyota in the speed at which a start-up can move. Through its global network of partners and dealers, Toyota can offer invaluable 'real market validation' for the start-up's products or services.

### Respect

Toyota's readiness to learn was a key reason for Adler accepting the role. "The company realised that it had to understand what a start-up company is – its ethos and how it defines success. Having done this a few times myself, I know what's involved and why entrepreneurs deserve so much respect."

To a big corporation, a start-up can feel like 'alien DNA'; the world of a company employing 350,000 people is so different from one employing just 35. Most have an academic idea of what starting and running a business from scratch is like, but few really understand the 'emotional toll' it can take.

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*"The most successful institutional and corporate venture capital funds have identified ideas that survive and thrive in the marketplace – putting financial return on the same footing as strategic focus."*

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In return, Toyota learns how these highly entrepreneurial companies work, what their culture is like, and what matters to them. Potentially, it also gets access to technologies that could prove vital to it in key fields such as self-driving cars and robotic systems.

Strategic fit is not enough in itself, however. "The universities are full of great ideas, but great ideas that translate into market successes are relatively rare," says Adler.

"The most successful institutional and corporate venture capital funds have identified ideas that survive and thrive in the marketplace – putting financial return on the same footing as strategic focus. It's the mechanism that best aligns the investor with the portfolio company because both sides want to create a market success."

"It's what I call attacking from the balance sheet," he says and it's an approach that others – Cisco, Intel, Google, Apple and Amazon – have made hugely successful by disrupting themselves. Now Toyota is following suit – not only learning about the culture and drivers of the start-up world, but connecting to these start-ups through the world of venture capital.

"Sean Parker said that 'running a start-up is like chewing glass and learning to enjoy the taste of your own blood.' It's a visceral visual but accurately describes the tough emotional roller coaster these innovators are on," Adler explained.

That understanding is informing the terms on which Toyota AI Ventures intends to invest. Unsuccessful investors, he notes, often demand onerous terms that get in the way of the start-up's success. "We've been consistent that our terms should not impede the company's progress, either in the marketplace or with other investors. We should help grow the company, thereby growing the pie for all shareholders."

Product, market, and stage of growth are key in selecting the right company for investment, but ultimately it is about the team, he insists. "Quite frankly, if the product and the market are right, but the team is not, I'm not interested."

The team qualities he looks for include creativity, integrity, resilience, and tenacity.

"Entrepreneurs are transparent, creative, and possess the resilience to pivot when the business is constantly challenged. As boxer Mike Tyson said of his approach to a big fight: 'Everyone has a fight plan, until they get punched in the mouth.'"

Optimism is key to this resilience. "It's part of the entrepreneurial life – a cycle of euphoria and despair that must be successfully managed to be successful."



**Simon Toms**  
Partner, Allen & Overy

## BOLD INVESTMENTS

Big companies across sectors are becoming active minority investors in early stage tech companies, calculating that this is the best way to gain access to new technologies and keep disruptive forces in their markets at bay. For many this is new ground and they are increasingly turning to us for help.

Disruption has become a fact of life across almost every sector of the economy and established businesses and, with their market dominance under threat like never before, they are having to find new ways to fight back.

In planning their response, a growing number of businesses have come to a similar conclusion – that the best way to beat disruption is to embrace it, and the quickest way to embrace it is to invest in the very companies and technologies that threaten to disrupt them.

As Simon Toms, a corporate partner in our London office, puts it: “These big businesses could choose to change their business models or adjust their behaviour to emulate the disruptors. They could invest in building a fully-fledged tech capability of their own.

“But all that’s pretty hard to do if you’re a large company even if you’ve got a growing number of nimble challengers disrupting your existing markets,” he says.

“They’re conscious too that early stage companies can grow very fast in this environment, where Google, Facebook, PayPal and eBay barely existed 15 years ago. They know they need to move quickly.” →



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[allenovery.com/annualreview](http://allenovery.com/annualreview)

By becoming providers of growth capital through corporate venturing they are actually following a fairly well-trodden path.

For the last ten years or more, some of the most successful businesses in the tech and life sciences sector have been carefully building their competitiveness and capabilities by making carefully selected investments in niche start-up businesses to gain access to market-changing ideas, intellectual property and talented people.

Now this is becoming the strategy of choice for companies in a diverse range of sectors. Companies are setting up corporate venture funds, incubators and accelerators to make strategic minority investments in promising technologies and the entrepreneurs behind them.

“They know that by making a series of such investments they will gain a unique view of where key technologies are going and which ones have the best chance of making a difference,” says Simon.

“Of course some transactions might not be successful, but by making a series of small targeted investments the calculation is that they will see many more things than they would ever see if they’d tried it alone.”

In addition, it allows companies to work with talented people who might not normally be interested in working in a big corporate environment. Indeed, many tech entrepreneurs are people who have deliberately stepped away from the corporate world to work in the more relaxed and unstructured start-up environment.

And the relationship, if properly established, is a symbiotic one. Big company investors can offer other things of great value on top of much needed capital to start-ups that are not only pre-profit but also often pre-revenue and hard-pressed to raise more conventional bank financing.

“They bring industry, customer and product knowledge, access to other players in the market, a ready environment in which to try out their ideas and the ability to give the new company a credibility and scale it could not hope to have as a start-up standing alone,” says Simon.

*For the last ten years or more, some of the most successful businesses in the tech and life sciences sector have been carefully building their competitiveness and capabilities by making carefully selected investments in niche start-up businesses to gain access to market-changing ideas, intellectual property and talented people.*

### Unfamiliar territory

The difficulty is that this is new ground for both buyers and sellers.

Big companies, though perhaps adept at completing large strategic M&A transactions, will often have no experience of minority investing in start-up companies. Similarly, entrepreneurs may be at an equal loss to know how to deal with a big corporate investor on acceptable terms.

The potential for misunderstanding and culture clash is great, and that raises the risk of investments backfiring.

As Simon puts it: “A big company used to having clear policies, committees, handbooks and all the good things it has to have can pretty easily put a small start-up off by trying to impose its culture. And that’s where we can come in and bridge the gap, not just from a legal perspective but by trying to explain that a minority investor relationship is different, more like a joint venture and a long-term partnership than trying to impose control.”

This is fertile ground for A&O because there is a growing recognition that such deals, even if relatively speculative, require careful planning, appropriate legal structuring and specialist due diligence ahead of and throughout the lifecycle of the transaction if they are to have a chance of long-term success, says Simon.

“We are now working with clients in sectors as diverse as financial services, aerospace, retailing and automotive and across a wide range of jurisdictions, including the UK, France, Germany, Australia, Singapore and China, helping them to frame investments that are sustainable and create value for both sides of the deal.”

### Addressing issues

Simon highlights some of the issues big investors need to be thinking about.

“It’s essential that corporate investors have the right governance procedures in place, including efficient processes to gain clearance for a deal. Unlike private equity (PE) houses and venture capital firms (VCs), they rarely have investment committees. Without them they can move too slowly or, worse still, make ill-judged investment decisions.”

Establishing the true long-term value of a start-up is always tricky, often requiring convertible preference share or loan note structures to push the question of valuation further down the road and to guarantee the right returns for investors.

While there might be a temptation to seek exclusivity over a technology being developed by the start-up, investors need to be realistic. The business case for the technology might well depend on broad market adoption including, potentially, by competitors of the investor.

Due diligence is critical, but necessarily different in these deals. Since the start-up may not yet have a customer base, there will be less need to scrutinise material customer contracts. Instead the diligence needs to focus primarily on issues such as regulatory risk for new products and ownership of intellectual property (IP) to make sure that the start-up really owns what is often the key value driver for the business in the long term. Such issues will be a major feature of the investment terms drawn up to support the deal.

Establishing real trust is also worth investing time and effort in, says Simon. Big companies are often investing in the founders of the company who are, and are likely to remain, a key asset. Strong clauses guaranteeing a fair return for all investors and covering founders leaving the company will be essential.

“Key members of the team may be vital to the value of the company. Taking care to incentivise important members of the team as part of the bigger organisation can pay huge dividends.”

As an adviser and as an investor in our own right, we have common cause with our clients here.

“Companies making these investments want to do things right because they’ve got policies, procedures, a legal team, a board. Even if they are making a relatively small and sometimes speculative investment, they need to dot the ‘i’s and cross the ‘t’s.

“Getting that right requires careful thought,” says Simon. “But having a good governance structure in place will ultimately mean investors remain nimble, agile and, hopefully, ahead of their competitors.” ●



# CRISPR: HOW WILL IT CHANGE OUR LIVES?

# CRISPR ONE GIANT BREAKTHROUGH; A MASS OF COMPLEXITIES

The discovery and successful harnessing of the gene editing technology, CRISPR, promises to be one of the most significant breakthroughs of our age. But a complex series of hurdles – legal, technical, commercial, regulatory and ethical – must be leapt to safely realise its vast potential.



**Marc Döring**  
Partner, Allen & Overy



**Daniel Lim**  
Senior Associate,  
Allen & Overy

The trajectory of scientific discovery often follows a similar pattern, with years of slow progress within individual disciplines suddenly giving way to a moment of extraordinary breakthrough and a giant leap forward.

The discovery and successful harnessing of the CRISPR (clustered regularly interspaced short palindromic repeats) system looks to be one of those step-change moments, particularly in its application in the field of gene editing. It promises to be of massive importance, not just in the treatment of genetic disorders, but in drug development, animal health, crop science and across the bio-industrial sector.

“The potential applications are so wide-ranging that it is hard to scope them out fully,” says Marc Döring, head of our IP Litigation practice in London. “But I

think it’s fair to say that CRISPR has the potential to revolutionise just about any industry in which biology and genetic technology play a part.”

Part of that is because the technology is relatively low cost and easy to use, says Daniel Lim, a senior associate in the IP Litigation practice.

“Gene editing technology is not a new idea and after more than a decade of trying we were getting close to creating one or two viable products. Then CRISPR – a Johnny-come-lately technology – arrives and really throws the cat among the pigeons because it represents such an important paradigm shift.”

The previous technologies were cumbersome, expensive and just very difficult to develop, he explains.

As a gene editing tool, CRISPR is a lot easier to handle, and cheaper to develop and to use.

“Within a year or two of its arrival CRISPR was quickly being put to work by researchers in labs around the world at a fraction of the cost of previous methods. In the research sense, it has democratised gene editing.”

There are now many variants of the technology but the most widely used is the CRISPR/Cas9 system, with other promising variants now being developed, including the Cpf1 and C2c2 systems.

The power of these systems lies in the relative ease with which they can be adapted specifically to target regions or genes of interest in the genome of target cells. The activity of the Cas protein causes a double-stranded break in the DNA at the target site, allowing researchers to remove or insert genetic material through DNA repair mechanisms.

Much of the media coverage of CRISPR has focused on its potential medical applications, particularly in the field of personalised medicine. For example, we are already seeing CRISPR being applied in a number of promising fields of research, such as in so-called ‘killer’ T-cell therapy designed to target cancer cell antigens specific to an individual patient’s cancer.

In the only trial to be cleared in the U.S., the University of Pennsylvania plans to use CRISPR to introduce three different modifications to T-cells taken from the patient’s body, which are then reintroduced in modified form to hone in on and attack tumour cells.

Clinical trials have already begun in China to investigate the use of similarly CRISPR-modified T-cells to treat patients with aggressive lung cancer. And in an indication of how quickly China is becoming a global force in biotech, clearance has also been given for the world’s first trial of a direct *in vivo* (within the body) application of the technology, significantly ahead of Western trials.

## Patent uncertainties

In any area of rapid scientific advancement, questions of ownership and control are rarely far behind. That’s certainly the case with CRISPR, with patent battles being fought in both the U.S. and Europe. The most prominent disputes centre on the foundation IP behind the technology.

Two rival groups have laid claim to inventing the fundamental components of the CRISPR system.

On one side are Jennifer Doudna of the University of California, Berkley (UCB) and Emmanuelle Charpentier who first described the use of the Cas9 system in single-celled organisms.

On the other side are Feng Zhang and the Broad Institute of MIT and Harvard who were the first to publish work on the use of the system in eukaryotes – higher-level organisms (including humans) with cells in which DNA is stored as chromosomes within a membrane-enclosed nucleus.

Some hailed a widely reported ruling by the U.S. Patent Trial and Appeal Board (PTAB) in February 2017 as a win for the Broad Institute. But, taking a global view and in light of subsequent patent grants for UCB, that decision (currently under appeal) was actually less decisive than many media commentators had suggested and, crucially, ruled that both teams’ approaches were separately patentable.

That is an important ruling because each of the three main players have separately created spin-out companies to commercialise CRISPR-based technology. Doudna has set up Caribou Biosciences and Intellia Therapeutics, which cross-license their foundational CRISPR IP with Charpentier’s CRISPR Therapeutics and ERS Genomics. Meanwhile, Zhang is associated with Editas Medicine.

The spin-outs have all moved quickly to form ties with (variously) disruptive biotech groups, venture capitalists and some of the very biggest pharma and agriscience companies, among them Bayer, Novartis, Regeneron, Allergan, DuPont and Monsanto, attracting thousands of millions of dollars of investment into specific areas of research.

But the PTAB ruling is by no means the end of the story and Marc and Daniel are clear that the patenting issue, complex enough already, will only become more so.

Already hundreds if not thousands of CRISPR-related patents have been filed worldwide, they argue, and if even a small fraction of them are granted, the field will be left with an incredibly complex web of patent rights that must be navigated. ➡

Reflecting on the PTAB ruling, Marc says: “I think we’ve come to the view that the ruling is effectively letting both sides have some of the IP – it’s not knocking out one side or the other.”

Daniel agrees, but adds: “On the commercial side, a huge number of questions have already been raised about what players need to do to ensure they have the freedom to operate given the complexity of the current landscape in terms of licensing and rights over ownership.

“And the key questions for a business seeking freedom to operate in the CRISPR space are: should I be jumping in now and with whom? If I do, what are the short, medium and long-term risks of backing one side over the other? And, if I don’t, will I get left behind?”

Although both are agreed that the legal landscape will remain uncertain, they suggest a more rational outcome might be possible, given the importance of the technology and its potential uses to society. Sure, there will be a proliferation

of patents, often involving overlapping scopes of protection, but how many in reality will end up being the subject of litigation and when?

As Daniel puts it: “I think the really interesting question is what sort of patent pools will form, what sort of cross-licensing and other innovative licensing solutions will we see being explored, and what groups will, in the end, band together to take different applications of the technology forward.”

Notably, the Broad Institute appears to have flagged its willingness to participate in such patent pooling initiatives, recently submitting 22 of its foundational CRISPR patents for consideration in a pool proposed by MPEG-LA, the company best known for administrating the patent pools behind the MPEG video codec standards. This could be a strategic move to corral other patent holders to move towards patent pooling. However, it is still early days for such initiatives. The many exclusive licences to the Broad Institute’s patents alone may well scupper any such deal.

### Regulatory and ethical doubts

That, however, leaves one other area of complexity.

Genetic modification has always been a deeply controversial issue, as we’ve seen most clearly, perhaps, in the field of GM foods.

It is an area where regulation is lagging behind the rapid pace of technological change, with existing rules, devised for an older generation of GM technology, failing to address the new landscape of which CRISPR is just a part. The future direction of regulation will have huge implications for therapeutic applications of CRISPR as well as its uses in food production and agriculture.

Ethical questions could prove even more controversial. In particular, there are deep concerns that the technology could be used eugenically.

It’s an area where some of the breakthrough scientists in the field have expressed their own real concerns, including Jennifer Doudna of UCB who has spoken powerfully of her fears of science running way ahead of ethics. Despite

asking scientists to refrain from clinical use of human germline editing (editing the genome in human embryos, sperm or egg cells), at least one research team has done just that in an attempt to show that diseases might be stopped before they ever start.

Marc says governments, policymakers and regulators need to perform a delicate balancing act here – introducing regulation that, on the one hand, encourages free and open research, but also protects against reckless or nefarious uses of the technology.

“It might seem straightforward. If you could edit the genome to remove coding for leukaemia in a patient – terrific, who wouldn’t want that? Similarly, if you can use gene technology to eradicate malaria-carrying mosquitoes in Africa, the case for that might seem pretty clear.

“But is this morally right, and where do you stop? If germline editing (to prevent inheriting a disease) is permitted in the name of alleviating human suffering, why would genetic enhancement facilitating a ‘better’, ‘improved’ life be impermissible? Who ultimately is going to decide what

## ADVANCES IN DNA DISCOVERY AND TECHNOLOGY

**1953**

James Watson and Francis Crick discover the double helix, the twisted-ladder structure of DNA giving rise to modern molecular biology.



**1977**

Frederick Sanger and colleagues invent the ‘dideoxy’ chain-termination method, known as DNA sequencing.



**1987**

First report of CRISPR cluster repeats. *Ishino et al.*

**1990**

U.S. Government launches the Human Genome Project, a USD3bn international effort to map out the 3bn DNA bases.



**2000**

First recognition that CRISPR families are present in bacteria. *Mojica et al.*

**2007**

First experimental evidence for CRISPR adaptive immunity against viruses. *Barrangou et al.*



**2008**

CRISPR acts upon DNA targets. *Marrafini et al.*

USD2.8bn cost of first human genome sequencing efforts taking almost 15 years to complete. Today genome sequencing and analysis costs below USD1,000.

ethical codes and legal regulations are needed to put the right limits on this technology? And if gene editing has become democratised, how are we going to be sure common ethical standards will be applied from country to country?”

On the one hand, there are stories of those who have seen family members suffer from a devastating genetic disease rejoicing at the prospect that CRISPR will potentially be able to remove the inherited genetic mutation. On the other hand, genome editing is seen by some as potentially undermining humanity itself, and has even been described by the U.S. intelligence community as one of the six weapons of mass destruction that nation-states might seek to deliberately or unintentionally misuse, leading to far-reaching economic and national security implications.

Certainly CRISPR epitomises how advances in science and technology can profoundly disrupt the world around us – and at such speed that many businesses, governments, policy-makers and regulators are struggling to keep up.



**Dr Brian Zambrowicz**  
Vice President, Functional Genomics, Regeneron

## A TECHNOLOGY THAT CAN'T BE IGNORED

Although there is still a great deal of development work to be done, gene editing has the potential to cure genetic diseases, making CRISPR/Cas9 a technology that can't be ignored, says Dr Brian Zambrowicz of Regeneron.

For Dr Brian Zambrowicz, Vice President of Functional Genomics at Regeneron and chief of its VelociGene operations, CRISPR/Cas9 technology has changed the game in gene editing in fundamental ways, promising significant benefits in both basic research and, potentially, in therapeutics.

“Tools that can be used to create targeted cutting of DNA increase our ability to engineer the genome. This has been possible in the past with older technologies like Zn Finger and TALEN-directed nucleases, but it has become

much more broadly applicable with the introduction of CRISPR/Cas9,” he says.

“Because it is incredibly easy to use, flexible and easy to design, it allows scientists to achieve in a matter of days things that used to take much longer. It has many applications in basic research and has great potential as a therapeutic.”

### Drug development

He specifically highlights the use of the technology in drug development but says that, here, gene editing should be

integrated into a chain of technologies and combined with a depth of biological understanding, rather than being seen as standing in isolation.

“We're a company with the foundational belief that genetics drive a lot of diseases,” he says of Regeneron. “If you believe in genetics, you can't ignore a technology that allows you to modify genes to affect disease. That's why we are so excited by CRISPR/Cas9 – because gene editing has the potential to actually cure genetic disease.” →

### 2012

First patent application by Doudna and Charperter to use CRISPR-Cas system as a genome engineering tool.

### 2013

First use of CRISPR in mouse and human cells. Zhang *et al.*

### 2017

US Patent Office awards key CRISPR-Cas 9 patents to the Broad Institute.



### 2019

The global Genome Editing Market is expected to reach over USD3.5m by 2019 from USD1.8m in 2014, growing at a rate of 13.75%. MarketsandMarkets.

He says that many disease-causing mutations and genetic variations associated with disease have been identified that are potential targets for the new technology. Regeneron's own Genetics Center continues to make new discoveries related to the genetics of human disease.

"All this is providing additional leads on where exactly in DNA we might want to knock out, repair or insert genetic sequences in order to attack diseases that have been historically difficult to address."

The liver is, he says, a good place to start because it is one of the body's main production sites for large numbers of proteins and is also 'amenable' to current delivery methods.

This is a focus for Regeneron in its collaboration with Intellia, one of the spin-off companies to have emerged from the labs that worked on the foundation IP for the new technology.

Together they are working on transthyretin (TTR) amyloidosis, a severe and ultimately fatal disease that has yet to find an effective treatment. "Using CRISPR/Cas9 we hope to edit the gene causing the dysfunctional TTR, but this is still very early research."

### Safe application

And, despite the rapid advances that have been made in CRISPR technology in a relatively short time, that note of caution is indicative of the challenges that lie ahead in capturing the potential of this technology.

Brian points to several. Finding better ways to deliver components of CRISPR/Cas9 to specific tissues efficiently and ensuring that off-target DNA cutting is minimised will be key to the safe use of this technology, he says. Just as important is the need to improve target insertion and repair techniques.

"There's a lot of technology development that needs to happen before we use these treatments in patients."

But he is confident Regeneron can play an important role in further developing the technology in safe ways.

"Regeneron has a long history of gene editing in mouse models and depths of experience in genetic engineering, so we feel well equipped to develop the refinements required for CRISPR/Cas9 to be used safely and effectively for therapeutic development."



**Professor Mitchell O'Connell**  
Assistant Professor of  
Biochemistry and Biophysics,  
University of Rochester

## PROFOUND CHANGE; PROFOUND QUESTIONS

From the frontline of scientific research, Assistant Professor Mitchell O'Connell offers a view of the huge benefits that could flow from the CRISPR gene-editing technology, and warns about its current limits and possible misuse.

The sudden emergence of CRISPR technology, with all its transformational promise, has, at times, led to the kind of hype that often greets a moment of profound scientific discovery.

But, says Assistant Professor Mitchell O'Connell, speaking from his research lab at the University of Rochester Medical Centre in New York state, it's important to bring some balance to the conversation about this hugely important technology and the complex work that still needs to be done for it to reach its potential.

"If you have a good idea in science, no doubt ten others will have had the same idea, and five may have tried it already," he says. "Ideas are generally easy. Implementation is harder."

And many hurdles lie in the way of CRISPR achieving its potential – IP ("messy"), regulation ("very tough"), potential societal resistance, deep ethical questions and significant technological challenges.

The scientific community, Mitchell argues, needs to be real and open about these issues so that the technology can be developed and applied safely, backed by a broad and informed consensus among stakeholders.

### Opening doors

But that, he makes clear, is not to underestimate the extent to which CRISPR is already opening new doors in scientific research.

"At a very fundamental level its ability to extend our understanding of biology and what genes and non-coding DNA do in everything from humans to all kinds of plants, animals, and bacteria etc. is extremely profound," he says.

*“There is a massive cost to a lot of healthcare and being able to treat diseases and cure and/or prevent serious disabilities could massively boost our ability as a population to thrive.”*

“In fundamental research CRISPR has really been able to help us begin to decipher the architecture of the genome and I think we will look back in 20 years’ time and think ‘wow, that’s how people were thinking about gene expression prior to CRISPR.’”

More importantly it is relatively easy to use and available to labs across the world. “There were gene editing techniques before, but they were only there for the 1%. Now anyone who runs a lab is able to take their favourite model organism(s) and modulate its genes to study their effects on growth, development, aging, cancer, cognition etc... you-name-it.”

In contrast to some of the patent disputes that have erupted as the technology is commercialised, sharing of ideas within the academic community is also helping to propel research. “We are all really focused on just pushing the field further forward,” he says.

### **From drug testing to food**

He sees a number of key benefits coming from the technology, not least in the treatment of disease, in drug development and agriculture.

In the past, he notes, some drug development programmes have “struggled and failed spectacularly” because they have simply not reflected

the vast genetic variation within and between different human populations. CRISPR could change that.

“It will allow us to create more complex disease models that will take account of the vast amount of genetic variation that exists in populations so that we can really understand how multiple gene variants are causing disease. That’s because we can now go in and target thousands of genes at once with pretty high efficacy. That’s where we see the technology going.”

But in terms of using CRISPR gene editing itself as part of a therapeutic intervention (and particularly in vivo gene CRISPR editing) it is still early days and key technical challenges are yet to be overcome, including delivery – getting it to the appropriate cells (and not to unwanted target cells), making precise edits at high enough efficiency to manifest a therapeutically beneficial phenotypic effect, and limiting the possibility that other regions in the genome will be affected, creating unwanted “off-target” mutations.

These challenges will be particularly challenging when using the technology on somatic (non-reproductive) cells within the body and Mitchell thinks that in the short-term the biggest advances in disease therapeutics will be seen in ex vivo (outside the body) research and

in offering some relief to patients with terminal diseases.

He predicts much faster progress in applying CRISPR in food production. “I’d like to see more talk about the benefits we can make in agriculture and revisiting the genetic modification (GM) debate. This is where CRISPR researchers need to be very careful because scientists previously struggled communicating the benefits of GM to the general population, their voices were often drowned out by fearmongering and lots of falsehoods.”

Maintaining a secure food supply has been one of the great feats of civilisation, he argues. “Using CRISPR is a lot more precise and usually involves making only very minor changes to the genome compared with the hundreds and hundreds of imprecise changes that we have made to plants to get from a wild heirloom species to something that’s domesticated and can grow in a mono-culture.”

Some of the nuance of these debates is lost, he says, particularly when transformational technologies come into the media spotlight.

### **Renegades**

Ease of access to CRISPR technology and its relative simplicity to use, without approval or oversight and “with a couple of years’ experience in molecular biology”, has clear downsides too. It means that regulation will, also, be a particular challenge in what is currently still something of a “Wild West” environment.

“The danger of a couple of renegade scientists coming out and doing stuff

before it’s safe to do so, or doing it just because they can, is a real concern,” he says.

In common with a growing number of researchers, including Jennifer Doudna – a pioneer in the field and his former advisor at the University of California, Berkeley – Mitchell calls for a pause to allow for a “community conversation” to decide what should and shouldn’t be done with the technology.

“We need to reach out to the community and let people know that we are citizens too and might in some cases have an opinion that is potentially separate from our scientific opinion,” he says.

Such a conversation needs to be inclusive of all stakeholders and address people’s concerns – particularly on issues likely to be highly contentious, such as germ-line editing. Equally, real care needs to be taken to explain the medical and economic benefits the technology might bring in terms of human wellbeing and helping to curb soaring healthcare spending.

“It’s hard to bring everyone together to create a quorum. But we need to really lay it out and be clear about the benefits to humanity as a whole in terms of quality of life and economics of healthcare particularly given our aging population and the increasing costs associated with long-term healthcare”.

“There is a massive cost to a lot of healthcare and being able to treat diseases and cure and/or prevent serious disabilities could massively boost our ability as a population to thrive.” ●

# RIDING THE CHAOS

RAISING FINANCE  
IN VOLATILE TIMES



## RISK AND REWARD

Uncertainty should, surely, mean that investors and borrowers have much less appetite for risk, especially in emerging markets. In fact, in recent times the exact opposite has been true, say Stefan Weiler and Laurel Hurst of JP Morgan.



**Stefan Weiler**  
Head of CEEMEA DCM, JP Morgan



**Laurel Hurst**  
Managing Director, Head of  
Transaction Management, CEEMEA  
Debt Capital Markets, JP Morgan

At a time of such palpable turbulence in world affairs, it's easy to assume that the risk appetite of both borrowers and investors would be greatly diminished. Uncertainty ought to breed high levels of caution and to argue otherwise would seem counter-intuitive.

For that reason it's interesting to hear from two people, very well placed to judge current attitudes to risk, who take a very different view of the current global environment.

Meet two of the senior executives from JP Morgan's Central and Eastern Europe, Middle East and Africa (CEEMEA) debt capital markets (DCM) practice with years of experience working in some of the world's most dynamic, but often volatile, emerging markets.

Both Stefan Weiler, head of the bank's CEEMEA DCM practice, and Laurel Hurst, MD and head of transaction management in the practice, take the view that the last 15 months have been a time of extraordinary stability in global markets in general and emerging

markets in particular where the investor hunt for yield, in a continuing low interest rate environment, has grown increasingly intense.

"If you look at the VIX Index – the fear gauge of Wall Street – we are at nearly an all-time low and markets have been extremely stable and actually very predictable," says Stefan.

"In the last 15 months or so we've enjoyed a bull market, and, with the exception of the month immediately following the U.S. presidential election, the picture has remained that way."

Laurel agrees. "There has been a steadiness to the last year, year and a half. Events of course take place but get amalgamated into the market view fairly swiftly. On balance, I would say we've been working from a steadier, solid base."

### **Doubling down**

Few people can be in a better position to make that judgement. As a bank, JP Morgan has been one of the few institutions to maintain a firm focus on emerging markets, while many of its peers have, since the financial crisis, scaled back their operations to concentrate on their core markets.

"While other banks have downsized, closed offices, lowered headcount and off-boarded clients, we have invested more into our platform and have doubled down on our focus and interest in these markets," says Stefan. ☹

167

DEALS IN 2016 IN  
THE CEEMEA REGION

77

OF WHICH COMPLETED  
BY JP MORGAN

"It's a long-term strategy. Emerging markets are growing faster than developed markets over time. Of course, there often is a certain degree of volatility and unpredictability, usually stemming from unexpected political events, but recently this is also increasingly true for developed markets. There are some ups and downs, but longer term these are markets with much greater promise and ever since the asset class was established by JP Morgan in the mid-1990s it's been core to our DNA."

And the bank's success in the last year and a half underlines the picture of stability that Stefan and Laurel describe.

2016 saw a surge in Russian activity with JP Morgan playing a bigger role than any other bank in issuances by those corporates and banks able to avoid the impact of sanctions. The bank was highly active in other CIS markets too, including Georgia, Azerbaijan and Kazakhstan.

In the Middle East, it not only worked on Saudi Arabia's record-breaking USD17.5bn sovereign transaction but was represented on almost all the sovereign deals in the region including transactions in Bahrain, Qatar, Jordan, Oman and Abu Dhabi. And there were unique one-off transactions, including local currency Eurobond issuances for the Bank of Georgia, Russian Railways and Turkey's Garanti Bank.

In the first half of this year that strike rate has continued, notes Stefan. "There have been 167 deals so far this year in the CEEMEA region and we have done 77 of them, almost half of the deals. So we are definitely in the know."

### Assessing risk

So what patterns of risk and risk appetite are they seeing across their region?

"Emerging markets are not uniform," Stefan explains. With some 60 countries falling within the CEEMEA region, some are necessarily more stable and predictable than others. Some core markets go through periods of turbulence as we've seen in Russia with the imposition of sanctions following the Ukraine crisis, in Turkey and South Africa with domestic political turmoil and, more recently, with Qatar's increasingly fractious stand-off with its Gulf neighbours.

"What's clear though is the growing ability of issuers and yield-hungry investors to assess and deal with such risks," says Stefan.

"Risk and uncertainty are much better understood by the market now and the emerging markets market is a very broad one these days." When the Turkish market closed for a while, a host of Russian issuers came forward and investors allocated their liquidity there instead, he says. The Polish market was effectively closed for a year after a new government came to power, then opened again, with investors ready to move in again on opportunities.

"When I started in this business there was a lot of contagion," he says. "If there was trouble in one market then it tended to spread across the whole emerging markets space. Now investors understand these markets and risks much better, and are able to differentiate the risks in individual markets."

That makes it all the more important to identify risks as soon as possible and for issuers to be open about how they are addressing uncertainty.

"We bring an experienced ability to spot issues early," says Laurel. "Where there is uncertainty, issuers want a trusted bank that will take their transaction through seamlessly from start to finish and spot the issues a mile off. They are putting their name and reputation on the line and don't want to go out into the market before they've crossed every 't' and dotted every 'i'."

And she identifies a growing and more sophisticated level of transparency among issuers.

"I have seen a quickness and a receptiveness to deal with anything that comes up in a very open and transparent fashion, whether it's how we deal with sanctions and how we ring-fence use of proceeds, or, if there's a cyber security issue, how we demonstrate to investors that the issuer has robust technologies in place. There is a real willingness on the part of the issuers to ensure investors have the transparency to address tough issues."

### Speed

For all issuers – whether a sovereign, a corporate or a financial institution – market agility is increasingly key.

"Across all our issuers there is a real understanding of what's required of them to get their deals done efficiently from start to announce, in terms of disclosure, sanction compliance, due diligence and dealing with issues that will allow them to execute faster," says Laurel.

"What we want to do is get them ready as quickly as we can so they have as many market windows as possible, making sure they have the flexibility to choose the right one."

Stefan suggests there is a widespread view that market conditions have rarely been more favourable and that there is a need to take advantage of them while they last. Increased transaction speed is not down to a fear that uncertain events will interrupt and scupper a planned deal. "Rather, the mindset is more: 'Oh wow – this is a great opportunity and I don't want to miss it!'"

### Economic and political risk

Potentially momentous political risk can of course have an impact, but often in surprising ways.

Brexit, they suggest, had a beneficial effect in the sense that the economic uncertainty it caused seems to have had the effect of delaying increases in interest rates, temporarily at least.

The election of Donald Trump did raise worries that some of his expansionary and protectionist campaign pledges would translate into higher inflation and therefore much faster increases in interest rates.

But with his administration having difficulty turning pledges into policy, the market grew pretty sanguine, pretty quickly. "Since the beginning of the year the market has taken the view that rates will not rise much and will do so in a gradual and predictable way, which is helpful to investors and encourages risk appetite," says Stefan.

That could all change. Central banks are increasingly discussing tightening monetary policy, reining in quantitative easing and hiking rates. Emerging market investors are watching this very carefully. They have a keen eye on oil prices too, with the fear that if they were to become volatile again and dip below the USD40 mark, the impact on emerging markets would be negative.

"If the market was to become more uncertain, all of these issues would become more tricky to navigate and the advice would need to focus on manoeuvring around risk events, accelerating timetables to mitigate risk and choosing different products for the transaction," he says. "Ultimately, if uncertainty grew significantly investors would eventually turn away from smaller, lower rated borrowers and gravitate to bellwether and blue chip names that are well known."

For now, though, that is certainly not the case and Stefan points to two recent deals that clearly demonstrate the current market mood.

*"I would say we are probably in the most unpredictable time since the end of the financial crisis and it is now a very different set of issues that is driving events. You don't just have macro-economic and political uncertainty; it's the impossibility of predicting what's going to happen next that is so difficult to contend with."*



The first was an international bond issuance done in local currency for the Bank of Georgia. "That was a phenomenal feat. Georgia is a small market with very few international investors who had any exposure to the local currency. Investors are generally very cautious about mixing currency and credit risk, so this was a perfect example of investors willing to step into unknown territory to capture a good yield."

He also highlights the corporate bond issue by the Ukrainian poultry giant MHP, in April, only the second issuance in Ukraine since the Russian crisis erupted three years ago. The transaction priced 100 basis points inside the sovereign, eventually repricing the entire sovereign curve.

"That's very rare. I can think of only four times that has happened in my career in the region and it highlighted to me that investors are very hungry for corporate credit and very hungry for riskier jurisdictions."

In the end, it's a sign of how radically the world and attitudes to risk have changed. Of course, core emerging markets will continue to have moments of crisis and increased volatility. But, as Laurel and Stefan point out, developed markets are just as open to risk – look at Greece and Portugal.

"These events are not unique to emerging markets any more," says Stefan.

"Politics have become much harder to predict and market risk much harder to anticipate, more generally. It's a global issue now."



**Sachin Davé**  
Partner, Allen & Overy

## CHAOS AS USUAL

*How can companies meet their financing needs in a secure and sustainable way at a time of unprecedented economic volatility and political uncertainty? The answer, argues Sachin Davé, is by arming themselves with the right tools to remain extremely agile.*

Currency and equity market volatility, the prospect of higher interest rates, conflict, terrorism, Brexit, Trump, nationalism, protectionism, the slowdown in China. It is something of an understatement to say we live in highly uncertain times.

Yet, for companies and institutions trying to plot secure and sustainable ways to meet their everyday financing needs, the current environment has given a new depth of meaning to the word 'uncertainty'.

That is the view of Sachin Davé, an ICM partner based in our London office, who says that "constant volatility" and "complete policy uncertainty" are the defining characteristics of the current business environment.

"I would say we are probably in the most unpredictable time since the end of the financial crisis and it is now a very different set of issues that is driving events. You don't just have macro-economic and political uncertainty; it's the impossibility of predicting what's going to happen next that is so difficult to contend with."

Following the financial crash, there was at least some kind of policy consensus among political leaders and central bankers about how to respond, he argues. But if you ask clients to pinpoint the biggest issues facing them today, they are often at a loss to decide between any number of uncertainties.

In the context of debt financing, clearly future interest rate policy is a big concern. Most clients work on the assumption that other central banks will follow the U.S. Federal Reserve and start to raise rates fairly soon, bringing to an end one of the longest periods of low interest rates on record.

Yet despite the impact that will have on the availability of cheap debt, clients are generally of the view that monetary policy, though important, is today only a relatively small part of the uncertainty puzzle they are wrestling with.

On the political front, you would expect Brexit to be right at the top of many boardroom agendas, yet it is in the politics of the U.S. that the deepest worries lie, he says.

"Most of our clients are global businesses and Brexit, to be frank, is not right at the forefront of their radar screens. Companies are far more worried about what President Trump is doing – precisely because there is no policy certainty whatsoever."

For many clients this is uncharted territory.

"We are in a strange world where companies feel they are dealing with a level of macro-economic risk that is so overwhelming that their own internal business issues become almost secondary to it," says Sach.

"An executive I spoke to recently put it perfectly. Explaining why his business was pushing ahead with a financing transaction despite considerable volatility within the business, he simply said: 'I would rather pay for my own uncertainty, because I don't want to pay for macro-uncertainty when who knows what the politicians will do next.'" →

## The finance conundrum

Plotting a workable financing strategy in this environment is tough. How does a treasury team judge the right time to raise finance and decide on the best route to take, whether that is to issue bonds, launch a rights issue, seek new bank financing, complete a high yield issue or place debt privately with investors?

When events and conditions are so unpredictable the honest answer, says Sach, is they can't, precisely.

Instead they need to arm themselves with the right toolkit enabling them to react as quickly as possible to events as they unfold. Above all, he says, that calls for agility.

"You need to develop as many alternative funding platforms as you can, across currencies and across types of instruments. And you need to remain flexible so that when market windows open and opportunities present themselves you are ready to grab them, knowing that the window may not stay open for long and that the opportunity may not come back again."

For many of the largest and most sophisticated global banks and corporations that agility has probably long been part of their DNA, he says.

"They tend to maintain a whole range of funding platforms. That might include an SEC-registered debt shelf, a European medium-term note programme, a separate platform of structured products, the ability to raise finance in one currency and swap to another at the right time, and all those things co-exist."

"Armed with this kind of corporate financing menu, they can react quickly to events, picking the appropriate items from the menu at the right time. In advising clients of this kind, our job is to help them look at all their options as a whole and make sure they keep disclosures and other issues consistent as they jump from one to the other fairly quickly."

Companies on the next tier down – perhaps big national champion companies or banks that may need to access international capital markets less frequently but at key times – face a tougher time in making such calls.

They don't have the resources to maintain a rich variety of funding platforms. Instead they look to us to help them create a flexible financing framework that gives them the chance to access multiple markets and use as wide a range of instruments and structures as possible.

While putting such a framework in place might be a bit more expensive in the short term, he says, there will be savings down the road, a fact that many clients miss by focusing too intently on the upfront transaction cost. "They should be thinking: 'If I can make a 25 basis point saving on raising USD500m, what does it matter if I spend another USD15,000 up front?'"



But creating a strategic framework for short, medium and long-term funding options requires planning from day one, he says.

"It's like building a house. It's much better to think of all the extensions you might eventually want to do at the beginning, otherwise you're going to be knocking down walls and moving things around, and it's inevitably going to end up being a lot more costly."

### Balancing risk

The need to plan ahead has become all the more important for two reasons.

Firstly, transactions are now being completed at a much faster pace than ever before as companies try to complete deals quickly and before they get hit by any unforeseen risk that might suddenly emerge.

There is also a noticeable increase in tension between clients and their banking advisers about how best to read and react to the chaotic environment they are operating in – a tension that can often lead to opportunities being missed.

"We've generally seen that the most nimble, fast-moving clients – those willing to take a degree of risk – tend to do better because they are ready to jump at opportunities when they come up.

"But there's a counter-balance to that too which I don't want to overlook – the risk of executing too quickly, of course, dramatically increases the risk of mistakes happening."

*"But the truth is, either you embrace the chaos, ride it and say you will make a success of it, or you fall behind. Our message to clients is that, by working together, we can embrace the chaos and succeed."*

That, he says, is A&O's calling card. "Because of our global network we are close to the issues on the ground in multiple jurisdictions, able to interact with regulators across different markets bringing both in-depth local market knowledge and a global perspective. Combined with our technical ability across the full range of financing options, we are in a position to help clients think through their options and react quickly when events turn.

"And that's important because these issues generally come up on a Friday night," he says, citing a major transaction where an attempted military coup happened between the signing of a deal on Friday afternoon and the closing of the transaction early the following week. "A great deal of knowledge and expertise had to be mobilised at very short notice to steer the transaction safely through."

### Temporary or permanent?

So are the current levels of uncertainty a temporary phenomenon or a permanent feature of life for A&O and its clients?

Sach is quite clear it is the latter.

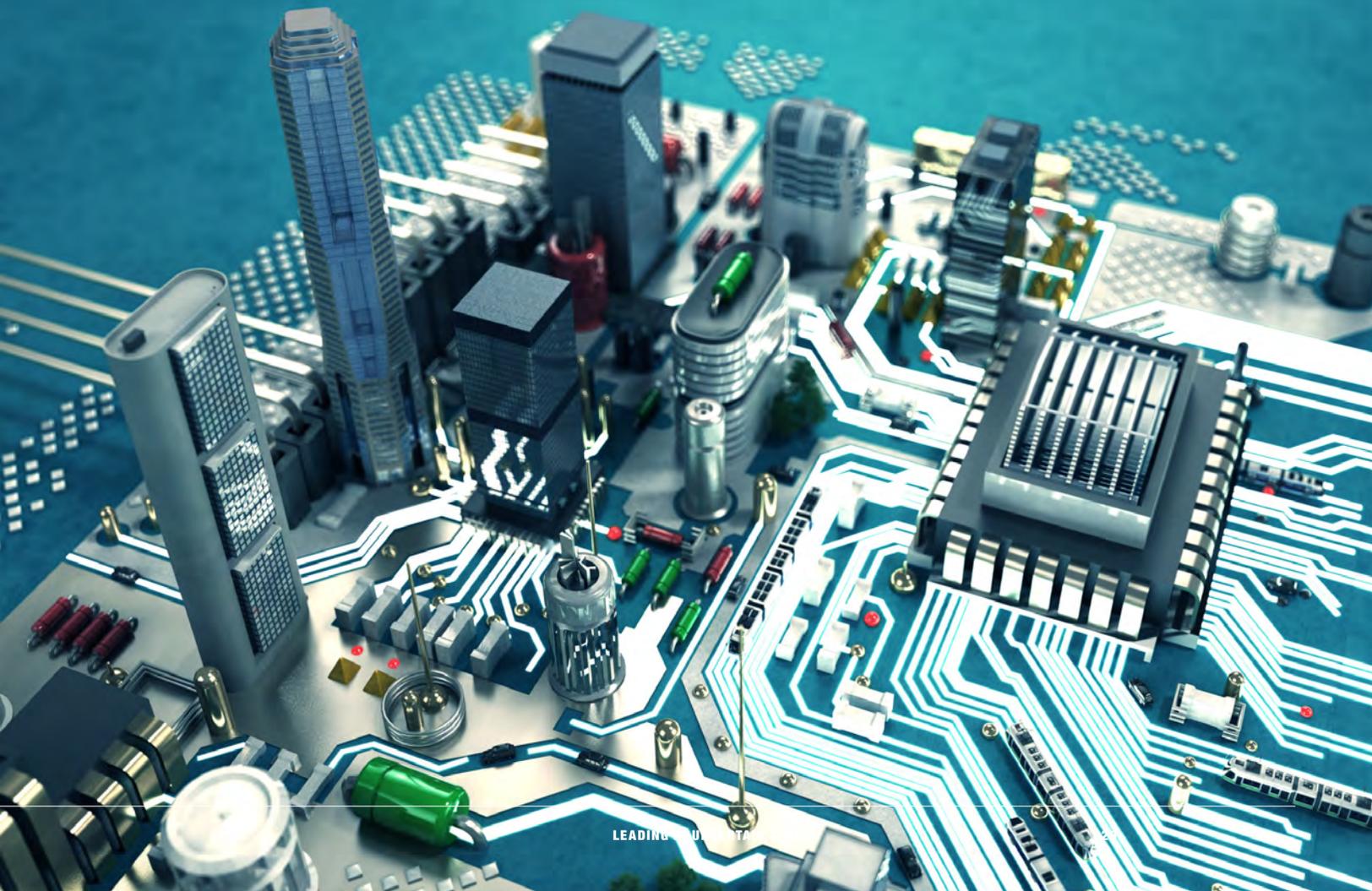
"Somewhere around 2010 I thought maybe it was all going to get more sane for a while. But I have completely given up on that view now and personally I've resigned myself to the idea that we will continue living in uncertain times," he says.

"But the truth is, either you embrace the chaos, ride it and say you will make a success of it, or you fall behind.

"Our message to clients is that, by working together, we can embrace the chaos and succeed." ●

# SOUTHEAST ASIA'S DIGITAL BREAKTHROUGH

THE RISE OF HOME-GROWN TECH DISRUPTORS





**Andre Soelistyo**  
President, GO-JEK

# HOW GO-PAY LEADS MOBILE MONEY IN SOUTHEAST ASIA'S LARGEST MARKET

Financial inclusion is among today's priorities for the Indonesian government. Late last year, President Joko (Jokowi) Widodo introduced a coordinated national strategy to promote financial inclusion to open up access to financial services for more people. This National Strategy for Financial Inclusion (SNKI) body attempts to raise Indonesia's financial inclusion rate from 36% in 2016 to 75% by 2019. There is no way to secure such tremendous growth without the contribution of financial technology.

As mentioned in Bank Indonesia's Digital Financial Inclusion in Indonesia report, a research initiative delivered by Intermedia in 2014 said that the top financial transactions done by the unbanked market are, among others, purchases of goods for daily consumption and payment of public utilities. This shows that the key to ensuring that Indonesia's unbanked market experiences financial services is by providing easy access to transaction accounts. In this regard, e-money plays a pivotal role as the gate to financial inclusion in Indonesia.

GO-JEK, the first unicorn start-up in Indonesia, has emerged as an on-demand services platform that provides daily needs for Indonesia's urban market. Our services range from transportation to food delivery to logistics and even home services such as cleaning. In May 2016, we introduced the GO-PAY

cashless payment solution to serve millions of daily transactions within the GO-JEK ecosystem. In just eight months of its inception, most GO-JEK transactions have already shifted from cash to cashless using GO-PAY. Additionally, through this approach and working together with banks, more than 300,000 of our driver partners – most of whom were unbankable – are now bankable and entering the gate into financial inclusion.

In July 2017, GO-PAY received a prestigious award from Bank Indonesia Governor Agus D.W. Martowardojo for its success in promoting a cashless society, financial inclusion and small-medium enterprise (SME) empowerment. This was testament to the efforts and energy of all GO-JEK employees, driver partners as well as more than 100,000 SMEs involved in the GO-JEK platform, who continue to promote a cashless society through GO-PAY. As the only e-money that received an award from Bank Indonesia, we are very proud of this accolade. This will motivate us to deliver more innovative financial digital services to help our customers boost productivity for their daily needs and, most importantly, help our SME and driver partners improve their financial well-being.

The key to this success is simplicity in end-to-end digital customer experience. The very beginning of the transaction

journey should be easy: our customers can top up their GO-PAY accounts through 13 banks and three switching networks that connect more than tens of banks. When ordering services from GO-JEK, all costs will be deducted automatically. Now, GO-PAY even enables customers to transfer e-money through barcode scanning; and so on and so forth.

Both GO-JEK customers and driver partners experience equal practicality and build the virtuous cycle of satisfaction. If we fail to deliver an excellent experience to our driver partners, they would not be happy to become GO-PAY change agents.

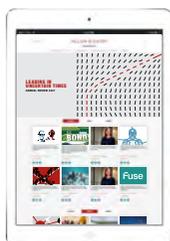
Future opportunities for e-money and a cashless society in Indonesia remain wide open. In general, e-money is still a very small portion of cashless transactions – mobile money is even smaller. E-money (card-based and server-based) is less than 1% of e-payment transactions. By 2015, total e-Payment transactions were at USD0.4bn, which was 0.1% of total debit card/ATM transactions (USD376.8bn) and 1.85% of total credit card transactions (USD21.6bn).

For future development, we see three key factors that can potentially enable Indonesia's e-money industry to take off and support financial inclusion even further. They are interoperability, security and regulation.

First, interoperability means we need to address expensive top-up fees due to the lack of interconnection

between the mobile money company and top-up channels, while at the same time enable the acceptance of mobile money products in more stores and outlets. Secondly, security is the most important feature for customers – one of the surveys revealed that security is the key lever for customers to adopt mobile money. Thirdly, regulation – current e-money regulations only allow IDR20m worth of incoming transactions per month, which can potentially hinder adoption for micro merchants through the customer accounts approach. With these three factors, we can grow closer and closer to the Indonesian Government's financial inclusion ambition.

Currently, Indonesia is in the transition stage towards a cashless society with only 25% of transactions cashless. When compared to transitioning countries in Southeast Asia, we are above the Philippines (22%) yet still lower than Malaysia (33%) and Thailand (36%). However, as the largest market in Southeast Asia, with a population of more than 250 million, this figure is very promising and we are very happy that GO-PAY is among the front players leading this cashless society transformation.



ⓧ Read more:  
[allenoverly.com/annualreview](http://allenoverly.com/annualreview)



**Brendan Hannigan**  
Partner, Allen & Overy



**Sugianto Osman**  
Partner, Allen & Overy



**Connell O'Neill**  
Partner, Allen & Overy

## LOCAL HEROES

Southeast Asia's tech sector is booming as investors put their backing behind a growing band of highly innovative home-grown start-ups. And as businesses pivot to digital technologies to transform their business models, continued strong growth looks certain.

Southeast Asia is increasingly on the radar of financial and strategic investors and it's easy to see why.

The ten economies that make up the Association of Southeast Asian Nations (ASEAN) – Indonesia, Singapore, Malaysia, the Philippines, Brunei, Thailand, Vietnam, Laos, Cambodia and Myanmar – represent a market of some 640 million people, the third largest in the world.

Although these economies are developing at very different rates,

the combined output from the region already adds up to the world's fifth largest economy with growth continuing to be propelled by significant productivity gains.

A young population and a rapidly growing middle class is driving consumer demand, with digital technology playing a central role in meeting their call for aspirational products and services. Mobile phone penetration is phenomenally high and internet usage is growing at a ferocious rate. Indeed, a Temasek/Google report last year predicted that the region's internet economy, already worth USD50bn, is set to quadruple to USD200bn by 2025.

Yet while the region has for many years been a focus for intra-Asia investment, particularly from Japan, investors from elsewhere have been relatively slow to capitalise on opportunities in the region, in some cases thwarted by hurdles on inbound investment which are frequently subject to change.

### Gaining momentum

That has left a gap in the market. And – nowhere more obviously than in the tech sector – that gap has been filled by ambitious and imaginative home-grown innovators with a keen understanding of their local markets and local consumer needs.

"In the tech space we've seen a whole range of start-ups launch across the region. They've had the benefit of seeing what works in other parts of the world and are adapting services for their local market," says Sugianto Osman, a partner in our Jakarta office.

"Those that have reached a certain size are now seeing a wide range of foreign investors approaching them to make investments." →

rather than sit in traffic for hours, you're obviously going to do that. And once a solution has been found in one city, it can be replicated elsewhere across the region."

The region is also proving highly fertile ground for fintech operators and for obvious reasons with so many people across the region remaining 'unbanked', says Sugianto. Here is a ready and highly connected potential customer base for digital banking services.

GO-JEK is a case in point. Indonesia's first ride-hailing app grew quickly using motorbikes to negotiate Jakarta's crowded streets. While it has since faced competition, it has moved way ahead by developing into a broad lifestyle business, progressively adding new increasingly popular services to its offering. Recent funding rounds have seen it attract investment from PE and sovereign funds and Asian strategic investors.

"The people behind these businesses are responding to a gap in the market and are just getting way ahead, developing, gaining momentum and getting to scale before the bigger players start to look in," says Brendan Hannigan, A&O ASEAN corporate partner based in Singapore.

Sometimes the source of this burst of innovation is tied up with the mundane realities of life in the region, he notes. "If you live in a city like Jakarta, Bangkok or Ho Chi Minh, the business of getting from a to b is just very difficult. Promised government investment in roads, airports and ports will take time to deliver, so a lot of these innovative companies are coming in with their own local fixes.

"So if there's a provider you can log into on your phone, order your product or service and have it delivered to you

### Business transformation

But this is by no means a story just dominated by start-ups responding to consumer demands in novel ways. This is also a story of businesses across sectors and across the region harnessing technology to transform their operations, argues Connell O'Neill, a partner in our Sydney office.

"We are starting to see a maturation of businesses across Asia as they either catch up with the most advanced business models in other markets or, because they are relatively new and unencumbered, and can manage to leapfrog business models in other markets," he says.

With China increasingly challenging the tech dominance of Silicon Valley, and with huge investment being put into the sector across the region, both in terms of finance and home-grown innovation, it is no longer U.S. brands that are in the driving seat, he says. "It is Asian brands that are captivating audiences, certainly for the consumer but also on the enterprise side of things."

A proliferation of tie-ups, corporate accelerator schemes and joint-venture partnerships promises a boom in enterprise transformation across many



sectors in the region, he predicts. And businesses are digging deep to make sure they stay ahead of the technology curve.

A telecoms company saddled with a host of legacy systems from the first generation of mobile services, or a bank looking to modernise its existing IT infrastructure to embrace new technologies like blockchain, are now likely to revisit the entire infrastructure to understand how it can deliver new benefits to customers.

"People are starting to realise that the pivot to digital has got to be total, because if you do it in a piecemeal way you are likely to get boxed in and left behind. That's been the pattern in more mature markets for some time, but we are really seeing that kind of thinking in Asia now."

Even big monopoly businesses in key markets are feeling a pressure

to look again at the efficiency and sustainability of their business models, driven by the example being set by nimble and highly innovative companies, he adds. Increasingly, tech is being seen by these businesses, as by others, as an enabler rather than just a cost centre, with company CIOs playing a bigger and bigger role in revenue generation.

Changes in the regulatory landscape are helping to fuel the boom. Crowd-sourced equity funding is opening new routes to alternative financing, and more relaxed rules on foreign investment in key areas like e-commerce are opening the door not only to new funding but new ideas and services.

"Governments could be a significant hurdle depending on how they play their role in dealing with the disruption caused by these new technologies and players," warns Sugianto. "They face significant pressure from incumbents to stop or

*Changes in the regulatory landscape are helping to fuel the boom. Crowd-sourced equity funding is opening new routes to alternative financing... opening the door not only to new funding but new ideas and services.*

delay the progress of the new entrants and need to strike a balance between competing interests.”

But he is hopeful: “I have to say the Indonesian Government has been doing a great job here, recognising that this is something you can’t hold back and trying to create the right regulatory environment for them to thrive.”

Singapore has also emerged as a hub for fintech development and is beginning to challenge Hong Kong, long seen as the darling of the fintech space, regionally. Government incentives and a willingness to provide a ‘sandbox’ environment where new technologies can be tested in a benign regulatory environment have helped that growth, and the example is now being followed in other ASEAN markets.

### Political and economic cohesion

Although efforts to create greater political and economic cohesion between the ASEAN countries have not moved as far or as fast as some predicted, there is a growing sense of the region being a distinct market in its own right.

The political dream of creating a single market – something along the lines of the EU – remains a distant one, however, despite some progress on equalising tariffs and trading rules.

Sugianto again: “You have to remember that ASEAN was created first and foremost to bring stability and peace to a once troubled region. It has achieved that and that has brought huge economic benefits in the process.

“Will a single market be created? I don’t know to what extent. Economies are

at very different stages of development. Singapore is well ahead. Indonesia is growing at a very fast pace. Myanmar is only just opening its doors. So it remains to be seen to what extent countries within ASEAN will seek to protect their interests or open up.”

But maybe such political moves will eventually be overtaken by events in the digital economy, argues Connell. “Technology is one of the key factors driving the region towards a single market. People trading across borders, buying things with their mobile phones, making use of new ride-sharing or banking services, and businesses forming innovative technology partnerships, that’s a story that speaks more to me about a single market than any treaty put in place by lawmakers,” he says.

### Home advantage

As investment builds another question remains. Will the local tech businesses that have established such a strong presence be able to hold their own against challengers from other markets, if and when they join the fray?

“I think one of the features of businesses generally – and it’s not just in the tech sector – is that you have local operators with market knowledge, brand recognition and increasingly professional management. It’s quite difficult for a big foreign competitor to come in and just supersede them,” says Brendan.

“The more intriguing question is how will they build on their current strengths? While some might become buy-out targets, it is just as likely that others, as they achieve scale and grow their reach,

will become acquirers themselves and investors in other markets.”

We see a clear role for A&O in this exciting period for the Asian market.

“We are right in the middle of what businesses are doing to reposition themselves for the future, whether that’s in the start-up world or in the whole area of business transformation,” says Connell. “We are determined to play a leading role and are doubling down on our investment to help clients see the benefits that investing in technology can bring.”





# LEADERSHIP FOR AN UNCERTAIN WORLD



**Sasha Hardman**  
Global HR Director,  
Allen & Overy

Disruption, competition, ambiguity and constant change are some of the defining characteristics of our time. Sustaining our business and continuing to meet our clients' evolving needs calls for a new kind of leadership – one fit for an uncertain world.

Businesses across sectors face a similar conundrum – how to find the right people to lead their organisations into the future at a time when many of the traditional models of leadership are being challenged by rapid economic, technological and social change.

Many of our clients are devoting significant resources to the issue of future leadership and they are keen to work with advisers who are searching for answers to similar questions.

As Sasha Hardman, A&O's Global HR Director, puts it: "Alongside our clients we are asking ourselves what kind of leaders do we need to steer us through an increasingly complex and uncertain world?"

"What skills, talents and personal qualities will our leaders need to deal with an environment where disruption, hyper-competition, ambiguity and constant change are now the new order of the day and where the margins for error are growing increasingly narrow?"

There is, says Sasha, a vast and growing library of books – both academic and popular – on leadership. Advances in neuroscience and psychology have opened up many fascinating new perspectives on what constitutes great leadership.

Business schools around the world are teaching modules on leadership, albeit often in a generic way.

Yet in the professional services industry in general, and the legal sector in particular, there is limited writing on the subject and there are very few leadership development programmes aimed specifically at the particular leadership challenges faced by law firms.

"Leadership has always been seen as something of an add-on in our world, almost a luxury," she says. "And in our profession, as in others, people tend to rise to the top of the tree because they are brilliant lawyers, but not necessarily because they are great leaders."

Increasingly, A&O has taken a different view from many of its competitors, seeing leadership as a matter of critical importance both for the future direction of the firm and to sustain and develop deeper and more strategic relationships with our clients.

Fiona Colthorpe, Head of Talent and UK HR, explains: "We believe that the best-led firms will make the best business decisions and stand a far greater chance of sustaining their success, even at times of great complexity and change.

"Crucially, the best-led firms are also likely to be much more agile in meeting evolving client needs in inventive ways, since inspiring leadership is often the best catalyst for innovation."

In that sense, leadership will increasingly become a point of real differentiation between global law firms, she argues, and the investment we make in identifying, developing and supporting future leaders should translate into a significant competitive advantage. →

*"What skills, talents and personal qualities will our leaders need to deal with an environment where disruption, hyper-competition, ambiguity and constant change are now the new order of the day and where the margins for error are growing increasingly narrow?"*

### The A&O Leadership Centre

The companies that have made most progress in addressing some of the toughest questions around future leadership are those that have invested in their own dedicated resources in this area – Goldman Sachs, McKinsey and Deloitte, to name but a few.

“We have decided it is time for us to make a similar investment,” says Sasha. “Working with a group of best-in-class partners we have now launched the A&O Leadership Centre to identify, develop and support future leaders, whether their aspirations lie within the firm or elsewhere in the commercial world.”

Partners joining the programme have either been picked out or see themselves as having the potential to take leadership positions within the firm. That makes the overall programme highly aspirational and the response has been tremendous.

“Part of the appeal, I think, is that the modules we are offering go significantly further than development work we are currently offering our emerging leaders and our partners through the A&O Business School,” says Fiona. “The programme is global – open to partners across our network. But people particularly seem to like the fact that our modules are highly personalised, relying heavily on intensive one-to-one and peer-to-peer coaching.”

Sasha agrees. “The fact that the modules have been designed with lawyers specifically in mind is another significant draw – we find a lot of our partners and the GCs we work with at client firms are wanting leadership programmes designed for the legal sector.”

The external partners helping A&O draw on the most advanced thinking in the field include INSEAD, executive search and leadership consultancy firm Heidrick & Struggles, and world-renowned executive coach training and leadership development provider Meyler Campbell.

These external partners have also joined with key members of A&O’s current leadership team to create a powerful faculty to support and steer this development work, combining external expertise with experience of working at the highest level in the profession.

### Being a leader

“I think the accent on personal coaching will prove very important,” says Sasha. “It allows us to concentrate, if you like, on what it really means to be a leader, rather than just focusing on the theory.”

It’s about encouraging and building on those, often varied, personal qualities and skills that will be so important in the years ahead.

“Our future leaders will need to be agile, self-aware and self-assured,” says Fiona. “They will need to have high levels of energy, passion, ambition and drive, and be able to take timely decisions, but not shy to take responsibility when mistakes happen.”

“They will need to be optimistic, but realistically so, and they will need to be resilient in the face of setbacks. Crucially, they will need to be empathetic and adept at navigating complex business relationships and environments.”

“We want the A&O Leadership Centre to focus on a wider range of leadership skills than have typically been addressed in the context of the legal sector,” adds Sasha.

“It’s the ability to bring insight, for instance, to build deep client and business relationships, and to drive performance while encouraging innovation and collaboration. And it’s the ability to build trust among colleagues and fellow leaders, to nurture talent and to stand confidently as a recognised role model within the firm and in the wider world.”

It will take time and patient investment to build the sort of capability in this area that we want, she admits.

“But we are determined to get this right because we are clear that great leadership will increasingly be a defining feature of successful global law firms and a very important differentiator for our clients.” ●

*“Our future leaders will need to be agile, self-aware and self-assured. They will need to have high levels of energy, passion, ambition and drive, and be able to take timely decisions, but not shy to take responsibility when mistakes happen.”*



ⓧ Read more:  
[allenoverly.com/annualreview](http://allenoverly.com/annualreview)

# A Fuse HAS BEEN LIT

The launch of Fuse, A&O's tech innovation space, and an exciting tie-up with the fintech start-up, Nivaura, are helping us understand how to harness the power of disruptive technologies that can transform our own and our clients' operations.



**Avtar Sehra**  
CEO, Nivaura



**Shruti Ajitsaria**  
Head of Fuse and Counsel  
at Allen & Overy



**Jonathan Brayne**  
Chairman of Fuse and Head  
of A&O's Innovation Panel



**Phillip Smith**  
Partner, Allen & Overy

A corner of A&O's Bishops Square headquarters, standing on the border of Shoreditch and the City of London, has this summer been transformed into a new, largely open-plan, collaborative workspace.

But behind the physical redesign lies a bigger piece of construction work – building a strategy to understand and harness the disruptive technologies that will undoubtedly transform the way the firm works and allow it to meet our clients' needs in faster, smarter, more cost efficient ways.

Welcome to Fuse, a collaborative tech innovation space, set up to explore and develop practical technology solutions in three interconnected areas – legaltech (helping in-house lawyers and law firms operate and deliver their services in smarter ways), regtech (supporting businesses in complying with law and regulation) and dealtech (developing new ways for businesses to negotiate and transact with each other).

Jonathan Brayne, chairman of Fuse and head of A&O's Innovation Panel, explains the genesis of the project. "We know that both what we do and what our clients do is going to be quite radically changed by technology in the coming years and we know that will throw up a lot of opportunity."

"But we felt that we weren't nearly knowledgeable enough about the emerging technologies, how they are going to affect us and our clients and, therefore, how we could take advantage of those opportunities."

It's a dilemma that faces businesses across many sectors and recent times have seen many look for ways to invest in the very technologies that threaten to disrupt their business models, often by setting up incubators or accelerators to nurture promising technologies and the entrepreneurs behind them.

When thinking through its response to the disruptive forces impinging on the legal sector, A&O judged it needed to take a slightly different approach if it was to really make progress in creating relevant solutions.

The idea was to tackle the challenge from three different angles by bringing together A&O's own technology group, tech companies and clients. Collaborative thinking and development, within a vibrant physical workspace, looked like the best way to proceed. Fuse was born. →

But this is new ground for the firm, and when the invite went out in May asking tech companies to apply to join, there was little way of guessing what the response would be, says Shruti Ajitsaria, head of Fuse.

In fact, the response was overwhelming, with 84 start-ups applying to join the first cohort, 12 chosen to go through the final selection stages, and with seven eventually joining Fuse when it opened its doors in September.

### Redrawing the map

“One of the few things we had by way of market analysis when we began looking into this was Legal Geek’s start-up map, which sets out the current categories of legaltech, and the names of some of the companies addressing those categories. That map names about 65 companies, so receiving 84 applications was a very good result for us.”

“That’s a key part of why we are doing Fuse,” says Jonathan. “We are now beginning to be able to map the market for ourselves and build a database of the sort of companies out there and what areas of legaltech, regtech and dealtech they are engaged in. That’s market information that anyone who doesn’t have something like Fuse just won’t have.”

Was the team surprised by the sort of companies applying to join?

“I’d expected to have tonnes of AI and regtech companies to apply, but actually some of the dealtech companies are doing things that I’d never really thought about or considered,” says Shruti, adding that there were fewer applications from companies using technologies like blockchain than A&O would have liked.

For Jonathan that points to one of the clear issues the firm faces in identifying promising collaborators and why it was so important to recruit a group of outside experts to join him and Shruti on the selection panel, including representatives from Amazon, JP Morgan, Funding Circle and Balderton.

“It’s really quite hard without extensive research to get to the bottom of the technologies these companies are using. It’s very different from doing a commercial partnership with an organisation, so you have, to some extent, to follow the wisdom of the crowd who are with you making the selection.

“And you have to be realistic. There will be some successes and there’ll be some that may not realise the potential we thought was there.”

### First to know

Clients have been very receptive to the project and the team is now working on a number of ways to bring some of them into the project, to complete that collaborative community.

“The response has been universally positive, because it’s just such a novel initiative for a law firm to be doing,” says Shruti. “I think clients are very interested to find out what we are learning – which companies are looking good, what technologies they are using. They want to be among the first to know.”

Through Fuse, A&O will hope to match a technology and a provider directly to a challenge being faced by a client. It may also look to target issues common to a number of clients in the same sector and then, in later cohorts, invite tech companies that can propose a solution – or even just part of a solution – to that challenge to apply to join.

“Between those two ends of the spectrum you could imagine all sorts of ways our clients might get involved,” says Jonathan. “But, crucially, the knowledge we are gaining through Fuse should hopefully spread throughout A&O and equip us to engage with clients much better in all sorts of situations where technology can be part of the solution to the challenges they face.”

### Another collaboration model

A&O’s growing partnership with the fintech start-up, Nivaura, has provided another way to explore tech collaboration.

Although the company will become ‘Entrepreneurs in Residence’ at Fuse to help mentor and support other start-ups involved in the programme, the link developed entirely separately, as Phil Smith, an ICM partner in London, explains.

Associate Michael Zdrowski suggested that business development manager Rose Hall have a conversation with Nivaura’s COO, Vic Arulchandran, at a conference they both attended. Vic mentioned that the company was developing a tech solution in the private debt, private placement space. Rose suggested he talk to Phil and his colleague, Richard Cohen, who were heavily involved with A&O’s work in this area.

“Because she was there and aware of what we were doing, it was a case of being able to join the dots,” he says. A meeting was set up which proved immediately fruitful.

“Within five minutes of talking to Vic and Nivaura CEO Avtar Sehra it was clear to me that what they were working on, and how they were approaching it, could be very, very interesting.”

Nivaura is developing a tech solution that makes it affordable for SMEs to access the capital markets. In doing so they were potentially creating a new asset class and, in the process, offering

investment banks a new line of business. Given that funding of smaller businesses has been such a hot political topic since the financial crisis has made it all the more interesting, he says.

“I was sitting there and thinking this is all the stuff we’ve been looking at in the conventional space but actually one of the prohibiting factors has always been cost. Here they were offering a product that would reduce that cost significantly.”

From this starting point the relationship has quickly developed with A&O helping Nivaura commercially, not least in supporting it to test its system in the Financial Conduct Authority’s regulatory sandbox environment and in preparing documentation for its automated process.

Supporting the company as it contemplates raising new finance and offering pro bono support for its efforts to raise research grant funding is also part of the growing relationship. Phil will also be joining the Nivaura board as a non-executive director and A&O is now preparing to make an equity investment in the business.

### Control and experimental solutions

Avtar explains that the Nivaura team has gained restricted clearance under the MiFID/CASS regulations to trial its system in two Financial Conduct Authority sandbox test environments, the second of which got under way over the summer.

It is testing a control solution using traditional financial services infrastructure and, more radically, an experimental solution using a public blockchain infrastructure to register and hold client assets and money. The hope is that the experimental approach will prove that Nivaura can build significantly on the cost efficiencies it is achieving with the control solution.

Reflecting on the FCA sandbox work, Avtar says: “One of the aspects tested from a compliance perspective was how a public blockchain can be used to register and manage the custody of client assets in a way that would be acceptable in the UK’s regulatory and legal framework.”

Progressively, the insight has deepened for A&O. “The more closely we looked at the business it became clear to me that Nivaura was attracting significant third party investors and a number of big organisations were taking an interest in the technology.

“Among them was Capita Asset Services (CAS) whose traditional business is the provision of custody, agency and trustee services for bond issuances which have until now had to go through clearing houses using third parties to manage bonds and payments. Like us, CAS realised pretty early on that if the Nivaura platform gained traction it could remove the need for certain third party service providing. Capita has engaged closely because it realised this could well be their future and that their past may well just disappear.”

“Nivaura is a great example of why we are doing Fuse,” says Phil. “You’ve got a company creating something new which could be completely transformational using a range of technologies including AI, blockchain and smart contracts.

“In one microcosm they are looking at all the stuff we’ve been scratching our heads about, wondering how this will affect our business. It’s a brilliant way of getting really close to where the technology might take you.”

Jonathan agrees: “In a way it’s exhibit A when you talk about dealtech because they are creating an end-to-end process that sees the deal from conception, through completion and performance, to termination using a full suite of technologies. It’s potentially disruptive but very complementary with A&O’s relationship with its clients, so, in many ways, it’s a great example of what Fuse can help facilitate.”

From Nivaura’s point of view the partnership is also proving successful.

“With A&O we immediately saw the level of expertise we could tap into,” says Avtar. “Some corporate investors will have an agenda that’s different from start-ups. With A&O it was more of an intellectual engagement – it was, like, let’s understand where this industry is going, try to develop a good product and see where it can go.”

### So much to learn

It also illustrates that on both sides there’s a lot of learning to do, and the collaborative approach enshrined in the Fuse project creates an ideal environment for that learning.

“I think that is a key part of Fuse,” says Jonathan. “There’s an awful lot we can learn and even if we stopped the project today – which we don’t plan to do – there is an awful lot we’ve learned already.”

Working with a company like Nivaura also gives you a view into the very tight-knit ecosystem of tech companies, says Phil. “They all know each other, they all do the same circuits and conferences, they know who’s doing what and how well different technologies are progressing.

“Through Fuse we are getting a privileged view on a world that is new to us, and, perhaps we’ll get a better overview of the landscape – or, at least, see enough of the picture to have a good crack at grasping the opportunities coming up.” ●

# DISPLACED PEOPLE

**THE BIGGEST HUMANITARIAN  
CRISIS OF OUR TIME**



*Photo credit: War Child UK*



Photo credit: War Child UK



# 4,000

NEARLY 4,000 PRO BONO HOURS VOLUNTEERED BY A&O TO SUPPORT DISPLACED PEOPLE AND MIGRANTS OVER THE PAST YEAR

# GBP500K

RAISED FOR SYRIAN CHILD REFUGEES IN THE FIRST SIX MONTHS OF OUR PARTNERSHIP WITH WAR CHILD

## DISPLACED PEOPLE: “THE BIGGEST HUMANITARIAN CRISIS OF OUR TIME”

War Child is an international charity that safeguards and rehabilitates children affected by conflict. In November 2016, A&O began a two-year partnership to support the charity’s Rescue Childhood programme, aiming to fund the creation of an education centre in the Emirati Camp – a refugee camp in the middle of the Jordanian desert.

Najwa was just eight years old when her family fled the conflict in Syria. “During a siege on our town, my dad went to get us some food,” she explains. “He didn’t make it back alive. That’s when my mother took us to Jordan.”

Najwa lives with her mother and siblings in the Za’atari Refugee Camp in Jordan, home to 85,000 refugees. Along with nearly half of the 30,000 school-age children there, she doesn’t attend school. Instead, Najwa helps to look after her two brothers, who suffer from psychological trauma as a result of the war, and two of her young sisters, who have physical disabilities. “I thought, why go to school? But then War Child heard our story and came to see me and my siblings.”

Three months on, Najwa has completed one of War Child’s education programmes, which provide children with psychosocial support as well as lessons in reading, writing and maths. “I’ve made so many friends and learned so much,” Najwa says. “I’m now registered in a formal school in the camp and intend to keep attending. I want to be a painting teacher in the future.”

### Rescuing childhood

War Child is an international charity that provides education and protection services to support children affected by conflict. In November 2016, A&O began a two-year partnership focused on the charity’s Rescue Childhood programme. It aims to fund the creation of an education centre in the Emirati Camp – a newer refugee camp in the middle of the Jordanian desert.

A&O’s Managing Partner Andrew Ballheimer visited Emirati Camp in March 2017. “Around 8,000 people currently live in the camp,” he explains. “People come for the medical centre and vocational courses for adults. But it’s obvious there’s nothing for young children to do. Mothers want their children to learn, but there’s no one to teach them. Instead, children are helping to cook or playing in the dirt outside.”

A&O’s partnership will fund War Child’s facility in Emirati Camp to provide psychosocial support and education to 2,160 refugee children, many of who are severely traumatised, and nearly 200 parents and caregivers struggling to cope with their own experiences.

“We’ve had an incredible response to this partnership,” Andrew says. “We reached our fundraising target of GBP500,000 within six months and have funded the centre in Emirati Camp already. Construction is under way and War Child will start delivering services to children and parents in September.”

### An uncertain future

The war in Syria has forced 5.5 million people to leave the country, but it is only one of the causes contributing to the 65.6 million<sup>1</sup> people displaced through persecution and conflict around the world today – the highest figure ever. In 2016 alone, 10 million people were newly displaced, more than half of whom are under 18.

“This gives you an idea of the huge numbers of people fleeing their homes worldwide,” says Gonzalo Vargas Llosa, UNHCR’s<sup>2</sup> Representative to the UK. “And the problem is getting worse. Old conflicts, like in Afghanistan, remain unresolved and new conflicts erupt, such as in Syria and South Sudan, which makes it very hard for people to return home.

“This then funnels the growing issue of people-smuggling around the world, as there are virtually no legal and safe routes for refugees to leave countries. So desperate people put their lives at risk with smugglers.”

The future for displaced people is very uncertain.

“Family separation and integration within hosting societies are the biggest challenges refugees face. People need help with language, education and work.”

And this is where businesses can help. “The role of the private sector is more important than ever,” Gonzalo says. “Money is crucial, as governments simply cannot fund the humanitarian response on their own. But businesses have many other resources to offer, like providing job opportunities for refugees and offering safe resettlement routes through private sponsorship programmes.”

Kate Cavelle, A&O’s Head of Pro Bono and Community Investment, agrees: “We need to think longer term about our response to this crisis. Reacting in the immediate aftermath of a conflict or emergency is important, but many of these refugees are displaced for years – many can never go back at all.

“As a law firm, we’ve looked at how we can use our resources most effectively: from supporting asylum claims and asserting rights to citizenship, to providing access to education and employment. On top of our financial contributions, we’ve provided nearly 4,000 hours of pro bono support to displaced people over the past year and want to do more – this is the biggest humanitarian crisis of our time and it is only getting worse.” →

[A&O’s partnership will fund War Child’s facility in Emirati Camp to provide psychosocial support and education to 2,160 refugee children.](#)

One of the most life-changing rights migrants can achieve is for their children to gain citizenship in their resettled country. **The Children’s Pro Bono Legal Service**, launched by A&O, DLA Piper and Coram Children’s Legal Centre, provides end-to-end representation for children who are entitled to British citizenship but without legal support cannot obtain it.

This is the first pro bono service to support some of the most marginalised children in the UK who, without citizenship, have no right to a passport or access to higher education and healthcare. Over 50 A&O lawyers have been trained and have so far obtained British citizenship for 20 children, with many more applications under way.

The clinic celebrated its second anniversary this year by winning the Legal Week Innovation Award for CSR Innovation and being Highly Commended in the Financial Times Innovative Lawyers Awards.

<sup>1</sup> From the UN Refugee Agency: [www.unhcr.org](http://www.unhcr.org)  
<sup>2</sup> The UN Refugee Agency



Children taking part in activities in War Child’s safe space in the Za’atari Refugee Camp. Photo credit: War Child UK

**Highlights of A&O's work to support displaced people this year:**



**Europe**

We have provided a paid internship to a young Syrian refugee lawyer in the Netherlands, and are actively involved with charities in the Czech Republic, Germany and Belgium that mobilise lawyers to help refugees and victims of trafficking. In the UK, we are providing an internship for a refugee in our Litigation practice and are working with the International Refugee Assistance Project and Micro Rainbow International supporting LGBT refugees. We have also conducted employability workshops for refugees and are working with Birkbeck College to give displaced people access to further education opportunities.

*“As a law firm, we’ve looked at how we can use our resources most effectively: from supporting asylum claims and asserting rights to citizenship, to providing access to education and employment. On top of our financial contributions, we’ve provided nearly 4,000 hours of pro bono support to displaced people over the past year and want to do more.”*



**North, Central and South America**

We work with five charities and non-profit organisations in the U.S. to support refugees fleeing violence and persecution with applications for asylum. Over 15 lawyers have been trained and taken on 15 cases in the past year. We have also been recognised by the New York City Bar Association for our work in Guatemala (carried out by a team from Spain and our co-operative firm Khoshaim & Associates in Saudi Arabia) to advise on rights for people who have been forcibly removed from their homes in a national park.



**Middle East**

In Dubai, we partner with non-profit organisation START and across the region are setting up a START scholarship programme to support an orphan or refugee through higher education, providing financial support for the costs of university.



**Asia Pacific**

In Hong Kong and Thailand, we are providing pro bono and financial support to Liberty Asia on 'Project Safe' to protect child trafficking victims in Southeast Asia. And in Singapore, Indonesia and Hong Kong, we are supporting Justice Without Borders to achieve compensation for migrant victims of human trafficking and labour exploitation. ●

**ALLEN & OVERY  
FOUNDATION GLOBAL  
GRANTS PROGRAMME**

**GBP50,000**

DONATED GBP50,000 TO UN REFUGEE AGENCY (UNHCR) AND THE BRITISH RED CROSS TO SUPPORT RELIEF EFFORTS FOR REFUGEES

**GBP30,000**

PROVIDED OVER GBP30,000 TO REHABILITATE A SCHOOL IN SYRIA

*Photo credit: James Marcus Haney/War Child UK*



# AWARDS AND ACCOLADES

FY2016/17 was a tremendously successful year for A&O, with work by our lawyers and staff winning widespread recognition across our network.

## NORTH, CENTRAL AND SOUTH AMERICA

### GLOBAL FINANCE DEAL OF THE YEAR

Insolvency and Restructuring (U.S.) – Honoree Recognition, American Lawyer Global Legal Awards 2017

# 1,079

### A&O LAWYERS

RANKED ACROSS ALL CHAMBERS AND PARTNERS DIRECTORIES

# 270

### A&O IS RANKED

IN 270 CATEGORIES ACROSS ALL LEGAL 500 DIRECTORIES – AMONG THE HIGHEST WITHIN THE MAGIC CIRCLE FIRMS

## WESTERN EUROPE

### FT INNOVATIVE LAWYERS AWARDS, 2016 HIGHLY COMMENDED

- Culture, Brand and Strategy, FT Innovative Lawyers Awards, 2016
- New Markets and Capital, FT Innovative Lawyers Awards, 2016
- Children's Pro Bono Legal Service, FT Innovative Lawyers Awards, 2016

### ENTERPRISE: PROMOTING OPPORTUNITY THROUGH SOCIAL MOBILITY

Queen's Award, 2017

### WINNER

CSR Innovation, Legal Week Innovation Awards, 2017

### COMPETITION TEAM OF THE YEAR & LEGAL INNOVATOR OF THE YEAR

Legal Business Awards, 2017

### PRIVATE PLACEMENT LAW FIRM OF THE YEAR

Global Capital, 2017

### FINANCE (ACQUISITION) TEAM OF THE YEAR

Financial News Legal Services Awards Europe, 2017

### SIX 'BEST IN' AWARDS AT THE EUROMONEY LMG EUROPE WOMEN IN BUSINESS LAW AWARDS 2017

- Four 'Best In'
- One 'Rising Star'
- Best International Firm for Work-Life Balance

### EUROPEAN PENSIONS LAW FIRM OF THE YEAR

European Pensions Awards, 2017

### LAW FIRM OF THE YEAR

Risk Awards, 2017

### INTERNATIONAL FINANCE LAW REVIEW (IFLR) EUROPE AWARDS, 2017

- International Law Firm of the Year
- Belgium Law Firm of the Year
- High Yield Deal of the Year
- Loans Deal of the Year
- Private Equity Deal of the Year
- Structured Finance and Securitisation Deal of the Year

### ILO CLIENT CHOICE AWARD FOR WHITE COLLAR CRIME: JOOST EVERAERT

Client Choice Award, 2017

### GLOBAL LAW FIRM OF THE YEAR

Infrastructure Investor Awards, 2017

### LEGAL ADVISER OF THE YEAR

IJ Global Awards, 2017

### TOP LEGAL ADVISOR BY VALUE

InfraDeals, 2017

### BEST GLOBAL COMMERCIAL IP LAW FIRM 2017 & MOST FEARED IP LITIGATION PRACTICE (FRANCE)

Acquisition International Magazine, IP Excellence Awards 2017

### LAUNCH OF A&O LIFE SCIENCES HUB (FRANCE) RISING STAR FINANCE OF THE YEAR

Italian Legal Community Finance Awards, 2017

### DEBT CAPITAL MARKETS LAWYER OF THE YEAR

Italian Legal Community Finance Awards, 2017

## CENTRAL AND EASTERN EUROPE

### INTERNATIONAL LAW FIRM OF THE YEAR

Slovak Law Firm of the Year competition, EPRAVO Group, 2017

### CZECH REPUBLIC LAW FIRM OF THE YEAR

IFLR Europe Awards, 2017

### BAND 1 FOR BANKING AND FINANCE

Corporate and M&A, Chambers

### TIER 1 FOR BANKING AND FINANCE

Legal 500 and IFLR1000

### WARSAW COMPETITION TEAM RANKED ELITE

Global Competition Review, 2017  
Tier 1 ranking for our CEE offices across legal directories

## ASIA PACIFIC

### MORE BAND 1 RANKINGS IN ASEAN THAN ANY OTHER LAW FIRM

Chambers, 2017

### SOUTHEAST ASIA BANKING & FINANCIAL SERVICES FIRM OF THE YEAR

ALB Southeast Asia Law Awards, 2017

### DEBT MARKET DEAL OF THE YEAR

ALB Southeast Asia Law Awards, 2017

### DEBT MARKET DEAL OF THE YEAR

Australasian Law Awards, 2017

### M&A DEAL OF THE YEAR (MID-SIZE)

ALB Southeast Asia Law Awards, 2017

### EQUITY MARKET DEAL OF THE YEAR

Australasian Law Awards, 2017

### SINGAPORE INTERNATIONAL FIRM OF THE YEAR

Chambers Asia Awards, 2017

### INDIA INTERNATIONAL FIRM OF THE YEAR

Chambers Asia Awards, 2017

### POWER DEAL OF THE YEAR

IJ Global Awards Asia, 2017

### OIL & GAS DEAL OF THE YEAR

IJ Global Awards Asia, 2017

### ENERGY & RESOURCES DEAL OF THE YEAR

ALB Southeast Asia Law Awards, 2017

### BANKING & FINANCIAL SERVICES FIRM OF THE YEAR

ALB Southeast Asia Law Awards, 2017

## MIDDLE EAST

### CONSUMER M&A LEGAL ADVISOR AWARD

Middle East & North Africa Mergermarket M&A Legal Advisor Awards, 2017

### BANKING AND FINANCE TEAM OF THE YEAR

Corporate Counsel Middle East Awards, 2016

### QATAR DEAL OF THE YEAR

IFN Awards, 2016

### SAUDI ARABIA DEAL OF THE YEAR

IFN Awards, 2016

### BEST LAW FIRM IN INSOLVENCY & RESTRUCTURING

IFN Awards, 2016

### BEST ISLAMIC LAW FIRM

The Asset Triple A Islamic Finance Awards, 2017

### LAW FIRM OF THE YEAR IN QATAR

IFLR Middle East Awards, 2016

### CONSTRUCTION TEAM OF THE YEAR

Corporate Counsel Middle East Awards, 2016

### MENA PETROCHEMICALS DEAL OF THE YEAR

IJ Global MENA Awards, 2016

### MENA POWER DEAL OF THE YEAR

IJ Global MENA Awards, 2016

## AFRICA

### AFRICA DEAL OF THE YEAR

Yinson Production financing, Islamic Finance News (IFN) Awards, 2017

### BAND 2 BANKING & FINANCE BAND 4 PROJECTS & ENERGY

Chambers South Africa, 2017

### TIER 1 BANKING & FINANCE TIER 2 PROJECTS & ENERGY TIER 3 TAX

Legal 500 South Africa, 2017

# OUR CONTRIBUTORS

The 2017 edition of A&O's Annual Review – *Leading in Uncertain Times* – has been produced with the generous help of people working across commerce and wider society to make sense of a constantly changing world. They provide an invaluable insight into how leaders of organisation – whether businesses or civil society groups – are harnessing the power of collaboration, shared ideas and co-creation to tackle the disruptive challenges of our times. We are very grateful to them for sharing their perspective of the risks and opportunities that lie ahead.



**Jim Adler**  
Managing Director, Toyota AI Ventures  
*p13 Defend and attack*



**Sasha Hardman**  
Global HR Director, Allen & Overy  
*p34 Leadership for an uncertain world*



**Amit Singh**  
Partner, Allen & Overy  
*p09 How green is my bond?*



**Shruti Ajitsaria**  
Head of Fuse and Counsel  
at Allen & Overy  
*p37 A Fuse has been lit*



**Laurel Hurst**  
Managing Director, Head of  
Transaction Management, CEEMEA  
Debt Capital Markets, JP Morgan  
*p25 Risk and reward*



**Phillip Smith**  
Partner, Allen & Overy  
*p37 A Fuse has been lit*



**Jonathan Brayne**  
Chairman of Fuse and Head  
of A&O's Innovation Panel  
*p37 A Fuse has been lit*



**Daniel Lim**  
Senior Associate,  
Allen & Overy  
*p19 CRISPR: How will it  
change our lives?*



**Andre Soelistyo**  
President, GO-JEK  
*p30 How GO-PAY Leads Mobile Money  
in SouthEast Asia's Largest Market*



**Tim Conduit**  
Partner, Allen & Overy  
*p09 How green is my bond?*



**Professor Mitchell O'Connell**  
Assistant Professor of  
Biochemistry and Biophysics,  
University of Rochester  
*p23 CRISPR: How will it  
change our lives?*



**Yousuf Syed**  
Head of International Debt Capital  
Markets, Axis Bank Limited  
*p08 Green futures*



**Sachin Davé**  
Partner, Allen & Overy  
*p27 Chaos as usual*



**Connell O'Neill**  
Partner, Allen & Overy  
*p31 Local heroes*



**Simon Toms**  
Partner, Allen & Overy  
*p15 Bold investments*



**Marc Döring**  
Partner, Allen & Overy  
*p19 CRISPR: How will it  
change our lives?*



**Sugianto Osman**  
Partner, Allen & Overy  
*p31 Local heroes*



**Stefan Weiler**  
Head of CEEMEA DCM, JP Morgan  
*p25 Risk and reward*



**Brendan Hannigan**  
Partner, Allen & Overy  
*p31 Local heroes*



**Avtar Sehra**  
CEO, Nivaura  
*p37 A Fuse has been lit*



**Dr Brian Zambrowicz**  
Vice President, Functional  
Genomics, Regeneron  
*p21 A technology that can't be ignored*

**BREXIT LAW SUPPLEMENT**

# **PERSPECTIVES ON BREXIT**

## **THE IMPACT ON BUSINESS, LAW AND EVERYTHING IN BETWEEN.**

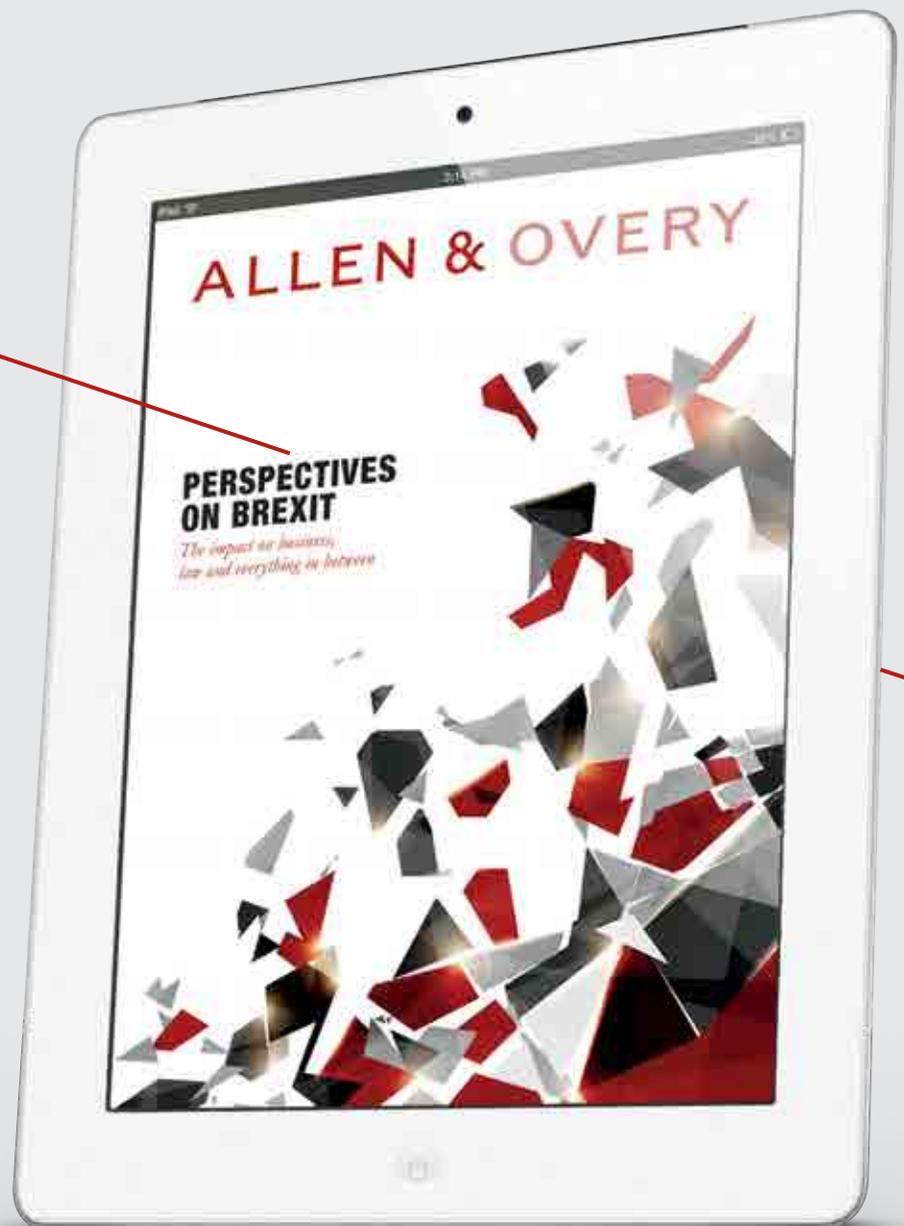
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The supplement looks at:

- The politics of the UK's deal on Brexit
  - Creating a new trading relationship between the EU and UK
  - Brexit and the courts
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