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April/May 2019
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SECURITIES FINANCE

UK EXPERTS DISCUSS KEY MARKET TRENDS

Custody

Definitive guide to global sub-custody

+ Derivatives

Compression reshapes the swaps business

THE MAJEDIE WAY

Chair James de Uphaugh describes a modern boutique

It's not the size of the dog in the fight…

Majedie Asset Management is proud to be different. The company that started with just six staff in 2002 has increased its headcount by a factor of only ten in the intervening 17 years and remains unashamedly an investment boutique.

Majedie has an investment team comprising some 16 fund managers and analysts, a handful of funds and about £13bn of assets under management, which is a small number in a market where the largest firms have assets measured in trillions.

But the London-based firm is only interested in one metric: performance, as Chairman James de Uphaugh explains in this issue's cover feature.

De Uphaugh puts it plainly: "The game here is unashamedly about making money for our clients."

Indeed Majedie believes its smaller size is actually an advantage rather than a disadvantage, because it ensures the firm is focused on using its limited capacity as effectively as possible.

De Uphaugh said: "One of the big principles for us is capacity which is not something you might hear from those asset managers who talk in trillions. For a true boutique, capacity is crucial because the reality is (and this is something of a dirty secret in the industry) is that liquidity is not that great.

"If anything, with all the changes in regulation (which were taken for good reason) such as Mifid II and the bank capital rules etc, liquidity has got worse since we started in 2002. So capacity becomes even more important. Why that matters is that when we have good ideas, I want to make sure we get into the companies in size, so they can make a difference to our clients' portfolios," de Uphaugh added.

De Uphaugh and his Chief Executive Rob Harris, who were two of Majedie's original founders in 2002, argue the Trillion Dollar Club (as they have become known) take their capacity for granted, whereas a firm like Majedie has to make every unit count to deliver performance.

Harris said: "We think of a boutique as a firm that aims to do a few things well and not try to be all things to all people. A lot of firms in our industry have fallen into that trap of chasing asset growth, perhaps because they have external shareholders demanding it, so the managers launch new strategies."

Harris added: "We are sticking rigidly to equities, so that is UK and global equities with some US equities and potentially more in-fill in the future. We are an equity boutique, that's what we understand."

Majedie is also keen to talk-up its environmental, social and governance credentials, arguing it has been adhering to these principles for years because they represent good business sense. Majedie does not have an ESG fund for example, rather these ideas are embedded in its investment approach.

As de Uphaugh said: "When we are asked about ESG, for us it is so integral to what we do so we almost struggle to take it out."

This, of course, represents something of a challenge for Majedie at a time that all asset managers are keen to talk about their commitment to sustainable investments. Harris concedes: "We need to find more of a voice on that [ESG]."

But Harris continued: "In time honoured Majedie fashion, we don't see this as an opportunity to raise assets. This is much more about ensuring that we do ESG properly with the view that in ten years' time the label may have disappeared frankly and active managers and investment firms will be expected to do it as part of their jobs."

De Uphaugh and Harris are unblinking in their commitments to staying small, staying focused and nurturing a culture of inclusivity, or cognitive diversity as Majedie call it.

In an industry increasingly obsessed with size, Majedie Asset Management is proof-positive there is another way. ■

Luke Jeffs,
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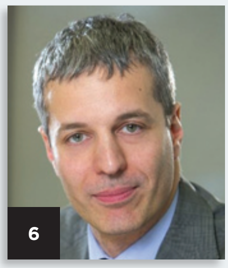

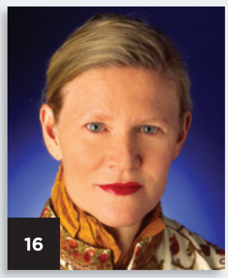

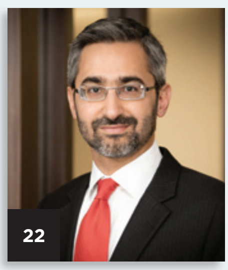

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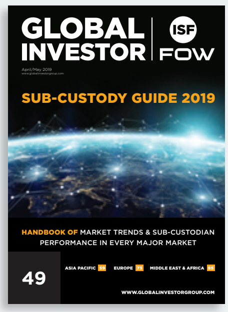

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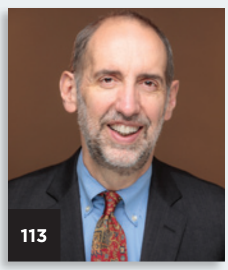
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Trading Places

Asset management, securities finance, custody and the derivatives industry saw more senior moves at the start of 2019

ASSET MANAGEMENT:

UK would approach regulation differently – Bailey

The head of the UK financial markets watchdog said there should be a debate about the future of regulation, claiming the UK would construct its regulation differently.

Financial Conduct Authority (FCA) chief executive Andrew Bailey said is it time to put the future of financial conduct regulation on the table.

"Brexit will clearly be a defining factor. I do think that, left to our own devices, the UK, with its common law system and large, global financial markets, would construct financial conduct regulation in a rather different way," he said.

"To be clear, that is not a comment on the level of regulation, but rather the approach and the means, and, to be very clear, it does not involve taking a position on Brexit."

The comments are based on the overarching view that the financial system should earn sustainable and acceptable returns, and do so transparently.

He added: "And, we need to encourage fair and sustainable risk taking. In these circumstances, there should be a debate about the future of regulation."


ANDREW BAILEY

European elections unlikely to move markets – Morgan Stanley

The upcoming European Parliament elections may provide a degree of additional 'noise' in the market over the short term, but experts at Morgan Stanley think the risk of a more meaningful impact on European equities is low.

"Our economists are not expecting an anti-mainstream majority to emerge; however, neither do we observe meaningful concern by investors whereby the re-establishment of a mainstream majority will prompt much of a relief rally," Daniele Antonucci, a London-based economist at the US bank wrote in a note to clients.

The elections take place over the course of four days (May 23-26) with vote counts and seat totals will be released on a country-by-country basis only after the last member state has finished voting on Sunday.

It is just the first in a series of events as part of a 'changing of the guard' in EU politics and policy-making this year.

If the usual schedule holds, a new Commission will be appointed in the summer once the MEPs elected have taken their seats, with an inaugural speech setting out the priorities for the next five years to come in October.


DANIELE ANTONUCCI


FRANCISCO ARISTEGUIETA

CUSTODY:

State Street hires Citi's LatAm head

State Street has hired Francisco Aristeguieta from Citi.

The executive, most recently head of Citi's business in Latin America, takes on the role as chief executive for State Street's international business, reporting to CEO Ron O'Hanley.

Initially based in Hong Kong, Aristeguieta will be responsible for all of State Street's business activities outside of the US.

The Boston-based group derives more than 40 percent of its revenues away from its home market.

At Citi, Aristeguieta led securities services, trade and cash management and was vice chairman for Banco de Chile.

State Street has shifted senior roles and hired a number of senior experts of late.

Lou Mauri was promoted to chief operating officer at State Street in February.

Northern Trust names Asia ops head

Northern Trust has hired Conlon Chen as head of operations for its global fund services business in Asia.

Hong Kong-based Chen, most recently head of operations for Maples Fund Services, will be responsible for Northern Trust's middle-office outsourcing solutions and fund administration business across the region.

He will report to Caroline Higgins,

CONLON CHEN

head of global funds services, Asia, at the Chicago-headquartered bank.

Earlier in his career Chen worked at Standard Chartered and State Street.

Northern Trust has 11 offices across Asia-Pacific and hired Lily Kwok in March as head of client services for its asset servicing business in Hong Kong, Macau and Taiwan. Ryan Burns was promoted to head of global fund services in the Americas in April.

SECURITIES FINANCE:

Ex-Goldman risk chief to run Credit Benchmark board

Credit Benchmark has set-up a new advisory board and picked the former chief risk officer at Goldman Sachs to run it.

Craig Broderick, who is based in the US and retired from Goldman Sachs in January 2018 after 32 years, will lead the new unit designed to provide guidance on the firm's strategy.

The company, which has offices in London and New York, collects credit risk information on major banks, brokers and corporates.

It aggregates internal lending risk assessments and uses them to devise ratings.

Credit Benchmark's co-founder and chairman, Donal Smith, is the former chief executive of Data Explorers, a securities lending analytics business acquired by IHS Markit in April 2012.

Mark Faulkner, also co-founder of Credit Benchmark, launched Data Explorers in the 90s after spotting an opportunity to provide customers in the securities financing industry with independent analytics.

Reilly exits BNP Paribas for Morgan Stanley

Claire McKinlay Reilly has left BNP Paribas in New York for Morgan Stanley.

The executive was most recently vice president of agency lending trading at BNP Paribas.

She joined the the French bank in 2014 and managed sec lending desk activities for the firm's asset owner and investment fund clients.

Prior to joining BNP Paribas, Reilly worked at EquiLend in a client relationship management and sales role.

Before that she worked at Euromoney Institutional Investor.

She will focus on securities lending in her new role at Morgan Stanley as vice president.

Morgan Stanley's Bank Resource Management (BRM) division houses securities lending, repo financing, listed and OTC derivatives collateral businesses.

DERIVATIVES:

TP Icap taps UBS MD for Ruskin's division

TP Icap has hired former UBS managing director Mike du Plessis as senior managing director of its institutional services division.

Plessis will join the inter-dealer broker's New York office on July 8, reporting to institutional services chief exec John Ruskin.

He joins after eight years at UBS AG, where he was a managing director in several senior roles across London and New York including global head of FX, rates and credit execution services, and global head of ETF macro execution.

Prior to UBS he worked in listed and cross rates sales for almost 20 years including roles at Cube Financial - which was acquired by Societe Generale - Lehman Brothers and Deutsche Bank.

MIKE DU PLESSIS

"Mike has a strong reputation for his singular vision for agency execution and client focus; his appointment is a response to the growing demand amongst our clients for truly impartial and measurable execution quality alongside dedicated pre and post trade service provision," Ruskin said.

Jon Regan becomes CEO of PhillipCapital UK

PhillipCapital UK has hired former Macquarie associate director Jon Regan to run the business as it expands into futures.

Regan has been appointed chief executive officer of the Singapore-based broker's British arm - PhillipCapital UK.

A PhillipCapital spokesperson confirmed this is a new role to add futures to its offerings in the UK.

"Regan brings with him a wealth of experience in the futures industry and will be growing the company's business in this area," the spokesperson said.

Regan had been with Macquarie for 11 years, most recently as an associate director for futures execution, clearing and direct market access sales.

Prior to that he worked for trading tech firm Patsystems for over three years covering EMEA sales development of risk and futures trading platforms.

He also served eight years at New York-based commodities and futures broker Refco Overseas and Stamford-based metals provider Gerald Metals. ■

Breaking stories from Global Investor Group

Here are some of the top stories you may have missed at GlobalInvestorGroup.com

ASSET MANAGEMENT:

Citi extends ETF service offering to Europe

Citi has announced the expansion of its ETF custody and fund services tools to cover index-tracking funds across the EMEA region.

The US bank said in April that it could now cater to European passive funds, following the build-out of its wider ETF servicing platform in the US, Latin America and Asia.

A new platform, dubbed Advanced Citi ETF System (ACES), supports the business allowing the firm to automate the entire ETF life cycle, including settlement.

"Citi's business model enables us to support all aspects of the ETF lifecycle agnostically - from index creation, dedicated research and content, sales, trading, market-making, derivatives and securities lending, all the way through to traditional ETF fund administration, custody and common depositary," said Gareth Myburgh, EMEA ETF product manager.

China bottom of the pile for ESG

China is last in global environmental, social and governance (ESG) rankings, according to US research house Morningstar, primarily due to poor corporate governance among companies like Alibaba and Tencent.

After sifting through the sustainability profiles of the firm's entire suite of global equity indexes, Morningstar's analysts published in April what they described as an 'ESG Atlas'.

"China lands in the globe's bottom tier across ESG criteria," experts wrote in the report. "Technology player Lenovo is the only company in the Morningstar China Index considered to be a leader on ESG."

Asian markets Japan and Korea also scored poorly on corporate governance with SoftBank Group, Toyota, and Samsung underperforming.

In Europe, Denmark scores highest on social criteria, the Netherlands on governance. Portugal has the best environmental score.

The US ranks in the fourth quintile of global sustainability leaders because of controversy from big index constituents like Amazon, Apple, Microsoft, and poor governance scores from companies like Facebook and Alphabet.

CUSTODY:

Broadridge to take over TD custody business

US fintech giant Broadridge has struck a deal to buy a unit of TD Ameritrade that handles assets for thousands of mutual funds and ETFs.

Both firms announced an agreement in April which will see Broadridge take over custody duties on assets serviced by TD Ameritrade Trust Company.

TOM NALLY

The broker's subsidiary provides back office support to retirement savings plans across the US.

Terms of the deal were not disclosed but the purchase is expected to be completed in this year's second quarter.

"After careful consideration, we decided to exit a part of our retirement plan trust business, one that's better served by a scale player dedicated to expanding and investing in this business," Tom Nally, president of TD Ameritrade Institutional said in a statement.

TD is keeping hold of its TD Ameritrade Retirement Plan platform which offers record-keeping, administration and other services in one bundle.

Crédit Agricole, Santander to combine custody arms

Santander's Spanish and Latin American custody business is to be rolled into French bank Crédit Agricole.

Both banks announced in April an agreement had been reached to create a new entity holding £2.9 trillion in assets under custody.

Santander's S3, which safe-keeps assets in Mexico and Brazil, will be merged into Credit Agricole's Caceis division.

Credit Agricole will hold a 69.5% stake in the combined unit with Santander owning the rest.

"The enlarged group would be better placed to capture growth in high potential markets (Latin America and Asia) and new opportunities," the firms said in a joint statement.

Jean-Francois Abadie, chief executive

ANA BOTÍN

of Caceis, will lead the enlarged business.

The deal is expected to complete by the end of 2019.

Santander's S3 had £615 billion worth of assets under custody at the end of 2018 and employed around 300 staff.

"By working together we can create a custody and asset servicing platform that leverages our collective scale and global presence, and offers clients a comprehensive service that can support their ambitions and help them to prosper," said Ana Botín, executive chairman of Santander.

SECURITIES FINANCE:

Academics caution against OTC stock lending restrictions

Academics have called for regulatory caution over further restricting over-the-counter (OTC) stock lending activity.

A new study by Zsuzsa R. Huszár, associate professor in finance at the National University of Singapore, examines centralised and OTC stock lending markets side by side.

The paper, co-authored by Melissa Porras Prado, Nova School of Business and Economics, concludes that regulatory intentions are well-placed with the centralised stock lending market in that it helps to alleviate short-sale constrains and illiquidity when OTC market demand is unusually high.

However, the economic benefits of centralised stock lending may not be fully realised as OTC market seems to remain the preferred venue to facilitate short selling for the relatively informed traders.


ZSUZSA R. HUSZÁR

Stock lending transactions are traditionally arranged in the non-transparent OTC market among large institutional investors worldwide.

Post-financial crisis, regulators have pushed to move derivatives, bonds and even securities lending transactions from OTC markets to transparent markets with central counterparties (CCP) to reduce settlement and counterparty risk.

INTL FCStone launches prime unit

US broker INTL FCStone has launched its prime brokerage business after a six month build.

The firm, known for its commodities clearing service, hired a trio of former Convergex executives in November to lead its foray into the prime space.

On April 23, a statement from the company said it had launched the multi-asset unit set-up to serve hedge funds, mutual funds and family offices.

The division covers US and global equities, options, futures, foreign exchange (FX), and fixed income

It also offers fully paid securities lending through "various external clearing partners".

INTL FC Stone is headquartered in New York but the new prime brokerage arm is based in Atlanta, Georgia.

Douglas Nelson and brothers Michael and Nicholas DeJarnette, all ex-Convergex, arrived at INTL FCStone as co-heads of prime brokerage in November.

DERIVATIVES:

FCA "not satisfied" with PFOF controls

The Financial Conduct Authority (FCA) said it is not satisfied with the limited, manual controls firms are using to monitor compliance with payment for order flow (PFOF)

On April 23, the UK financial markets watchdog published its findings after a supervisory review into PFOF practices based on information from 15 firms and visits to 12 firms.

The regulator banned PFOF back in 2012 in a bid to stop brokers and banks receiving payments from market-makers in return for orders, which would create a conflict of interest.

Although brokers are typically no longer charging PFOF in certain cases, such as retail and professional client business, the regulator has nevertheless highlighted ongoing failings.

"Our supervisory work found that firms had implemented limited systems and controls to detect and prevent inappropriate charging of PFOF, or to monitor their adherence to the relevant regulatory requirements and internal policies and rules on PFOF," the regulator wrote.

Marex revenue up 20% in "breakout year"

Marex Spectron reported revenues up 20% in a year marked by the return of volatility and preparation for three acquisitions.

London-based commodities broker Marex reported total net revenues up 20% for the full year 2018 to $294.7 million from $245.6 million in 2017.

The metals business saw revenues up 45% to $88.4 million in 2018 compared with $61.0 million in 2017 as a result of higher volatility.

The agricultural business also saw significant revenue growth, up 54% to $32.5 million in 2018 compared with $21.1 million in 2017.

Meanwhile the energy business grew 7% to $130.8 million due the established fuel oil and European power desks as well as returns on newer investments.

The end of the year was marked by preparation for three deals that closed in 2019.

The acquisition of UK trading firm CSC Commodities completed in January, and the Energy Broking Ireland and Rosenthal Collins Group deals, set to strengthen business in Dublin and the US respectively, completed in February. ■

Majedie highlights

> "While most of the people you might profile will talk about their assets and they might be measured in the trillions, we want to talk about long-term performance. The game here is unashamedly about making money for our clients."
>
> James de Uphaugh

the power of focus

Majedie Chairman James de Uphaugh and Chief Executive Rob Harris reflect on the opportunities for the 17 year old equity investment boutique

Majedie Asset Management is a rare beast in a business dominated by trillion dollar managers with thousands of staff.

Founded by four star managers from Mercury Asset Management, Majedie Asset Management began life in 2002 as a UK equities specialist and that is what it remains to this day.

With some 60 staff and about £13bn under management, this firm is proud to be a boutique and happy to set itself apart from the industry's bulge-bracket management firms.

James de Uphaugh, the Chairman and Chief Investment officer of Majedie Asset Management, told Global Investor: "While most of the people you might profile will talk about their assets and they might be measured

> "If we look back at the decisions we made at the start, such as aligning staff and employee interests, staying relatively small and every employee owning equity in the business, these tell a nice story that we are doing what we say in our own business"
>
> Rob Harris

in the trillions, we want to talk about long-term performance. The game here is unashamedly about making money for our clients."

De Uphaugh founded Majedie with three former colleagues from Mercury Asset Management's Alpha Team of star UK equity managers which de Uphaugh had run.

Today Rob Harris is the Chief Executive of Majedie Asset Management, Chris Field is its Executive Director, responsible for co-managing with de Uphaugh the firm's flagship UK Equity and UK Focus funds and Adam Parker is retired.

But de Uphaugh is no ordinary chairman. As chief investment officer he is still doing what he has done for 32 years.

He said: "In my day job (as CIO), I want to invest in companies whose strategies are different. If you are just doing the same things, such as grow assets, you are consigned, unless you are very lucky, to a bland future. What we are after is distinctive performance."

Majedie has a relatively small investment team but the emphasis is on working together rather than star managers. The firm uses for example a technique it calls the "mini multi-manager" where various managers take joint responsibility for an investment.

De Uphaugh said: "We have 16 people who are a mix of fund managers and analysts, and the joy of that is they work in a collaborative way. They are of different vintages with different styles and quirks but what unites us is looking fundamentally at companies."

Majedie also uses the term cognitive diversity to describe its investment decision-making approach which delivers "both better returns and a better service for our clients". Cognitive diversity relies on people from different educational and cultural backgrounds mixed with graduates bringing new ideas.

The Chairman continued: "We have people who are really at the top of their game. The way a boutique takes it to the opposition, wins business and does really well is by ensuring the investment team is on the bit so to speak day-in, day-out."

Harris believes Majedie has retained the mentality of a start-up. "We started with six people 17 years ago competing with huge asset management firms. At that time, boutiques in this industry didn't exist. To get to the point where you are on a buy-rating for a consultant, you have to beat these firms in every area or you don't stand a chance."

De Uphaugh and Harris are obviously proud of the working environment at Majedie and this has been something they have been keen to encourage by ensuring staff have equity stakes in the firm.

De Uphaugh said: "Culture is a fragile beast and not something you can take for granted. It is something which Rob, myself and others work at day-in day-out, to really ensure standards are kept high. We made the decision at the beginning to make sure equity ownership runs like Brighton Rock through the business. I am convinced that changes behaviour, people act more like owners -- they care. We keep people turnover relatively low. The net result is standards are kept high but we don't take that for granted."

As a boutique, one might think Majedie is sometimes outmuscled by its larger rivals but de Uphaugh sees his firm's approach to capacity as an advantage.

"From the off, we had some core principles and one of the big principles for us is capacity which is not something you might hear from those asset managers who talk in trillions. For a true boutique, capacity is crucial because the reality is (and this is something of a dirty secret in the industry) is that liquidity is not that great.

"If anything, with all the changes in regulation (which were taken for good reason) such as Mifid II and the bank capital rules etc, liquidity has got worse since we started in 2002. So capacity becomes even more important. Why that matters is that when we have good ideas, I want to make sure we get into the companies in size, so they can make a difference to our clients' portfolios," de Uphaugh added.

Harris continued: "From a business angle, we think of a boutique as a firm that aims to do a few things well and not try to be all things to all people. A lot of firms in our industry have fallen into that trap of chasing asset growth, perhaps because they have external shareholders demanding it, so the managers launch new strategies. We are sticking rigidly to equities, so that is UK and global equities with some US equities and potentially more in-fill in the future. We are an equity boutique, that's what we understand."

Majedie obviously knows what it's good at and is happy to focus on that but there is still scope for innovation.

De Uphaugh said: "The interesting thing about having a fixed amount of capacity in a fund and when you get close to that level, you need to think about having another stream to your business. People businesses are not very good at standing still, rather they need to move forward so what we do with our flagship funds when they reach capacity is we recycle the outflows and launched in conjunction

> "We started with six people 17 years ago competing with huge asset management firms. At that time, boutiques in this industry didn't exist. To get to the point where you are on a buy-rating for a consultant, you have to beat these firms in every area or you don't stand a chance" – Rob Harris

with a very talented manager Matt Smith the Tortoise Fund."

The Tortoise Fund is a long/short global equity fund, managed by Matthew Smith, who joined Majedie from Deutsche Bank in 2006, and Tom Morris. The Fund aims to achieve positive absolute returns in all market conditions over rolling three-year periods with less volatility than a conventional long-only fund.

De Uphaugh said: "This was a new avenue of growth for the business that not only provided the oxygen of capacity but a new client base. Twelve years on from launch, this is now a billion plus. Then we launched the UK Income Fund which is now, if you take the streams together, over a billion. More latterly, we are earlier on the J-curve for the Global Equity Fund and the Global Focus Fund, and the US Equity Fund.

The Chairman added that the main opportunities for the firm going forward were "mostly in global and to a lesser extent in the US".

As a UK-centric asset manager, Majedie has lived every minute of Brexit but de Uphaugh believes the UK is in better shape than some might have us believe.

He said: "The UK equity market has been something of a Cinderella because of the events that have been happening live in Parliament. We saw that seeping through post the vote in 2016, the economists effectively knee-capped forecasts and consigned the UK to the slow-lane of growth. Asset allocators have cut their UK weightings so if you look at the data now, international funds are very under-represented in the UK in terms of equities and sterling as an asset class.

"Yet the pulse of the UK economy relative to expectations (and that's the key thing) is actually not too bad. Wage growth is at its highest since 2009 because sterling has been perky and remains in a reasonable zone. The data is not actually too bad and we have got to remember that."

De Uphaugh said non-UK corporates are still moving in on UK

"Culture is a fragile beast and not something you can take for granted. It is something which Rob, myself and others work at day-in day-out, to really ensure standards are kept high."

assets because these firms typically taken a longer term view.

"If you think about what corporate investors are doing, there's a whole roll-call of US companies buying UK companies such Comcast buying Sky, Coke acquiring Costa, JLT was bought by Marsh, Boston Scientific bought BTG. They realise the next period might be foggy but share prices are about multiple periods of cash-flows."

De Uphaugh added: "I think we do the UK down too much. The reality is we're early in a new political cycle and late in an economic cycle. For the UK, expectations are relatively well-grounded but we're early in the new political cycle where everyone is

"The pulse of the UK economy relative to expectations (and that's the key thing) is actually not too bad. Wage growth is at its highest since 2009 because sterling has been perky and remains in a reasonable zone. The data is not actually too bad and we have got to remember that."

going to become more national and less global. Brexit is one big symptom of that but it is not the only example."

Harris also played down the impact that Brexit will have on Majedie from an operational point of view. The firm launched in 2007 a Dublin fund umbrella so any clients from outside of the UK can hold sister funds in that jurisdiction.

He said: "It's unclear how things will play out. It is dependent on whether there is no deal, the PM's deal or some variant thereof, whether we may need more compliance or marketing staff in Dublin. I'm a director of the Dublin funds and it's not been a big business challenge for us, rather it is more an investment challenge with the headwinds the UK is facing as well as the opportunities it has thrown up."

Another theme occupying the minds of the Majedie senior management is the rise and rise of environmental, social and governance (ESG) investment strategies. Majedie does not have an ESG fund per se, rather these principles are embedded in its investment approach, according to its senior management.

Harris said: "James coined the phrase Responsible Capitalism seven years ago and we have been talking to our clients about it ever since. We haven't yet found our public voice on it. The industry is getting to a place where there is increasing demand for managers to put pressure on investee companies to do things properly and that is difficult if your own house isn't in order.

The chief executive added: "If we look back at the decisions we made at the start, such as aligning staff and employee interests, staying relatively small and every employee owning equity in the business, these tell a nice story that we are doing what we say in our own business."

"In my day job (as CIO), I want to invest in companies whose strategies are different. If you are just doing the same things, such as grow assets, you are consigned, unless you are very lucky, to a bland future. What we are after is distinctive performance."

De Uphaugh said he and his team have long supported ESG ideals because these principles also happen to represent good business practice.

"Companies don't make profits in a vacuum. We know that now but if you look back to early last decade we had a brand of capitalism running riot but we knew that companies that thought carefully about all stakeholders and how it drove their P&L were in a much more sustainable place.

"When we are asked about ESG, for us it is so integral to what we do so we almost struggle to take it out. We contribute a lot to the debate with the companies that we own, and I use that phrase "owner" advisedly because we like to be seen as owners of companies on behalf of our clients, not the high velocity traders that populate much of the investment firmament," de Uphaugh added.

Harris played down the likelihood that Majedie will launch an ESG fund, pointing again to the firm's focus on performance over asset gathering.

"If you are a large firm that is trying to be all things to all people then you need to launch an ESG range quickly to raise assets but for us, it's much more about doing things properly for our clients, but there might be an opportunity at some stage to launch a fund or a strategy that is more of window on what we do elsewhere.

He added: "In time honoured Majedie fashion, we don't see this as an opportunity to raise assets. This is much more about ensuring that we do ESG properly with the view that in ten years' time the label may have disappeared frankly and active managers and investment firms will be expected to do it as part of their jobs."

But Harris is keen to make more of Majedie's ESG credentials: "We need to find more of a voice on that. It's not enough to know we are good enough to do it properly, we need to demonstrate we do it properly and that has been the case with a whole series of different areas over the last 15 years."

Majedie has always had what Harris calls a "flexible investment approach" which allows it to "to rotate the portfolios slowly, over a period of years to those shares where valuations and expectations are both low and we see the opportunity to make money for clients over the long-term".

For de Uphaugh the challenge has not changed: "We spend roughly a quarter of our time thinking about macro-factors such as politics and elements of ESG to think about how we can benefit from tailwinds and avoid headwinds. All of these things go into the cauldron to help us define what sort of stocks we might be thinking about.

He added: "The greater bulk of our time is spent with the team trying to get to the real detail. Day-in and day-out we are looking at companies, dissecting them, coming to valuations and the joy of it is because we are relatively small, when we get the good idea, we can jump in and buy it in the size that's going to make a difference to our clients."

As a boutique, one might think Majedie is an acquisition target but it is hard to imagine Majedie retaining its very particular identity as part of a larger group.

Harris said: "What we'd like to do is turn Majedie into an inter-generational firm. We've mentioned that equity is owned by each employee in the business and each year more equity is passed to them. The key is to have equity in the right hands." ■

> "If you are a large firm that is trying to be all things to all people then you need to launch an ESG range quickly to raise assets but for us, it's much more about doing things properly for our clients" – Rob Harris

James de Uphaugh

James de Uphaugh is Chairman and Chief Investment Officer of Majedie Asset Management. He is a fund manager and analyst with 31 years' investment experience in UK and international equity markets.

At Majedie, he is responsible for co-managing both the UK Equity and UK Focus funds. He also leads Majedie's efforts in Responsible Capitalism.

Before co-founding Majedie in 2002, de Uphaugh was a Managing Director at Mercury Asset Management (later acquired by Merrill Lynch, now BlackRock), where he was also Chairman of the UK Investment Group and Alpha Team Leader. At Mercury, he was responsible for managing institutional portfolios with combined UK equity assets of £1.4bn. De Uphaugh joined Mercury Asset Management in 1988.

He holds a Master of Arts degree in Economics from Jesus College, Cambridge. De Uphaugh also holds the ASIP qualification and is an Associate Member of the CFA Society of the UK.

Rob Harris:

Rob Harris is Chief Executive of Majedie Asset Management. He has 26 years' experience in the asset management industry, in both investment and business roles. He co-managed both the UK Equity and UK Focus funds between 2003 and 2010, before becoming Managing Director in 2011 and then CEO in 2012.

Before co-founding Majedie in 2002, Harris had been a Director at Mercury Asset Management before it was acquired by Merrill Lynch, now BlackRock. While at Mercury, he was responsible for managing combined UK equity assets of £1.2bn. Rob joined Mercury Asset Management in 1993.

Harris holds a Bachelor of Arts degree in Classics from the University of Durham. He also holds the ASIP qualification and is an Associate Member of the CFA Society of the UK.

DWS traces rise of ESG and predicts bright future

Roelfien Kuijpers, the Head of Responsible Investments at DWS, talks to **Luke Jeffs** about the emergence of sustainable investments and her firm's approach

DWS turned a corner in late April. The German asset management returned to positive net flows for the first three months of 2019, net income for the quarter rose €102m and its assets under management were up 6% to break €700bn (€704bn).

Asoka Woehrmann, the Chief Executive of DWS since late October 2018 when he replaced Nicolas Moreau, welcomed the results: "Our flagship funds performed well and contributed to our net flows, as did our strategic partnerships. We will continue to do our homework and use our diversified business model to prove the strength and capacity of DWS."

Active management outflows slowed to €6.3bn from €11bn in the previous quarter, passive funds saw inflows increase to €6.2bn and DWS also cited a sustainable investing milestone.

The Frankfurt-based manager said: "In addition and further exemplifying DWS's leadership in the field of ESG (environmental, social and governance) investing, the Xtrackers business launched the largest ESG ETF ever in the US market."

DWS launched on March 7 its Xtrackers MSCI USA ESG Leaders Equity ETF on the New York Stock Exchange, adding to three regional ESG ETFs launched at the end of last year. Xtrackers ETFs are managed by DBX Advisors which is owned by DWS.

Fiona Bassett, Global Co-Head of Passive Asset Management and Global Co-Head of Product, DWS Group, said at the time of the launch "This latest expansion in our ESG offering will provide investors the opportunity to get exposure to the US market while ensuring they invest in companies with the highest ESG performance and to do so at a highly competitive price point."

The US ETF was however just the latest in a series of product launches that would today be called ESG, said Roelfien Kuijpers, Managing Director, Global Coverage, Head of Responsible Investments & Strategic Relationships at DWS.

> "We established a corporate governance and engagement practice in the early 1990s. In 1997, we launched social impact investing focusing on the S in ESG and this included a microfinance fund focused on financial inclusion in developing economies"
>
> **Roelfien Kuijpers, DWS**

Kuijpers, who has held senior roles at Deutsche Bank and Deutsche Asset Management before it was rebranded DWS in March 2018, said the firm was working on ESG before the phrase was invented.

"We established a corporate governance and engagement practice in the early 1990s. In 1997, we launched social impact investing focusing on the S in ESG and this included a microfinance fund focused on financial inclusion in developing economies."

She added: "In 2005, we analysed the key, long-term investment megatrends and identified climate change as a key long-term trend. Initially our clients were sceptical, asking, "So what has this got to do with investments?" Then, in 2006, US Vice President Al Gore released his film an Inconvenient Truth. While Gore knew a lot about climate change, he also knew how public and private capital could contribute to tackling climate change."

Kuijpers said that as recently as not much more than ten years ago, environmental investments was "out there" but DWS was convinced.

"DWS was the only asset manager that was really concerned about the impact of climate change. To make others aware of climate risks, we founded our research group looking at the impact of climate change on investment portfolios."

The next step for the German asset manager was to join the UN's Principles for Responsible Investment in 2008, in which the firm committed to six voluntary principles to integrate ESG into its investment process.

"The questions for us was: "How do we combine environmental, social, and governance issues into a single ESG investment practice and embed that into the investment process?"

Kuijpers continued: "In 2008, the amount and depth of ESG data was very limited in the market. Given this, we started building our proprietary ESG Engine. We quickly realised we couldn't rely on a single data provider so we decided to use multiple sources, providing us with a holistic view of ESG in publicly-listed companies."

As recently as five years, ESG was still a niche sector, according to Kuijpers. "Client demand for ESG strategies predominantly came from faith-based organisations, who focused on excluding such activities as fossil fuel or weapons companies.

"All that changed from 2015 when the Paris Agreement on Climate Change and the UN Sustainable Development Goals were signed. Every country in the world signed up to the Paris Agreement to keep the rise in Earth's temperature under two degrees Celsius by 2050."

The UN agreed in 2015 a framework 17 of Sustainable Development Goals (SDGs) to be achieved by 2030 through both public and private investment.

And Kuijpers believes investment in private assets has a big role to play in realising these goals: "There is some $130 trillion of invested assets globally; if the majority of this could be allocated in a responsible way, then that capital could go a long way to achieving these SDGs."

DWS was one of the first financial institutions to be accredited by the UN Green Climate Fund to help emerging economies meet their Paris Agreement goals.

The German manager is also a member of Climate Action 100+, an investor network with a combined $32 trillion in invested assets, in which investment firms like DWS engage with the 100+ largest carbon emitters to influence them to embrace a more sustainable business model.

Kuijpers described ESG as being "integrated into the DNA of our company" and key to the delivery of these objectives is DWS' ESG Engine.

"These days it is hard to find an investor who does not care about ESG but the challenge is how do you include their specific objectives, values and beliefs in an investment mandate?"

Kuijpers said her ESG Engine, which tracks thousands of companies using six different data providers, creating over a billion data points, enables DWS to construct a portfolio that accurately reflects the priorities of the underlying investors.

"It is a question of what are the fund holders' values and beliefs? For example, a lot of women care about gender equality on boards, while others may care more about board independence or health and safety issues," she said.

And the ESG Engine can also make investors think differently about some of the assets they hold in existing portfolios.

"We take a client's portfolio and screen it through the ESG Engine to analyse its ESG characteristics. For many clients, it is surprising to see what kind of companies their portfolios are invested in," said Kuijpers.

Yet she admits that the broader

> "We talk a lot about climate change, but linked to that are social issues. The long-term trend of globalisation has benefitted a large number of people but it has also left some people behind. Under the ESG banner, there is a real understanding that things need to be done to help people that are left behind"
>
> **Roelfien Kuijpers, DWS**

adoption of ESG principles presents challenges as well as opportunities.

"If we look at climate risk specifically, there are three main challenges: transition risk from a high carbon to a low carbon economy, physical climate risk and litigation risk.

"When we think about transitioning from a high carbon to a low carbon economy, there will inevitably be winners and losers. Some companies will likely contribute positively to this transition while some companies will need to think seriously about how they are going to manage the transition," she said.

Kuijpers cites the example of driverless trucks, which if widely adopted, could put one million US truck drivers out of work which would hurt a million US families. Similarly, in the coal, oil and gas industries individuals will be affected as firms move to a more sustainable business model.

"We talk a lot about climate change, but linked to that are social issues. The long-term trend of globalisation has benefitted a large number of people but it has also left some people behind. Under the ESG banner, there is a real understanding that things need to be done to help people that are left behind."

Kuijpers continued: "This is something we need to be aware of as we transition from a high carbon to a low carbon economy. We need to try to make sure we don't make the same mistakes we made with globalisation. We want to realise positive change for everyone, not just for the few and that is where E, S and G comes together. We can't have positive change in one without the others. E, S and G are interlinked so I our aim is to continue to manage investments under a robust ESG framework."

She admits it is "easy to get depressed" if you think about climate change – despite the Paris Agreement, global temperatures have already increased by one degree Celsius above pre-industrial levels – but Kuijpers is positive.

"There's potentially a massive advantage for countries that embrace these practices early on. China has been quick to move to electric vehicles for example, so it can be an advantage not to have a huge amount of legacy high carbon industries but rather leap frog ahead to a low carbon future."

Of course, sustainable energy sources are not cheap so to "leap frog ahead to a low carbon future" requires investment that smaller, growing economies may lack.

Kuijpers continued: "While the US and Europe benefitted from the industrial revolution which was largely powered by fossil fuels, emerging economies today are very aware of environmental issues. They know they must build their economies in a sustainable way. However, some emerging economies do not have the financial resources to invest into renewable energy sources, so we have set up a fund in collaboration with the UN Green Climate Fund to help them do that."

You only need to read this magazine to know ESG is a popular topic among European asset managers and Kuijpers is keen to guard against so-called "green-washing", where firms pretend to be ESG converts when they are nothing of the sort.

She said: "The industry needs guidelines to guard against any incidence of green-washing. We recently attended the EU taxonomy working group and I was impressed by the level of detail. This is important, otherwise the ESG investment industry becomes a free-for-all and investor rights can be compromised."

Kuijpers continued: "We have a taxonomy in DWS but this EU taxonomy is about agreeing on a European standard to make Europe the most sustainable economy in the world."

She also welcomed the increasing interest that US authorities are showing in ESG.

"The Securities and Exchange Commission has also recently started to look more closely at ESG, which is an interesting development. In Europe, there is a perception the US is behind on ESG investing but the US is catching up fast. Most US asset managers have European clients so they will also have to comply with the EU Action Plan. US asset managers are now investing heavily, which is good, but European managers are still leading the pack in ESG investing."

Sustainable investment in line with ESG principles is more complex than it might seem at first glance. Europe is working its way through most of the key issues involved in the hope that the US and Asia will follow.

Kuijpers said: "The future of ESG is bright in Europe. The EU Action plan will determine how people will invest going forward and it will also drive US and Asian asset managers. With the emergence of millennials, some 93% of whom care about ESG investing, responsible investing is only going to become more important over the next 30 years."

She added: "Some people have suggested ESG investing is a fad. I can assure you this is not a fad, and it is here to stay." ■

NN IP targets ESG, tech and diversity

Two years after Satish Bapat became the chief executive of NN Investment Partners, the Dutch asset manager is working hard to make itself more agile to respond to short and longer term investment trends.

The Hague-based manager is looking in the short term to pivot to credit and demonstrate its ESG credentials. Looking further ahead, the firm has committed to encourage diversity to make it more adaptable to market conditions and use data science techniques to improve performance.

Speaking to Global Investor, Valentijn van Nieuwenhuijzen, the chief investment officer at NN Investment Partners, said the new management team brought in by Bapat has in the past two years been tracking various trends.

He said: "We have been looking closely at what is going on in the world around us from a macro-economic, technological and regulatory perspective, and what is happening in our industry. We are now in a period of low growth and low inflation, bond markets are coming off the back of a 35 year bull-run, the rise of passive investing is driving down pricing power and the growing influence of technology is everywhere. Moreover, the need for a more responsible way of investing has really accelerated and we aim to be a market leader in this field."

In the short term, van Nieuwenhuijzen said his focus has shifted to credit. "Since our asset management business originated from the insurance business we have always had a strong focus on fixed income. With the current market environment of low growth, we are seeing flows back into credit.

"We are also working on the alternative side such as mortgages, infrastructure debt and commercial real estate where regulatory changes have made it less attractive for banks to hold these assets on their balance sheets, while many insurance companies and pension funds are actually very interested in holding more of these assets," he added.

As a leading Dutch manager that can trace its roots back to 1845, NN IP has a good story to tell on environmental, social and governance (ESG). It first integrated ESG criteria in its investment process and launched its first sustainable product in the late 1990's. More recently, NN Investment Partners has developed proprietary ESG scores that it uses in its investment process.

Van Nieuwenhuijzen said: "Looking at ESG-factors is indispensable these days. We regard responsible investing as the best way to enhance risk-adjusted returns while contributing to society as whole. Also, our clients are becoming increasingly more sustainability-minded and convinced that responsible investing does not come at a financial cost.

"The evidence is piling up that integrating ESG-factors in the investment process is financially prudent and this is only adding to the demand. So we can really help to fulfil both our client's financial and sustainable objectives by integrating ESG factors into our decision making," he added.

NN Investment Partners advocates inclusion rather than exclusion (see Chart 1) but it did exclude tobacco from its investments in 2018 and restricted companies with oil sands exposure.

Van Nieuwenhuijzen continued: "Our Responsible Investing approach is not dominated by exclusion. We do exclude firms but our strategy is more about inclusion than exclusion. Engagement with companies is one of the best ways to stimulate corporate change. We want to use our expertise to set the right incentives to change behaviours in the right way."

ESG, of course, is a popular topic among asset managers but van Nieuwenhuijzen is keen to stress that there

> "Moreover, the need for a more responsible way of investing has really accelerated and we aim to be a market leader in this field"
>
> **Valentijn van Nieuwenhuijzen**

is no one universally accepted definition of ESG, rather there are many interpretations.

"Different companies have different ESG profiles so there is no one-size fits-all approach. You really have to engage in a constructive and regular dialogue with these companies to collaborate on making a change. Different types of companies have very different carbon footprints, social footprints and governance arrangements," he said.

NN Investment partners is also an active shareholder, having held over 2,000 meetings with companies (see Chart 2) and voted in some 600 shareholder resolutions in 2018.

"From our perspective, what we are looking for is evidence that firms are heading in the right direction and that their ESG scores are improving. We have noticed that most companies are open to our concerns and are willing to enter into discussions with us," said van Nieuwenhuijzen.

NN Investment Partners said it is also keen to collaborate with its peers, such as the other large Dutch asset managers, to change behaviour.

Van Nieuwenhuijzen said: "We have worked together with other investors to influence change. Last year, we worked with six other major Dutch asset managers to encourage Royal Dutch Shell to do more on their energy transition and realise their Paris goals. The group actually engaged with Shell and Shell management which ultimately led to a change in stance."

NN Investment Partners currently has three responsible investing products (see Chart 3): ESG strategies in which ESG data is embedded in investment strategies to improve risk-return; sustainable strategies that focus on identifying today's and tomorrow's sustainability leaders; and impact strategies that target companies that make a clear contributions to the UN Sustainable Development Goals (SDGs).

Van Nieuwenhuijzen added: "It is our ambition to have ESG integrated in all of our funds where relevant and currently we have ESG principles embedded in over half of our funds. We will be publishing more on this over time."

NN said one of the challenges of applying ESG strategies is the quality of the data on the underlying firm, which is magnified for a manager like NN with nearly €250bn of assets in 15 countries.

Van Nieuwenhuijzen: "Previously, a lot of ESG data was qualitative, they simply provided ESG scores but, as has been well documented, these can vary widely. More recently, we have started to work with a data broker that provides us with access to alternative sources of data on the market."

Data is key to another of NN Investment Partners' priorities, namely making the company more agile and responsive to market conditions.

"Observing these trends, we looked at ways to make NN IP more future proof to changing market circumstances and to create a more adaptable organisation," said van Nieuwenhuijzen.

"We took the decision to focus our organisation and to create room to invest in technology, data, people and the skills of the future. An example of that

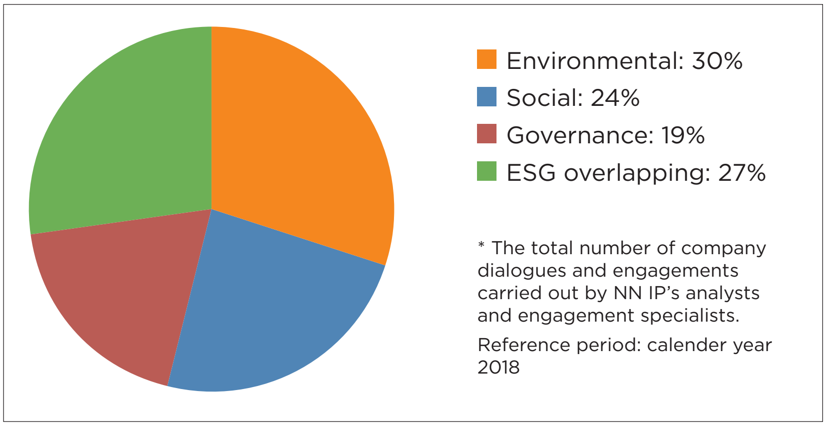

Chart 1: 512 dialogues on ESG with issuers*

Source: NN INvestment Partners Responsible Investing Report 2018

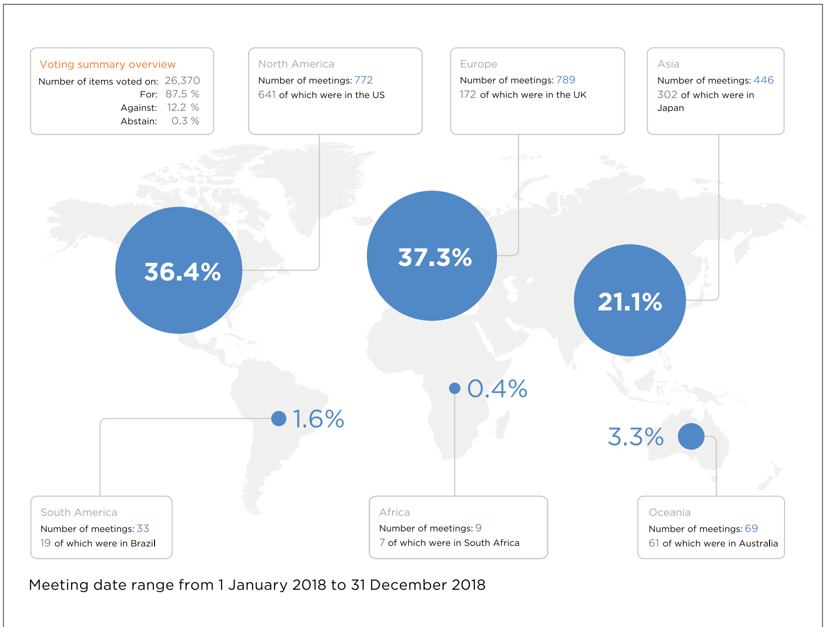

Chart 2: How and where NN IP voted in 2018

Source: NN INvestment Partners Responsible Investing Report 2018 is for instance embedding data scientists in our investment teams and setting up an Innovation and Responsible Investment Platform innovation platform. These investments strengthen our key capabilities and fund offering as they allow us to tap into new sources of alpha. We have also been working on the adaptability of the company and our investment style. We have been working on the culture of the company to make us more agile which is partly about the application of technology and the use of sentiment data," he said.

The initiative to make the company more agile is realised in two streams: the smarter use of technology, including artificial intelligence and machine learning, and employing people with differing perspectives.

Van Nieuwenhuijzen, who joined NN in 1999 when it was ING Investment management after graduating with an MSc in Economics from the University of Amsterdam, said: "On Artificial Intelligence and other technology, we have made some good steps but there is still a long way to go. In our multi-asset business, we have a long-standing history of investing in factors and we have been using sentiment data to complement our more traditional analytical tools for more than five years. The challenge now is blending fundamental analytics with behavioural analysis to generate alpha."

In its application of data analysis technologies, NN has sought to be flexible by striking partnerships such as its agreement with Big Data firm MarketPsych for the use of sentiment data, and launching research co-operations with universities like Erasmus and VU in the Netherlands, and Yale in the US.

"We have been adaptable and we are exploring partnerships in this area but we still need to make further steps. We have hired 15 data scientists. We have a central data science function but we have also embedded data scientists with all the teams, so the data scientists are working alongside the portfolio managers," said van Nieuwenhuijzen.

This hybrid approach has presented a cultural challenge to NN IP management.

"We are clear in emphasising that this is not a threat to traditional analysis, rather the data scientists can augment more fundamental analysis," said van Nieuwenhuijzen.

"It is important to stress that we combine the creativity and skills of humans and the rigour of machines so we are never going to blindly follow the technology alone when making decisions," he added.

NN is keen to explore the use of behavioural analysis to improve investment performance but is also cautious about what is an emerging analytic technique.

Van Nieuwenhuijzen: "As with all new technology, there will inevitably be problems. Machine errors in complex systems such as these will continue to happen. No matter how smart these techniques become, there will always be flaws. There are certain areas where humans are more adaptive than machines, for example humans are better able to understand never-experienced events.

"In bringing the IT side closer to the investment part of the business, we are trying to open-up our thinking to non-linear data analytics and working to digest more unstructured patterns. These techniques can be less stable but they can also create more adaptability in how you construct your investment portfolios."

NN also wants to make its investment team more flexible in its decision-making by encouraging diversity in its ranks.

"We are living in a changing and unpredictable world so we need a diversity of thinking to address that. So we are investing in hiring talent from different backgrounds. Research shows that some people are able to consistently predict market movements and those individuals tend to be those that can adapt more easily to changing market conditions. We are strongly convinced that stimulating diversity of thought and inclusion leads to better results to our clients," said van Nieuwenhuijzen.

He added: "I believe the traditional models have broken down, the period of inflation is over, and we are faced with having to identify new longer term secular regimes. This is an important cultural challenge which has seen us sponsoring diversity and bring more women into senior management roles at NN Investment Partners."

NN's commitment to ESG strategies, nascent behavioural analysis techniques and diversity should position NN Investment Partners and its management team to prosper in what will be a challenging period for Europe's top institutional investors. ■

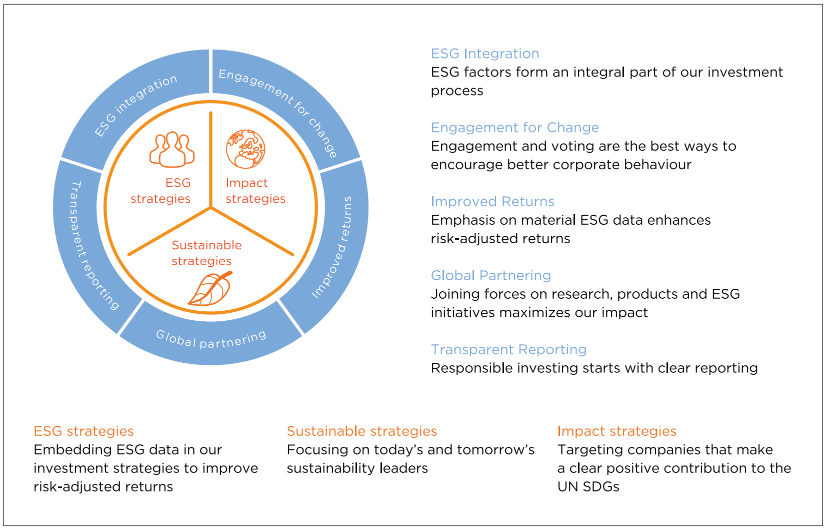

Chart 3: NN IP Responsible Investing Framework

Source: NN INvestment Partners Responsible Investing Report 2018

Qatar's local managers to generate inflows

By **Matt Smith**

Qatar's buoyant asset management sector has shrugged-off the ill-effects of the political and economic blockade against the country, and although the industry is small relative to GDP, homegrown innovation is convincing more institutional and wealthy investors to use professional money managers instead of investing directly themselves.

Qatar's assets under management (AUM) will increase to $7.8 billion by 2020, Henk Jan Hoogendoorn, Managing Director of Qatar Financial Centre's (QFC) Financial Sector Office, told Global Investor. Only around 15% of this is invested in public mutual funds, with the remainder consisting of segregated mandates, mostly from institutional investors.

Mutual funds largely invest in Qatari equities, while a few invest in fixed income, some in GCC equities and others in assets such as real estate. Subscribers include both individual and institutional investors, but Qatari nationals have long preferred to trade local equities themselves, buoyed by a market index that has gained 95% over the past decade.

"While performance track records are impressive for most local managers, an asset manager's value proposition is not something Qatari investors have historically bought into," said Akber Khan, Senior Director of Asset Management at Al Rayan Investment in Doha. "I'm glad to say this is beginning to change."

Dr. Ataf Ahmed, Head of Asset Management at QInvest, arrived in Doha in 2010 to find that clients typically had little portfolio diversification, with investments typically skewed towards the Middle East and North Africa and concentrated in a few asset classes.

"People would keep a big part of their wealth within Qatar and the GCC and give a small chunk to asset managers based in the West – there wasn't much interest in deploying assets outside the region," said Ahmed. "As time has gone on, the investor base has become more educated about the need to diversify geographically and sectorwise."

"While performance track records are impressive for most local managers, an asset manager's value proposition is not something Qatari investors have historically bought into. I'm glad to say this is beginning to change."

Akber Khan, Al Rayan Investment

Landmark moments for the industry were the launch of its first two exchange-traded funds (ETF) - QETF and QATR - in March 2018. Amwal manages QETF, while Al Rayan manages QATR, which is the world's largest Sharia-compliant equity ETF with net assets of more than $150 million.

The ETFs each have a total expense ratio (TER) of 50 basis points, which is low compared with other single-country emerging markets ETFs. The pair are Qatar's largest two mutual funds by AUM.

"Globally, ETFs have obviously been extremely successful, but in the region numerous previous attempts at launching ETFs had been pretty unsuccessful," said Khan.

Learning from these difficulties, Qatar's regulators and asset management companies collaborated over several years to create the region's most comprehensive and sophisticated ETF rule book, also creating the supporting infrastructure ETFs need to thrive. This includes the licensing of liquidity providers, covered short selling and allowing 100% foreign ownership; stock lending and borrowing is expected to follow.

Political Ructions

The shock imposition of a political and economic blockade on Qatar in June 2017 by its former allies Saudi Arabia, Egypt, Bahrain and the United Arab Emirates was an existential threat to the world's largest exporter of liquefied natural gas (LNG).

Nearly two years later the impasse continues, but Doha has adapted admirably, and the country's economy is well adjusted to the new normal. That is also true for its asset management sector, which continues to invest regionally.

Unlike most other emerging markets, dollar investors face no currency risk in Qatar, nor current account or fiscal deficits. Qatar's sovereign balance sheet is among the strongest globally, so has a higher credit rating than many advanced economies while also providing investors with emerging-market levels of growth.

These factors have propelled a stock market rebound, which has surged 33% from November 2017's seven-year low. Qatar first allowed foreign investors to buy local stocks in 2005, steadily increasing foreign ownership limits partly to achieve MSCI emerging market status in 2014.

Investment Strategy

The various FTSE and MSCI index upgrades and changes to stock weightings of the past few years – both in Qatar and other regional markets such as Saudi Arabia and Kuwait - have been a major factor influencing Qatari managers' investment strategy.

"Across the region, they've provided substantial liquidity and material share price moves in markets where the economic outlook and liquidity haven't always been great," said Al Rayan's Khan.

"If you're able to understand the factors shaping these moves along with the timing and direction of corresponding flows - which most non-professional investors would struggle with - these trades can provide a significant source of alpha."

In 2018, around eight of the largest Qatari stocks doubled their foreign ownership limits, attracting an estimated $2.5 billion of net inflows due to the stocks' increased weightings on MSCI and FTSE's indices.

> "As time has gone on, the investor base has become more educated about the need to diversify geographically and sector-wise"

Dr. Ataf Ahmed, QInvest

> We take a bottom-up approach to investment. We hold stocks for a long time, so like to think of ourselves as investing, rather than just speculating
>
> **Ibrahim Masood, Aventicum Capital Management**

"These are very material events for markets like ours," said Khan. "There's a limit to how long these index trades will continue, but they have been important drivers for the past several years."

Gulf markets are less efficient than developed markets and many of their emerging market counterparts, and while transparency and disclosure levels are lower on average, that offers greater potential for finding undervalued companies.

"Transparency is often weak, which offers a significant advantage to investors who are on the ground and have access to multiple data points, not just those provided by the companies themselves. Sometimes the company will only provide quarterly financials." said Khan.

"We can piece together information to understand underlying trends. On-the-ground investors are also usually far more persistent than global investors who might swing by for a day or two every six months – we can persevere until we get proper access to management of a target company or its competitors."

Al Rayan manages the Gulf's largest sharia-compliant equity fund taking a medium-term perspective. Over the last seven years, this absolute return fund has delivered a return of 46%, while for comparison S&P's sharia-compliant GCC index is up about 10% over the same period.

QInvest, meanwhile, launched the open-source, sharia-compliant QINVEST Managed Account Platform (QMAP) in 2012.

"A lot of people were interested in offering sharia-compliant investments but didn't want the hassle of offering these products themselves, so our idea was to use QInvest's infrastructure and partner with external conventional asset managers who would then work in a sharia-compliant manner," said QInvest's Ahmed. "We could then bring best-in-class expertise – people who excel at delivering alpha – to the sharia space."

QInvest offers a combination of in-house and joint-venture products and services.

"The thesis is simple – anything where we have a competitive advantage in doing it ourselves, we will do in-house, for anything else we'll find the right investment partner," said Ahmed.

QInvest manages its Middle East and Turkish equity and debt investments itself, with teams in Doha, London and Istanbul. The company also partners with other asset management firms to offer US, European and global equities.

The company has around $1 billion in AUM, of which around 80% is debt and equities, with the remainder derived from alternative income strategies such as equipment leasing.

In Qatar, around 30% of assets are held by large-scale institutions such as government-related entities, while around 40% comes from banks and insurance companies and 30% from family offices and corporations.

"A lot of people made significant gains on Qatar equities last year – our thesis was that the market was significantly oversold in the second half of 2017, with equity prices not reflecting the economy's resilience," said Ahmed.

This year, investors have opted to take some profits, reducing their Qatar equity exposure.

"Earnings haven't expanded enough to maintain dividend yields, so people have rotated out of Qatar equity into stocks in other countries or more defensive asset classes," added Ahmed. "I see that as a positive move and we still see a decent amount of interest in local stocks."

Aventicum Capital Management, whose major shareholders are Qatar Investment Authority and Credit Suisse, has four business divisions.

Chief Investment Officer Ibrahim Masood heads the investment team in the Doha office, which invests in MENA and frontier market equities and launched operations in 2013. Its emerging market credit unit is run from London, while its European equities business and European real estate business is based in Switzerland.

"We invest primarily in the Middle East and North Africa, plus select frontier markets such as Sri Lanka, Pakistan and Bangladesh. The idea is to have an exciting investible universe from a structural, long-term perspective – not just a few years, but decades," said Masood, whose clients are institutional investors.

"We take a bottom-up approach to investment. We hold stocks for a long time, so like to think of ourselves as investing, rather than just speculating."

Masood said Egypt was promising from a macroeconomic perspective, with his company's allocation to Cairo-listed stocks considerably larger than those of a passive fund, for example.

"We don't follow benchmarks, so our allocations are the result of our bottom-up approach and sometimes don't correlate with the sizes of the different regional markets," added Masood. "It depends on the opportunities at any given time." ■


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The 4x4 Areas for Fast-Tracking Corporate Sukuk Growth

By **Bashar Al Natoor,** Global Head of Islamic Finance, Fitch Ratings

The sukuk market has the potential to grow considerably in the near to medium term as key Islamic capital markets develop. Four key areas need to be harnessed to fast-track corporates as a significant player in the sukuk and the debt capital markets, namely:

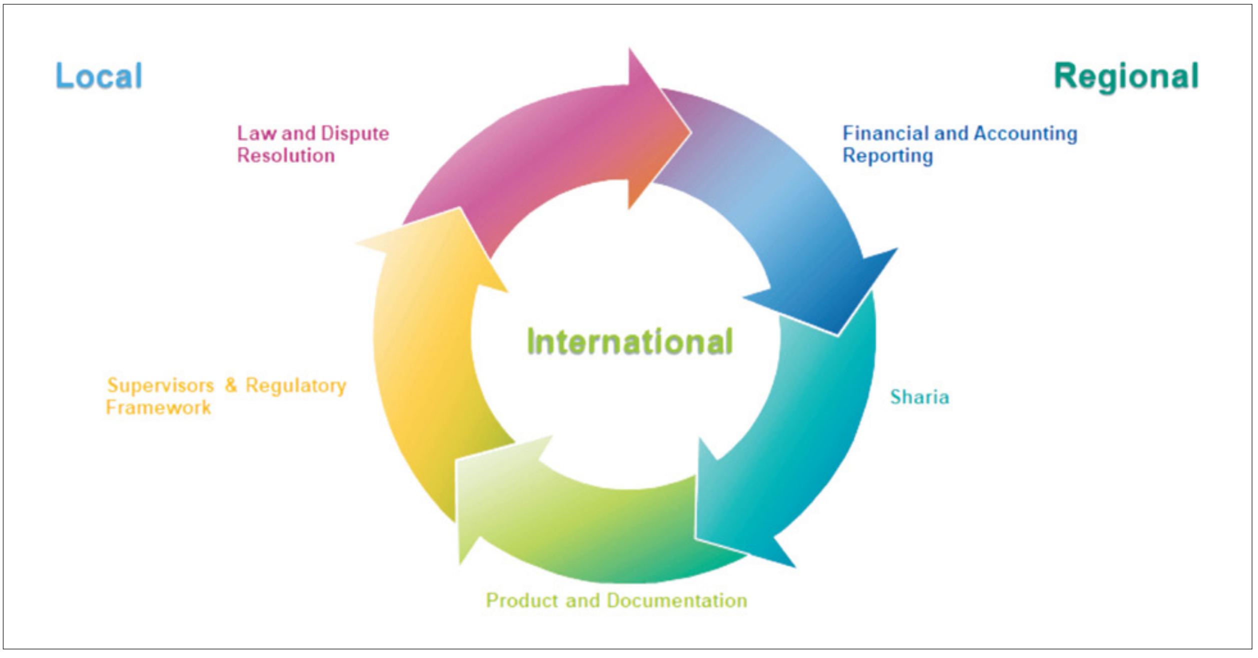
1. **Cost and time optimisation**
2. **Incentives**
3. **De-sophistication and standardisation**
4. **Education**

Processes and execution costs need to be optimised

Shifting corporate funding in the Gulf Cooperation Council (GCC) region from bank loans to sukuk and bonds is seen as more costly and time consuming. Banks in region are also primarily funded by deposits from customers and governments rather than capital markets, and we do not expect this to change significantly in the short to medium term. This is because many potential issuers see the economics for issuing sukuk or even bonds as less advantageous than taking out a loan from a bank. Therefore, the regulations, processes and costs for sukuk and debt capital markets in general need to be optimised so that they can compete with traditional loans.

Issuers need incentives to enter the debt capital markets

Issuers must be given monetary and technical incentives (apart from tax-neutral policies) to make sukuk an attractive alternative for them. Such incentives are already implemented by Indonesia, for example, where it provides lower registration fees for corporate sukuk issuances.



Islamic Finance Standardisation Framework Demystifying Islamic Finance Standardisation an Harmonisation
Source: Fitch Ratings

Sukuk must be de-sophisticated

Sukuk standardisation remains elusive on local, regional and global level due to its complexity, as can be seen in the chart below. Therefore, reducing the sophistication of sukuk, which is currently a key obstacle preventing or limiting the desire for capital users, is critical.

Issuers need to be educated about sukuk's benefits and risks

Capital market education may seem like a low priority, but it is actually key to removing an important barrier to growth in the corporate issuing sukuk market. This can be done by conducting robust public awareness and education programmes that inform issuers about the benefits and risks of funding from capital markets, sukuk and other sharia-compliant products as an alternative to bank loans.

The same holds true for investors. There are four key issues that need to be resolved that could boost growth:

1. Build and develop the relatively small and shallow local and regional institutional investors, such as pension funds, Takaful/insurance companies and mutual funds (with the exception of Malaysia that has a more developed market).

2. Establish greater confidence in the regulatory/legal framework, as it is currently yet untested and under developed. The adoption and implementation of effective and efficient regulatory and legal structures are key catalysts to bolstering the Islamic finance industry, and are crucial to creating reliable investor protection.

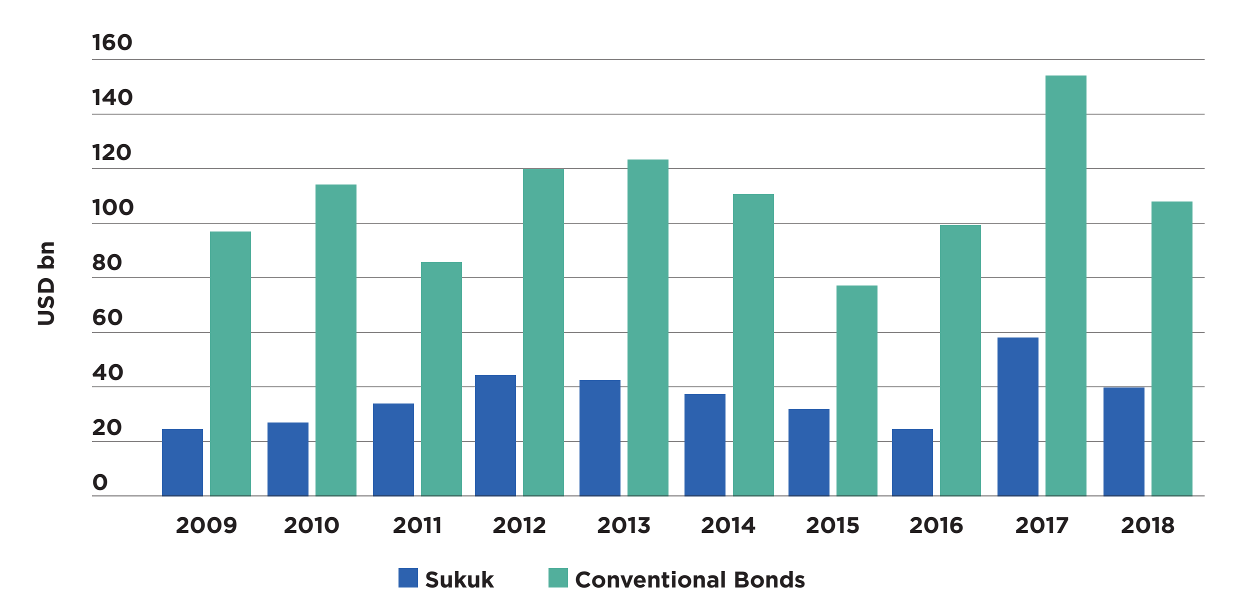
3. Addressing the fact that sukuk in many countries still lacks the scale and mass of issuances to meet some of the international investors' prerequisites, like the limited secondary market liquidity, either due to sukuk structure tradability issues or buy and hold inventories, or the under-developed diversification of products.

4. Build a strong regional track record in economic sukuk performance and then increase investor confidence in key areas, such as risk levels, ease of access, cost and transparency, to attract international investors.

The return to debt issuance in 2018 by many governments (although not at the same level of 2017) helped to encourage growth in the private sector's sukuk market. In addition, efforts to establish a basic sukuk market ecosystem and enhance infrastructure and processes for corporate debt issuance are making sukuk more attractive for corporate and financial institution (FI) issuers.

Conclusion

As capital markets in the10 largest sukuk countries become more efficient, sukuk could become an attractive alternative of funding for corporates. Total Islamic finance assets are projected to grow by 58% to $3.8 trillion in 2023 from $2.4 trillion in 2018. By adequately addressing the 4 x 4 keys to unlocking growth - cost optimisation, incentives, de-sophistication and education – the global corporate sukuk market should be able to reach its full potential. ■



Sukuk and Bond Issuance

Data covers GCC, Malaysia, Indonesia, Turkey and Pakistan Issuance with a maturity of more than 18 months.
Source: Dealogic, Fitch Ratings

A fresh look at lending

Market experts met in London in April to discuss the current trends shaping the securities lending market.

Chair: Where did the bulk of revenues come from in 2018 and what have market participants experienced so far in 2019?

DataLend - 2018 was a fantastic year from a revenue perspective. Securities lending gross revenue was up 8% over the previous year to around $10 billion, the best since DataLend began tracking the market. Average on-loan global balances totalled $2.4 trillion, split between $1.3 trillion fixed income and $1.1 trillion equity, while the supply of inventory was around $19.5 trillion on average for the year.

Key drivers of revenue were equities in EMEA and Asia, up 21% and 30% respectively. Revenue in the US was slightly down in absolute terms by approximately 6%, but the sheer volume on loan in the US meant the market still contributed half of the global revenue haul. Fixed income revenue in EMEA was up 14% with average on-loan balances of around $400 billion as demand for HQLA continued.

Close to two-thirds (65%) of the global average on-loan balances are on a non-cash collateral basis. That's probably not a surprise in EMEA and Asia; however, we are also seeing more focus on non-cash in the US Finally, for 2018, out of the $19.5 trillion in assets 42% were held by mutual funds and UCITS, plus 25% by pension plans and 15% sovereign wealth funds.

We witnessed a slower start to 2019 in first two months versus the same period in 2018, largely due to average loan values and average fees falling in sovereign debt in the Americas and EMEA. This could be the result of year-end pressures to reduce balance sheets or the dollar-yen basis trade being closed out or being re-rated down into the New Year. Despite activity declining in the first couple of months, the market stabilized in March and returned to the same average on-loan balance seen at the end of 2018. Additionally, we've seen corporate bonds on-loan balances up about $10 billion in the first three months of the year alone.

Asian equities are also leading the charge with increases across the number of securities on loan, the value and the actual revenue generated. Japan alone has seen an on-loan value increase of 14.5% to $134 million and a whopping 34% increase in total equities out on loan in this first couple of months.

Among small and nano caps, we've seen the number of securities with average fees of greater than 10,000 basis points double in Q1. The previous year it was 28, while at the start of this year there were 57 unique securities out on loan trading in this range, so that's an extremely hot sector.

Chair: Brian, how has RPMI Railpen's lending programme evolved in recent times?

Brian Willmott: In 2018, we reappointed BNY Mellon as custodian to our portfolios. As part of these negotiations a full review was undertaken of our

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- **Brian Willmott,** Vendor Management and Stock Lending Oversight Manager, RPMI Railpen
- **Yannick Lucas,** Independent Consultant
- **Stephen Kiely,** EMEA Head of Sales & Relationship Management, Securities Finance, BNY Mellon Markets
- **Dan Rudd,** Executive Director, Agency Securities Lending. J.P. Morgan
- **DataLend**
- **Hadley Pritchard,** Executive Director, Securities Finance, Global Markets, ABN AMRO
- **Bill Foley,** founder, SecFinHub
- **Andrew Neil** – Global Investor (chair)


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"There was a clear path to start with HQLA assets - strong demand for those - and build out the fixed income platform, followed by equities before looking at more complex collateral optimisation as well as other treasury functionalities"

– Yannick Lucas, Independent Consultant

discretionary securities lending mandate also operated by BNY Mellon. We had an existing programme that had been in place since 2005 but had not been reviewed for a number of years and revenues had become static. Given the significant changes seen in the securities lending market over recent times, we recognised an opportunity to expand the programme. We wanted to align the programme with how the industry has evolved, in a way that mitigated risk and enhanced returns. Consideration was given to the risk profile of the programme, current trends driving revenue returns, operational controls, programme governance as well as the financial strength of BNY Mellon. We now have a fully indemnified programme which meets our original objectives.

Chair: Yannick, can you describe your involvement in a recent securities lending project?

Yannick Lucas: I was brought in by a large asset manager (over £500 billion of AUM) to map out the road for it to be able to lend its assets again. We started by doing a feasibility study around the potential revenue and extra alpha that could be generated for the funds, as well as comparing an outsourced model to building an in house trading desk. Both the CIO who was the driving force behind the initiative and the CEO shared our view that given the scale of the undertaking and the vision of what the desk could look like, once it was lending its fixed income assets as well as its equities, it made sense to do an internal build. There was a clear path to start with HQLA assets - strong demand for those - and build out the fixed income platform, followed by equities before looking at more complex collateral optimisation as well as other treasury functionalities. We looked at BlackRock as a case study, it's no secret they made close to £600 million in 2017 from their securities finance business.

The global head of fixed income really wanted this to be done. I can still remember his words: "In a low yield environment and ever increasing pressure on management fees, every basis point matters!". I also believe it's part of the fiduciary duty of asset managers to try and generate as much alpha for their funds. The world has changed since the last big financial crisis in 2008, bank balance sheets have become much stronger, and as long as you are rigor-

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> "The market is always moving and firms need to change. That approach will reap rewards in terms of revenue"
> – Dan Rudd, J.P. Morgan

ous with your counter-party selection there is an extremely low probability of any losses occurring, especially with the over collateralised nature of the lending. All in all, this painted a fairly good picture from a risk perspective. The project involved looking at all the operational requirements, IT infrastructure, risk management, legal contracts, choosing which system to use, and regulatory and compliance issues. We made a lot of friends on the journey with the likes of Pirum who were instrumental when dealing with the operational aspects, JP Morgan were simply outstanding and very much engaged throughout the whole project, on the collateral management side BNY Mellon helped us get comfortable with all the processes, and there are many others who helped make this such an interesting and exciting venture. The programme went live in December with the first set of funds, all UCITS with institutional funds set to follow. When most projects seem to involve a degree of cost cutting or headcount reduction, building out a new revenue stream and helping portfolio managers maximise their returns really was inspiring from start to finish.

Dan Rudd: It's an unusual scenario for a large investment house to suddenly start a securities lending programme off their own back. What we've seen is the reverse trend, whereby firms continue to outsource activity and have greater dialogue with their providers. The cost of keeping this business going is increasing all the time and amount invested in technology is going up. Securities lending does generate a lot of revenue and agents don't take too much - the majority ends up back with the beneficial owners, with protections included. Fundamentally everyone has choices, that creates opportunities, competition. It's important funds review their approach to securities lending. Brian's work at RPMI Railpen is a great example of bringing someone in-house who knows about the industry, partnering with an agent, then adapting and developing a programme to acceptable risk parameters. The market is always moving and firms need to change. That approach will reap rewards in terms of revenue.

Stephen Kiely: Lending in-house makes sense for some large asset managers. However, I'm seeing more beneficial owners look at the regulatory requirements and ongoing management of their securities lending programme and deciding to outsource. At the same time, some smaller funds are weighing up whether to remain active in this market. The regulatory requirements of SFTR, for example, and the responsibility of getting it wrong weighs heavily on people. Most providers, including BNY Mellon, will still be here post SFTR but there is evidence the market is being driven into the hands of the bigger players and some of the smaller participants are coming out. Ultimately that's not good for competition and for the market in general, even though large players may be a net winner in the short-term.

Bill Foley: I think we are beginning to see the buy-side taking a more forward-looking view when considering their securities lending options as the market evolution gathers pace and technology changes the landscape. This may result in them opting for different and/or multiple routes to market as these options open up and will for many reawaken and inform the insourcing vs outsourcing debate. If we consider the recent trends in securities lending, the decision Yannick describes perhaps seems quite an unusual one. However, I sense that they have taken a forward-looking view of their securities lending options; the current market offerings, and their own abilities and requirements and very much taken a "blank sheet of paper" approach. Their conclusion is the right one for them. However, it's wrong to generalise when talking about beneficial owners and their choice of route to market because each is unique. There is of course huge variation in size and type of assets available to lend as well as differing regulatory considerations. Additionally, there will be individual risk appetites and revenue opportunities and of course variation in their ambitions: what they are looking to achieve from their programme.

Beneficial owners are ever more analytical and therefore more informed when considering their options and are less likely now to run through an RFP process every X number of years just because that's what they are required to do. Lending is higher profile; the available options are increasing and the selection process is more demanding. As a result, agent lenders are having to work harder to win and retain business. For them it's more difficult and competitive than it used to be, and they are really being held to account in terms of performance and service. This means that they in turn are having to become more selective in deciding what constitutes an attractive client. Less attractive lending clients – where the revenue is marginal or perhaps where the operational impact may be burdensome for the agent – will likely see this reflected in the pricing proposal.

Hadley Pritchard: As Yannick's been proving, it is still possible for an asset manager/owner to run their own desk. Yannick's work and the company's decision is good because if nothing else it disturbs the water. Clearly the technology, systems and data are all available which gives added comfort to the fund managers about what's happening. That said, there is an element of being too small to run securities lending by yourself. A benefit is to be able to reach out to a firm and say, "What is it that you're looking for?" There is value without having to go through an agent lender. For the purposes of speed, agility let's say, if firms are out there then bespoke trades could be done that are not just about revenue, because the business isn't just revenue-driven anymore, it's about metrics and behaviours.

Yannick Lucas: I am a fan of both routes. Agency lending brings great value to many, but in the case of the asset manager I was working for it made sense to go in another direction. Over the next year or two other firms will be re-examining their lending activities in order to reduce costs. I already know of a large UK asset manager who is simply looking at whether they should have an internal trading desk. In my opinion it's a matter of scale but even undergoing such exercises can only lead to a reduction in fees from existing agent lenders and custodians who are obviously keen to retain the business. So, taking a closer look is a win/win for any asset manager.

Brian Willmott: We have no current plans to internalise our securities lending programme. Given the programme's size it is unlikely this would be commercially viable. Significant costs for set-up, ongoing administration and investment in systems are likely to far outweigh the benefits. And this is before we even consider the current regulatory change headwinds.

Bill Foley: With technology an increasingly important facilitator, we may see increasing numbers of beneficial owners opting for multiple routes to market – in order to optimise their lending programme if this suits their portfolio and profile. Technologically, the marketplace looks set to evolve over the next three to five years in a way we haven't seen

before. Technology adds further options to beneficial owners when they're considering how they participate in lending and other securities finance activities. We're moving away from the days of a siloed approach where the lending oversight team, treasury, collateral and repo desk didn't take a joined-up view of asset and collateral deployment. Firms are looking at their inventory and taking a much broader view of what the most efficient, cost saving or revenue generating use is.

Those that are already lending in-house will be looking at SFTR, CSDR etc and considering the cost of running and maintaining a programme versus outsourcing it. And of course, should an investment house such decide further down the line to get some heavy lifting done by outsourcing part of their activity to someone else, they can do so. It's all about beneficial owners balancing out their programme requirements and restrictions and delivering the best result within the selected parameters. For example, if utilisation is important to you and you want to capture as much revenue as possible from your GC assets, you may consider that you are best served by outsourcing to an agent who will undertake this high-volume activity in exchange for appropriate fees. The decision is all about the value that you get from your agent, and to date, that value has been largely unquestionable because securities finance is a clunky old business and there's lots of heavy lifting to be done. However, from a post-trade perspective some of that heavy lifting might be lighter in a few years thanks to improved technology.

Chair: Which types of funds are keen to engage and who remains on the side-lines?

Stephen Kiely: Passive managers looking for alpha and the insurance companies who have P&L targets to meet - these are the types of participants we've seen coming into the market. The pension funds of this world are here to look after their pensioners and do so conservatively, but there is a realisation that you need to make long assets sweat, otherwise you're leaving money on the table. To say, 'This is our house view for the next ten years, fifteen years,' is a dogmatic view, when securities lending should be constantly reviewed because the market changes far more frequently than it used to. Clients are more aware of the data, its uses and who is providing the data. Beneficial owner education has improved markedly.

Yannick Lucas: One of the determining factors of choosing the in-house model was to allow for their portfolio managers to be as nimble and reactive as possible to market conditions. As an example, on one occasion we received an email from a borrower who knew we had a specific asset and was particularly keen to borrow it in return for a considerable profit. At the time, the asset manager wasn't set up to lend, and the thought process was, 'Would we have received that email if we had used an agent lender? How reactive could we have been?' The view was that the trading desk would be able to react very quickly to such an enquiry and therefore maybe be able to capitalise on that information.

Stephen Kiely: It's not just about the lending, certainly there's been an increase in people saying, 'Lending may be my main driver but it's not everything, I'm also looking for margin financing, I'm also looking for you to help me when I need liquidity and when I've got excess liquidity.' If you're an agent lender who can provide these services, then you'll be okay, because this is going to be a trend going forward. If agent lenders don't adapt, it could potentially drive the bigger players directly into the arms of the borrower community, especially the big investment banks or prime brokers.

Yannick Lucas: Some market participants are still adamant they don't want to get involved in securities lending because they don't want to help hedge funds short the market. And whilst I understand the principle behind this, the market is so mature nowadays that the shorts will still happen, however, by not participating in lending programs portfolio managers may not benefit from such knowledge and position themselves accordingly. Isn't that what they get paid to do? Bottom line is that in such a competitive environment every bit of information is key.

Chair: How are investors using data in the securities lending market?

DataLend: We're seeing funds that are on the sidelines and ones already actively lending looking at "what if" scenarios. For example, data is being used to forecast the potential additional returns from tweaking non-cash collateral schedules. DataLend Portfolio was released in 2016 to provide beneficial owners direct insight into their agent lender's (or lenders') performance. In conjunction with beneficial owners and agent lenders, we formed standardized peer groups to evaluate performance on a like-for-like basis. Data is also being consumed in different ways. Historically, much of the information would have been sent in data files and produced in the odd report; now, our API allows beneficial owners to take our data into their in-house systems and run their own algorithms to see what potential returns can be generated.

A lot of our focus over the last two years has been working with beneficial owners to help them understand the risks and rewards in the securities lending market. We see funds that will only lend out intrinsically and funds that lend out as much as they can to generate revenue. We also see a strive for automation: Gone are the days where a locate list would come in and it was simply the quickest finger first to get the business. We definitely see data educating and fuelling the changes in the way that people are trading, that's for sure. In addition, the oversight on the programs has grown. Oversight is daily; it's almost getting to real time as beneficial owners want to know where their securities are, what they're out at and who they're with every day.

Dan Rudd: The way in which data is used in this market has moved onto the next level. Portfolio managers are trading funds on a day-by-day basis, they want data to know what's being shorted in the market and they're using data to influence their core trading activity.

Chair: Do beneficial owners view pledge collateral structures as a useful alternative transaction type?

Brian Willmott: We are in discussions with our service provider regarding pledge. We have made no firm commitment either way, however we will not be an early adopter in implementing pledge. If it is evident that our revenues are being impacted negatively by not participating in pledge we will review this with our supplier and trustee. We will just wait and see what the impact is and react accordingly.

> "If it is evident that our revenues are being impacted negatively by not participating in pledge we will review this with our supplier and trustee. We will just wait and see what the impact is and react accordingly"
>
> – Brian Willmott, RPMI Railpen

Dan Rudd: Clients who are early adopters of pledge are seeing better rates and better utilisation. In a rising market borrowers have taken balances off so there are less shorts in the market, therefore there's been less focus on capital resulting in a temporary drop in demand for pledge. We'll see that turn around. The securities lending market is fickle, it goes one way one day, it'll go the other way the next. If you haven't got pledge approved as another alternative you're then going to lose out. It's all about flexibility to maintain and grow stable balances.

Stephen Kiely: Pledge is having an impact on our programme already. We released our pledge documentation last year, which is our own interpretation separate from ISLA's. We have a critical mass of clients signed up, representing over half of our supply. Within two weeks of going live with pledge, we had significantly increased our incremental balances- not converting transfer into pledge, but increasing utilisation. That will not continue forever because pledge will be the new normal at some stage, but at the moment, if you can get out in front there are substantial uplifts to be made both in terms of utilisation and spread. Hopefully we'll get to a stage where funds who are prohibited from taking pledge collateral, such as UCITS, lobby their regulator to try and get this approved as part and parcel of their activity.

Yannick Lucas: Pledge and SFTR are the two big talking points this year. There will be a clear benefit for both borrowers and lenders to change their legal agreements and include pledge structures going forward. The demand is there form the big banks as this helps them address liquidity ratios, so why should lenders not capitalise on this as well. Matthew McDermott at Goldman Sachs has been a pioneer in this space along with JP Morgan and ISLA. At some point pledge will become the new normal, but for a lot of people there is still a lot of work that needs to be done by their legal teams to work on new contracts.

Stephen Kiely: Exclusives have gone out of fashion over the last few years. Hadley, given the pressures on the market, if ABN AMRO were to find a client who was big enough, RWA friendly and accepts pledge collateral, do you think you'd be more inclined to get involved in some sort of exclusive arrangement with them?

Hadley Pritchard: We used to have large exclusives. My feeling is that on the back of something like CSDR, exclusives will become more important for providing your client with added protection. There could also be value in looking at exclusives, particularly non-main index.

Chair: Is Europe's Central Securities Depositories Regulation (CSDR) a negative for the stock loan business?

Bill Foley: Most of the conversations around CSDR suggest this is going to be bad for the lending community. This is because of the view that you may have lent or repo'd a security which you subsequently sell, and you are unable to get the security back. Consequently, your sale fails, and you may be looking at a buy-in or possibly a fine. This does not fall in line with claims that securities lending for example causes "minimal impact on your day to day activity" and if your lending activity is marginal, you may decide it's not worth the hassle. Anyone participating in lending should consider sensible buffers – how much of a security you hold back from lending. Buffer management is a key part of what an agent lender does within their programme, particularly of course for less liquid or less widely held securities. An agent needs to have both depth and breadth of supply, in order to deal with client sales. If you only have one client holding a security, even if it's a large position, caution needs to be exercised because when they sell it, you're out, it's all gone and under CSDR you may have a problem. This is where buffers are critical.

Dan Rudd: CSDR should lead to more settlement efficiency. Beneficial owners, providing they gets sale instructions to their agent on time, will face no charges. The cost, if there's a buy-in/fail cost, is either the agent's responsibility or the borrower's responsibility. However, the reality is that even if there isn't a penalty for a client in terms of failing their trade, there's a reputational risk. That's something JP Morgan takes very seriously as an agent lender. In my view CSDR will be a short-term headache for everyone, but it should create efficiencies and hopefully, as a result, more borrowing demand.

Chair: What action are beneficial owners taking regarding Securities Financing Transactions Regulation (SFTR) reporting? Have we entered a test phase?

DataLend: Yes, most definitely. We have partnered with Trax on an SFTR solution. The feedback we are getting is that most agent lenders will offer some reporting, that's for sure. Potentially, we could see more firms direct trades to platforms like NGT. If you trade on NGT you get SFTR data fields automatically, including the unique transaction identifier (UTI), so more trades may go down this route. As far as EquiLend goes, we have a working SFTR product that beneficial owners can drop trades into at the moment and see data through the dashboard. The service is in place and is currently being tested by clients well in advance of the SFTR go-live date in 2020.

Yannick Lucas: In a world often described as the last bastion of the wild west, SFTR is seen as a very welcome source of transparency. And that can only be a good thing. Yes it may be overly cumbersome in terms of the number of fields that need to be reported, and yes there are increased costs for all associated to complying with this new regulatory requirement. At the time of the project at the asset manager, we had met with a number of providers for an SFTR solution, and the costs had not yet been mapped out. No doubt for some smaller players the increase in cost may force them to rethink their strategies for others it will simply have to be an increased cost associated to doing their day to day business.

Stephen Kiely: I haven't seen an RFP, whether consultant-led or direct from a new client, for 9-12 months that hasn't had an SFTR question. Mostly clients just want to know that someone's going to take care of SFTR reporting whether that's an assisted reporting type scenario or whether we're going to put the reporting together for them. We're going to offer both to our clients.

Brian Willmott: Our agent lender has the required data, so we are looking to our agent lender to source a solution. We are having ongoing discussions with our agent lender regarding all SFTR requirements and are aware they are developing their solution in conjunction with a leading market vendor. We are waiting to see the full details of their service offering, however

> "We may see increasing numbers of beneficial owners opting for multiple routes to market"
>
> – Bill Foley, SecFinHub

recognise that it is likely that they will, at some point, engage with us regarding the associated cost implications of SFTR reporting.

Stephen Kiely: When you lend through a large agent lender who is a big custodian, you're used to them reporting for you. They might expect or assume the custodian is handling SFTR. That may be the case but funds can't outsource the responsibility of SFTR in the same way you can't completely outsource risk management. Beneficial owners have to be comfortable with their providers' capabilities. They have all the data but they're not necessarily going to have it in the way that the regulator or a repository wants to receive it.

Bill Foley: Is SFTR a good thing? There's no doubt that we'll be in a better place down the line. For those of us who in our introductions alluded to just how long we've been in this market, SFTR shouldn't have been too much of a shock when announced. This industry has been revelling in its opacity for a long time. SFTR - despite all the bumps in the road, the workload, the cost and potential for some to exit the market - must be a good thing for the industry. However, I would agree that it's a little more complicated than it needs to be. This is perhaps understandable considering the ambition is to regulate a market of this scale and complexity for the first time. What I think will be interesting is what happens post April 2020 Many feel that the level of reporting will likely be reduced at some point post implementation and that may be the case. What will the regulatory response be once they have this mountain of SFTR data? We may have to wait and see while they digest it. As I mentioned, I do think SFTR is a good thing for the industry, and it's simply bringing securities finance in line with others. I would caution however, that for regulators, having a huge amount of information doesn't mean they've necessarily got the right detail or can interpret that information fully. If after two or three years of looking at the data regulators aren't satisfied, the answer is unlikely to be less reporting or less data.

Dan Rudd: We've yet to see the full cost of SFTR. The reality is that beneficial owners are on the hook, they can't pass on the accountability, but agent lenders can do all the heavy lifting. This is why we've all partnered with various firms to make an easy solution for clients. I would suggest that the appetite across the beneficial owners to get heavily involved will be very limited, although there are going to be some who will want to.

Hadley Pritchard: Much depends on one's client base. My concern is the rules become too onerous to implement financially for small and mid-cap participants on the borrowers side to take part in this business anymore. They either need somebody who can 'sponsor' them in a way, through for example delegated reporting, becoming a 'regulatory parent', or they could drop out. According to ISLA, 80-90% of trades settle is this market. That's not such a bad ratio. My opinion is that CSDR rules are designed, in part, to improve and boost use of Target2Securities. With SFTR, it's the first time probably any industry has really been through this amount of detail in what it does, but ultimately we fully support transparency because it can only add confidence.

Chair: Is voting and ESG more broadly becoming more important to securities lending desks?

Dan Rudd: It's a mixed bag. We have certain clients who absolutely are adamant they want to vote on everything. You're never going to really change that. What I have seen, noticeably in fact more recently, is clients becoming very mindful about their governance. It is our responsibility as agent lenders to help them get their assets back. If they want them back, we'll recall them, it's not an issue whatsoever that's just the way we operate. But more are asking 'Is there a meaningful reason for getting the securities back for voting at this point in time?' That's a newer trend. It used to be, 'We absolutely want it back all the time whether a voter or not,' now they're really starting to have this conversation in terms of, 'Well actually, if I recall I'm losing out on quite a bit of revenue, and actually am I doing the right thing for my underlying customers and investors by recalling the stock?' That's a good step forward. Technology is out there and can be used in terms of ranking critical votes that are coming up. It's about using that technology to start recalling securities on an automated basis as required.

Hadley Pritchard: A developing challenge for the next few years is the push towards sustainability/ESG. ABN AMRO is very keen on its sustainable banking programme. There's a lot to be worked on in this space, and securities finance is one of those areas that's right in the middle of the whole developing discussion.

Chair: What is your outlook for the business?

Bill Foley: Although it doesn't feel like it sometimes, we are coming out of a post-crisis regulatory implementation era. During this period, for many participants there have not been the resources, either physical or financial, to cope with this heightened level of compliance and still focus on product development or technological advances – meeting the next regulatory deadline took precedence. For me, technology is going to drive and be the focus of the next important phase. Apart from all the good practices that we have been able to focus on like automation, STP, efficiency and cost reduction, I believe that we will see the actual landscape start to change and the nature of both participants and participation will alter. We'll see some of the traditional value chain participants evolving to meet that change, some will come under pressure and there will be new routes to market that will become available. Digitisation and tokenisation are already starting to find applications within securities finance, and I believe this phase will be a huge agent for change.

DataLend: There's more demand across the whole financial market for our data, especially amongst the beneficial owner audience, whether it's from asset managers, sovereign wealth funds or insurance companies. I expect that to continue. It's well documented that EquiLend has the leading products in the market from trading to post trade and data analytics. The last point I'd like to mention is that with all the data available, AI and machine learning will provide greater efficiencies across trading, post trade and analytics. While the business will remain relationship focused, it will be driven by data and automation.

Stephen Kiely: It's been a pretty uneventful Q1, the market is relatively flat and there doesn't seem to be much out-

"It's been a pretty uneventful Q1, the market is relatively flat and there doesn't seem to be much outperformance but there are no shocks either from a revenue perspective"

– Stephen Kiely, BNY Mellon Markets

performance but there are no shocks either from a revenue perspective. All things being equal, the demand for HQLA has softened, there's been spread compression and people are not earning the revenue they were last year. This quarter, probably our best stock in Europe has been Wirecard in Germany, and it is no coincidence it's the one with the short selling ban. Southern Europe Financials remain active. Any stocks associated with the motor industry tend to earn significant revenue from time to time. Outlooks for future performance have to be caveated because we're currently in a period of increased geopolitical uncertainty. Most hedge funds have de-levered and are waiting to see what will happen. Later this year we could be in a no-deal Brexit scenario with a US-China trade war at full throttle and then things could look very different.

Dan Rudd: Those that invest in this business will reap the rewards, those that use the data in the most effective, efficient manner and are easiest to deal with are always going to do well. The traditional form of securities lending is always going to be there, but things are changing. Alternative financing solutions are emerging. Being able to work through all scenarios and provide the infrastructure - in other words be a one-stop-shop - will be the way forward really to enhance this business.

Hadley Pritchard: The business changes all the time, which is why it makes for an interesting place to work. Daily or monthly you come in and there's something new, whether that be a new start-up lending desk or changes around collateral, you're always learning. I don't think securities finance desks are just channelled into borrowing names by market, for example, everybody's responsible for balance sheet, everybody understands what RWA means to their business and they understand so much more than just borrowing and lending. So, it's a good place to be, and with all the changes – CSDR, SFTR – these current challenges will create further insight in to what the client needs to stay relevant and lucrative so that they continue to think this is a good space to be in.

Brian Willmott: Our mission is to pay members pensions securely, affordably and sustainably. So, how does securities lending fit into that mission statement? Securely - we need to be aware of the risks and we have to manage and oversee those risks effectively. Affordably – do the levels of revenue generated outweigh the costs of appropriate governance and the associated risks of securities lending? Currently we view this favourably, but we have to be mindful of changes. We have to continually monitor our programme parameters to ensure they are aligned to our business objectives and the evolution of the securities lending market. Finally sustainably – we invest to generate strong returns over the long term. We therefore have to consider the long-term interests of our stakeholders. Our securities lending programme could generate significant returns compounded over the long-term which in turn can fund many members pensions. ■

The benefits of compliance - cost reduction, collaboration and best practice

By **Val Wotton,** Managing Director, Product Development & Strategy, Derivatives and Collateral Management, DTCC

As we enter a new phase of regulatory reporting implementation, in the form of the Securities Financing Transactions Regulation (SFTR), it is important to assess the wider benefits that post-crisis regulatory mandates have delivered to the industry and to consider what the future state of reporting could look like as firms continue to need to reduce costs, improve operational efficiencies and ensure compliance.

The cost of compliance has driven the need for market participants to do more with less in all areas of post-trade. As such, the 'build it yourself' logic has begun to decline in popularity and in its place has risen fruitful collaboration between market infrastructures, as well as partnerships between market infrastructures and regtech/fintech companies. These collaborations have been driven in most part by the need for market infrastructures to provide greater value to their clients, in order to assist them with regulatory compliance, reduce their costs and enhance operational efficiencies.

An example of this can be found in helping market participants to prepare for the upcoming SFTR, due to enter into force in the second quarter of 2020. Currently firms are exploring ways to access, validate and obtain the data required to meet SFTR reporting obligations. As well as addressing the data requirements of SFTR, firms are also beginning to recognise how important the pre-matching process will be to the successful implementation of the reporting mandate. Although SFTR does not require the pre-matching of trades before reporting to a trade repository, the scale of the regulation's requirements means that firms are incentivised to minimise the number of breaks by pre-matching data where possible to enable the generation and sharing of Unique Trade Identifiers (UTIs).

In response to these types of needs, DTCC has formed partnerships with 10 established providers offering solutions in support of SFTR, to enable mutual clients to prepare for the upcoming regulation. For example, our latest partnerships with Xceptor and Droit will enable firms to enrich, normalise and validate data before submitting it to a trade repository, and apply reporting eligibility logic respectively, before submitting transactions to a trade repository. These types of partnerships are enabling the development of 'platforms' or end to end solutions which can automate processing earlier in the trade lifecycle and improve the quality of data and are therefore helping clients to make further efficiency gains and achieve greater operational risk reduction. Without the regulatory mandates of the European Markets Infrastructure Regulation (EMIR), Dodd Frank and latterly, SFTR, these types of collaborative initiatives may not have existed.

Many firms have taken the opportunity to go far beyond approaching regulatory reporting compliance as simply a box ticking exercise. The forthcoming SFTR is a good example of this. If firms take a more strategic approach to addressing the requirements of the regulation they can ensure increased levels of pre-trade matching, less trade fails and more collateral efficiencies, which will result in significant benefits such as balance sheet optimisation. Furthermore, by adopting a strategic approach and working with independent, collaborative providers, firms can respond to any further regulatory change at less cost. The EMIR REFIT and the CFTC's re-write of current derivatives regulations under Dodd Frank -- both of which are being undertaken to simplify some of the existing requirements -- are good examples of where market participants can rely on the tools and services from solutions providers instead of having to amend their own systems to respond to these individual changes, which can often lead to increased costs and compliance risk.

Additionally, by working together, not only to offer enhanced reporting services but also across jurisdictions, a community of users begins to form which can help to drive data standardisation and harmonisation on a global scale. As a result, this will help regulators to more effectively analyse the data that is reported according to various regulatory mandates and in turn identify the build-up of risk in the financial system.

Post crisis regulation has required enormous efforts on behalf of the industry and much progress has been made in terms of market participants' ability to comply with the new rules. While this should be applauded, it is also useful to recognise the positive ripple effects of regulation such as cost reduction, collaboration and a best practice approach in order that these positive trends continue to dominate the market infrastructure space long after post crisis reforms have been implemented. ■

High earners - Asia's sec lending markets

Specials lending has become a key driver of increased lending revenues in Asia Pacific over the last few years, boosted by a variety of regional and national developments. By **Paul Golden.**

Any discussion of specials lending in Asia tends to focus on the high percentage, specialised markets such as Korea and Taiwan. Korea remains a significant driver of securities lending returns in Asia, but in recent years this has been due to a small number of stocks commanding very high fees.

Hong Kong is still a key contributor of returns in the region with its links to China, but once again the smaller number of stocks means revenue can fluctuate from year to year.

Experienced observers stress that the largest market in Asia – Japan – should not be discounted. "Japan is a perennially strong market due to its size and the number of securities," notes Andrew McCardle, head of EquiLend Asia. "While specials do not make up as large a percentage of securities finance trades in this market, the significant volumes mean it is a great source of securities lending activity in the region."

In the more established Asian securities lending markets of Japan and Hong Kong, specials lending typically accounts for 10-20% of all transactions by volume in HSBC's client programmes, whereas in less established markets (South Korea, Malaysia, Taiwan) such strategies form a much higher portion of an overall programme, representing as much as 80% of total volume.

"We see increased opportunities and anticipate this to continue as wider Asian cash markets mature and in the corporate event space due to pricing arbitrage opportunities between the market and offer prices for M&A, capital raising and tender offers," explains Reshad Mullboccus, acting co-global head of securities lending at HSBC Securities Services.

Additionally, some Asian security classes are exposed to regional or country-specific factors that are not so relevant elsewhere creating opportunities for lenders, such as directional interest in the gaming industry due to China's slow approval of games for domestic release.

"In Hong Kong, we saw renewed confidence in the local and mainland Chinese economies early in the year, which led to an increase in IPO and secondary capital activity," he said. "In the second half of 2018, US/China

> "Japan is a perennially strong market due to its size and the number of securities
> Andrew McCardle, head of EquiLend Asia"

Andrew McCardle, head of EquiLend Asia

trade tensions and rising US interest rates resulted in increased market volatility and consequently increased directional trading opportunities for hedge funds."

In Japan, activity was boosted by corporate deal flow with standouts including Takeda Pharmaceutical's record $62bn acquisition of UK-listed Shire and Softbank's spinoff of its mobile business, which raised $23.5bn. Other themes included increased corporate governance concerns and accounting scandals such as those at Suruga Bank and real estate brokerage firm Tateru, as well as increased manufacturing competition from China, which negatively impacted some leading Japanese consumer electronics firms including Sharp.

South Korean lending demand was once again strong due to renewed interest in the heavy industry and shipbuilding sectors which struggled with declining orders, adds Nizami. "Biotech and pharmaceuticals also generated demand on speculation of industry consolidation and concerns the sector was overvalued."

Another reason for the strong focus on specials in Asia is the current state of the global economy. China, Korea, Japan and Taiwan tend to be strongly impacted by rapid changes in both global trade patterns and broader economic issues. Escalating trade tensions between the US and China, rising interest rates in the US, renewed concerns over the state of the Chinese economy and the ensuing market volatility have all provided additional themes for specials lending in the region.

"From a trader's perspective, Asia is typically a fundamental equity long-short playground with lending fees ranging from 15bps all the way up to 1000bps and above. So 'specials' lending (defined as fees trading higher than 200bps) is prevalent across all active markets with the highest intrinsic fees most often seen in Japan, Taiwan, South Korea, Malaysia, Thailand and Hong Kong," explained Paul Solway, head of securities finance Asia at BNY Mellon.

Equity lending fees depend heavily on the liquidity and accessibility of lendable pools, which generally tends to be tighter in emerging markets. Many Asian markets are still considered emerging, having relatively smaller, riskier or more illiquid capital markets than their developed peers.

"In Hong Kong, we saw renewed confidence in the local and mainland Chinese economies early in the year, which led to an increase in IPO and secondary capital activity"

Zubair Nizami, BBH

Therefore if capitalisations are smaller, lending pools are less, which results in an imbalanced supply-demand. "Combine this with the additional rules and regulations that are often seen in nascent markets and fees naturally become higher as sourcing 'borrow' for shorting and other fundamental trading strategies becomes more difficult," said Solway.

He notes that in 2018, Japan, Hong Kong and South Korea generated some of the highest lending revenue returns in the region. "Such returns often follow the 80/20 adage but in some cases as much as 90% of the revenue will come from 10% of the portfolio, especially when securities are trading at 1000bps and above."

While fundamental interest in specific companies like BYD (Hong Kong) and Celltrion (South Korea) still dominates, the market has also seen the emergence of a number of thematic drivers including technology in Tai-

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>
> **Paul Solway, BNY Mellon**

wan, bio-pharmaceuticals in Korea and a lithium-related focus in Australia.

Although supply and demand dynamics are the cornerstone to securities lending pricing and therefore the incidence of specials activity, numerous other factors can influence whether a stock is deemed to be 'special'.

The trend in Asia over recent years has been for specials revenue to become a more important revenue-generating factor within securities lending portfolios, driven by borrowers more efficiently managing capital consumption challenges and navigating balance sheet capacity, explained Northern Trust's head of capital markets Asia Pacific, Mark Snowdon.

"Demand for specials is influenced by a multitude of micro and macro factors, meaning that one region will not always be more reliant on specials lending than another," he observed.

"Recently, there have been numerous specials globally that have contributed greatly to securities lending returns. In Asia, emerging market activity makes up a strong element of the revenue that is generated from the region - on a normalised basis these markets can yield more attractive returns than the US or EMEA."

> Asian stock markets tend to be more volatile than Eurozone markets, which results in a greater demand to borrow securities, while bespoke rules and regulations found in many of the smaller Asian markets (for instance, no-fail rules) result in supply/demand dislocations that ultimately create a unique focus for both borrowers and lenders.
>
> **Jim Moroney, eSecLending**

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That is the view of Jim Moroney, managing director, global head of equity trading and corporate bonds trading at eSecLending, who notes that Taiwan has been a growing source of lending returns as demand continues to grow in that market.

"Furthermore, Japan has enjoyed a resurgence with more specials and a few mergers that have created new opportunities for lending returns," he said.

Greater intra-day market volatility across the Asian markets is a result of global trade links and the geopolitical climate which leads to greater event driven and directional short opportunities in the region.

"We see examples of this regularly with Hong Kong, which remains a strong lending market for us," said Simone Broadfield, APAC head of agency securities lending at BNP Paribas Securities Services.

Shorts can become crowded very quickly due to the limited depth of lendable supply in Asia, even in developed markets such as Hong Kong, so demand from borrowers often outweighs supply and assets become hard to borrow at a relatively quick pace.

"There are growth opportunities

> "Demand for specials is influenced by a multitude of micro and macro factors, meaning that one region will not always be more reliant on specials lending than another"
>
> **Mark Snowdon, Northern Trust**

across the Asia Pacific markets with South Korea continuing to lead securities lending returns based on individual fee levels," added Broadfield.

Wayne Burlingham, fellow acting co-global head of securities lending at HSBC Securities Services, observes that IT, industrials, telecoms and utilities account for an increasing proportion of the overall Asian specials space with the IT sector alone contributing a quarter of all Asia specials balances, particularly in Japan.

Equity specials in the technology space (MLCC, DRAM) were very relevant in 2018 given the downturn from 2017, when there was a significant appreciation of valuations, explained Solway.

"Asia has many downstream suppliers for big tech companies like Apple and these suppliers - especially in Korea and Taiwan - were impacted by Apple's performance, with borrow volumes that are often seen as indicators of future trouble upstream."

Telecoms is driving large fundamental borrows with the sector facing challenges related to competition and pricing, but Solway refers to a more prominent impact on specific markets like Malaysia (DIGI, MAXIS) and Singapore (StarHub, SingTel).

"More often than not, Asian key specials have their own unique reasons for their respective borrow interests," he concludes. "Good examples of this include BYD (earnings), Sharp (corporate restructuring), Take da (Shire deal), Cyberdyne (long term fundamental short) and Zhaojin Mining (sector short)." ■

Volatility, Technology and Indemnification

Don D'Eramo, Global Head of Securities Finance, RBC Investor & Treasury Services (RBC I&TS), talks about the three big trends with *Global Investor/ISF.*

"Daily pricing on either side of the trade, supported by an enriched information set, means that beneficial owners are in a position to make decisions more quickly and increase their revenue generating opportunities"

What has recent market volatility meant for securities lending activity?

Historically, periods of elevated volatility -- such as 2015 and 2016 -- were associated with increased demand for securities lending. However, this trend appears to be weakening. The most recent period of volatility at the end of 2018 and through to early 2019 has actually been characterised by a subdued securities lending market with low M&A activity.

Lending volumes in North America and Europe continue to fall slowly, while those in Asia-Pacific, depending on the country, are between flat and slightly increasing. Amidst this changing context, the one constant is that clients are pro-actively searching for new opportunities. In this respect, discussions have gravitated towards lending assets that are less liquid, as well as emerging market assets. At the same time, an increasing market demand for HQLA assets continues.

Beneficial owners' growing awareness of available lending opportunities has been facilitated by a steady process of education. This has continued in parallel with efforts by agent lenders to increase their knowledge of client portfolios and align securities lending programmes with the needs of clients.

How is technology increasing the visibility of opportunities to beneficial owners?

Beneficial owners are looking for timelier and more granular information to identify the precise nature and location of their liabilities. Here, technology has become a crucial tool. The diverse range of performance and visualisation metrics is encouraging internal discussion within clients. As beneficial owners increase the size and sophistication of the teams responsible for overseeing their securities lending programmes, more accessible, detailed and responsive information has become increasingly important to them.

Daily pricing on either side of the trade, supported by an enriched information set, means that beneficial owners are in a position to make decisions more quickly and increase their revenue generating opportunities. The potential revenue in such opportunities may be considered "latent revenue": embedded in the portfolio but out of view. By leveraging technology to deliver data to clients, we are uncovering

opportunities that were previously hidden, turning latent revenue into reality. Examples include the ability to provide information on the potential revenue gain from a particular voting decision, the removal of a restriction on a stock or part of the portfolio, and the inclusion of securities that are not yet contained within the securities lending programme.

Transforming latent revenue opportunities into real opportunities means extending the scope of the agent lender's analytics across the client's entire portfolio and mining data that is not held within the existing securities lending programme. This requires aggregating information in a way that beneficial owners can leverage and implementing processes to facilitate new opportunities when they are identified.

To put these elements into place, clients require technology connectivity and a next generation trading platform that supports a high level of straight-through-processing. This helps ensure that counterparts make RBC I&TS their first call for targeted availability and, when they do, we present a clear picture of what is available. RBC I&TS' technology complements ongoing education initiatives and our longstanding experience, allowing clients to choose from revenue opportunities that best fit their performance and risk objectives. We support beneficial owners in an established lending mandate model, as well as those interested in an opportunistic transactional approach.

How is clients' growing focus on risk management shaping what they expect of a securities lending programme?

As clients consider how they can empower their internal teams to seek out latent revenue in times of increasing pressure to generate additional alpha, they require the underlying reassurance that risk is being properly managed. A key tenet of the RBC I&TS approach is a robust and holistic risk management strategy. We look at the loan and collateral book through different lenses such as notional stress and credit limits with VaR.

Working with a lender to understand the impact of collateral decisions on the ability to generate revenue is an important role of the agent lender. Clients should have an open discussion on their acceptable collateral base and the related risks. For example, are they comfortable with the inherent risks of including triple B rated corporates?

What trends are you seeing regarding indemnification and why?

Clients are placing an increasing value on indemnification. The first thing to note here is that RBC I&TS is prudent in how we price indemnification for clients. We place significant emphasis on communication with our clients to understand what they expect and examine the range of options available to them. For those clients who consider indemnification particularly important, broadening the range of admissible collateral can be a valuable exercise since it extends the potential revenues available to them, making indemnification more affordable. This is another example of how communication and transparency can help shift a sub-optimal securities lending programme to an optimal one.

"We place significant emphasis on communication with our clients to understand what they expect and examine the range of options available to them"

In future, what do you think will become increasingly important to beneficial owners?

Fixed income continues to be the asset class where demand is increasing at the fastest rate, and opportunities revealed by regulatory collateral requirements are expanding for clients with the appropriate profile. At the same time, regulators in North America and Europe are making the banking industry more robust: the increasing requirements around capital ratios have made a substantial difference, increasing demand for Level 1 or HQLA (including fixed income) assets compared to other securities, notably equities. Going forward, these pressures are likely to cause term lengths to extend beyond the current typical periods of between three and six months.

Emerging markets are also more likely to feature in future discussions. As we expand our presence into these markets, the contrasting settlement regimes have not hindered the development of a lending market. Nevertheless, there is plenty to stay on top of, if we are to continue to support our clients' operations in these markets. For example, ensuring pre-notification of sales and a properly functioning settlement process are essential. High levels of performance in these areas mean that our clients are unlocking value with increasing speed. The volumes are still small, but they are growing.

The third area worth highlighting is the expansion of institutional clients into the alternatives space. Currently, we are mostly in the discussion phase and not calling it a trend. However, this is likely the early signal of a shift, spanning the more sophisticated institutions and a growing number of large public pensions, as well asset managers across the range of geographical regions that we serve. These conversations share an expressed desire to move beyond the traditional long-only lending paradigm into levered or 130/30 type strategies, which include a borrow component. For example, in Canada, which is at the forefront of this shift, many larger clients and prospects are looking for a combination of lending and borrowing. In addition, levered financing structures have traditionally been concentrated in the prime space but this is shifting. Our preferred solution is now more nuanced than the traditional prime approach. ■

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SUB-CUSTODY GUIDE 2019

HANDBOOK OF MARKET TRENDS & SUB-CUSTODIAN PERFORMANCE IN EVERY MAJOR MARKET

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SUB-CUSTODY GUIDE – METHODOLOGY

All users of the services of sub-custodians (agent banks), from broker-dealers to global custodians, are asked to rate their performance.

Respondents are asked to rate sub-custodians in all countries in which they operate. The performance of sub-custodians is rated separately in each country.

Respondents are asked to rate their sub-custodians across 12 service categories (see list below). Respondents are permitted to rate up to 10 sub-custodians in each country.

For each country there will be two tables: unweighted and weighted. The weighted table allows for assets under custody (AuC) as well as how important the respondents consider a certain category to be.

Unweighted tables

For each country, all valid responses for each sub-custodian are averaged to calculate an unweighted score.

Weighted tables

Step one: weighting by assets under custody

Weighted versions of all unweighted tables are produced.

First, an allowance is made so that a greater weight is given to the views of larger respondents, defined by their AuC.

Respondents are asked to choose a band that reflects the size of their AuC in billions of US dollars. The boundaries of each band are determined by the AuC of respondents to last year's survey. They are chosen so an approximately equal amount of respondents fit into each band.

A weighting is attached to each band as follows:

<$100 billion	0.6
$100bn to $200 billion	0.8
$200bn to $500 billion	1
$500bn to $1000 billion	1.2
>$1000 billion	1.4

Each respondent's unweighted rating of a sub-custodian is then multiplied by the appropriate weighting. For example, if a global custodian with assets under custody of $567 billion gives a sub-custodian an average score of 6.7, its contribution to the weighted score is 6.7 x 1.2 = 8.04. This weighted rating is then averaged with all other respondents' weighted ratings.

Where a figure for assets under custody is not disclosed, a default weighting of one is assigned.

Step two: weighting by category importance

Respondents are asked to rank the importance of each of the service categories. These respondent rankings are then averaged. These average ranks are then used to create a weighting for each service category, which theoretically could range between zero and two but will depend on the actual responses. The average weighting is one to preserve comparability with unweighted scores.

For clarity, if on average respondents consider 'relationship management' to be the most important category, it will be given the greatest weighting when calculating scores in the weighted by importance tables.

Qualification

Qualification is on a country-by-country rather than regional basis. To qualify in each country, a sub-custodian needs to receive a minimum of three responses per market, or two responses in emerging and frontier markets.

If a sub-custodian is rated multiple times by the same respondent firm in the same country then the ratings will be averaged and will only count as a single response for the purposes of qualification.

CATEGORIES

Sub-custodians are rated across 12 main categories, of which some are divided up into sub-categories. The 12 main categories have equal weight. Where a main category is split into sub-categories, an average of the sub-categories is taken to produce the score for the main category.

1. **Settlement**
   - Efficiency of pre-settlement matching and reporting
   - Failed trade management
   - Timeliness, accuracy and completeness of reporting
   - Competitiveness of cut off times
2. **Safekeeping**
3. **Income collection**
   - Timeliness, accuracy and completeness of notifications
   - Timeliness, accuracy and completeness of confirmations
4. **Corporate actions**
   - Timeliness, accuracy and completeness of notifications
   - Timeliness, accuracy and completeness of confirmations
   - Competitiveness of response cut off times
5. **Client service**
   - Quality of subject matter expertise
   - Responsiveness and effectiveness of enquiry management
   - Availability and calling frequency
6. **Reporting capability**
   - Flexibility of delivery channels
   - Quality and timeliness and of SWIFT and other reporting
7. **Tax reclaim services**
   - Solicitation of timely tax documentation
   - Quality of reporting
8. **Market information**
   - Relevance of marketing information
   - Timeliness of market information
9. **Relationship management**
   - Understanding of a client's business needs
   - Ability to set up new products when requested
   - Quality of subject matter expertise
   - Responsiveness and effectiveness of enquiry management
   - Availability and calling frequency
10. **Securities lending fail coverage**
11. **Regulatory expertise and capability**
12. **Product development and innovation**

Americas

ARGENTINA

Unweighted	Score
Citi	5.40

Weighted	Score
Citi	6.20

Against a backdrop of economic uncertainty, the Argentine Stock Exchange has been working on various initiatives to boost market volumes and access.

One example is the creation of a new securities lending programme covering shortage of securities and short selling in order to provide the market with greater liquidity and dynamism, observed Ingrid Collazo, head of securities services at Citi Direct Custody and Clearing Argentina.

"Capital market reform was approved in May 2018 within a broad Financial Productive Law that also updated other laws with the objective of giving incentives to issuers and investors and to expand the capitalisation of the market," she said.

This reform removed the registration requirement for foreign investors to allow them to vote at shareholder meetings, continued Collazo. "The tax reform approved by the end of 2017 eliminated CGT on equity for transactions registered in unauthorized markets and all these initiatives led to the re-classification by MSCI of Argentina to Emerging Markets status."

Also during 2018, Citi led a market initiative to extend the DVP environment available in MAECLEAR, the clearing house for fixed income instruments, to also include DVP settlement for OTC transactions between custodians.

On the macro-economic side, the country suffered a currency depreciation of almost 100% and an agreement was signed with the IMF to extend a stand-by programme for $57 billion, Collazo noted. As a result, the government committed to target a 0% fiscal deficit for 2019 and the Central Bank announced a new monetary framework implementing FX intervention zones.

BRAZIL

Unweighted	Score
Citi	5.30
BNP Paribas Securities Services	5.10

Weighted	Score
Citi	7.49
BNP Paribas Securities Services	5.15

2018 marked the first full year of operations for B3 (Brasil, Bolsa, Balcão), the Brazilian market infrastructure provider that was established in March 2017 following the takeover of settlement and clearinghouse Cetip by the securities, commodities and futures exchange BM&FBovespa. The enlarged company's services span clearing, settlement, depository and registration activities.

According to B3's 4Q18 report, its strategic priorities include a customer-centric approach to the development of its core business areas across cash equities, derivatives, fixed income markets, data and analytic services, strengthening its operational and risk management capabilities, as well as its use of cutting-edge technology. In March 2019, B3 announced that it had completed the acquisition of a 75% stake in BLK Sistemas Financeiros, which develops trading screens and algorithms for brokers and institutional investors. The agreement gives B3 the option to purchase the remaining 25% stake in the company from December 2023. Over the last 12 months, B3 has also introduced new data products, such as historical data and analysis tools to aid decision making.

In addition to the diversification of its product portfolio and development of its service offerings, the exchange has been working with market participants to move to a T+2 settlement cycle for equities. Andrea Cattaneo, head of Brazil at BNP Paribas Securities Services, said: "Recent moves to integrate Latin American markets and unify infrastructures are making the area more user-friendly than ever for non-resident investors. Following the path of most of Europe and the US, Brazil is moving soon to a T+2 settlement cycle for the equities market. The main drivers we see are: counterparty risk reduction; greater efficiency in post-trading processes that reduce costs; operational risk reduction and increased availability of capital. The Brazilian market is undergoing certification phases and results are under evaluation. The go-live date is targeted at May 27 2019, subject to approvals from local regulators (Central Bank of Brazil and Securities and Exchange Commission)."

Roberto Paolino, head of securities services at Citi Brazil, added: "This change will reduce investors' exposure to risk, improve their capital efficiency and enhance the settlement's system resilience.

"Additionally, the market infrastructure players are working towards the implementation of a securities lending programme for government bonds as well, as currently securities lending is only available for equities in the Brazilian market. This new product offering will provide more liquidity to government bonds and increase the flexibility for non-resident investors.

"On the regulatory perspective, non-resident investors are currently undergoing a re-registration process to comply with new requirements introduced by the Brazilian Tax Authority to local regulations. In respect to these requirements, Citi Brazil has been actively engaged in discussions with local regulators through ANBIMA to postpone the re-registration exercise deadline and to simplify the registration requirements for non-resident investors."

CANADA

Unweighted	Score
CIBC Mellon	5.71
RBC Investor and Treasury Services	4.98

Weighted	Score
RBC Investor and Treasury Services	5.88
CIBC Mellon	5.80

Canadian markets are anxiously scanning for indications of whether the country is heading for a major downturn, although the chief executive of the Bank of Montreal is confident that the risk of a recession in the coming year is relatively low.

Shane Kuros, chief business development and product officer at CIBC Mellon, noted that market participants and regulators continue to place a premium on governance, control and prudent risk management. Focus areas include mitigating cyber risk (including technological developments across cloud computing, distributed ledger/blockchain activities and fintechs), vendor management and supply chain oversight, as well as affirming and strengthening resiliency.

In January 2019, the Office of the Superintendent of Financial Institutions (OSFI) published an advisory stating that federally regulated financial institutions or FRFIs must address technology and cyber security incidents in a timely and effective manner. Policies and procedures for dealing with such incidents relating to their operations should include timely notification of the OSFI.

For the purpose of this advisory, a technology or cyber security incident is defined to have the potential to - or has been assessed to - materially impact the normal operations of a FRFI, including confidentiality, integrity or availability of its systems and information.

A FRFI must notify its lead supervisor as promptly as possible, but no later than 72 hours after determining that a technology or cyber security incident meets the incident characteristics in the advisory.

Canadian regulators have introduced these new requirements for certain domestic federally regulated financial institutions to ensure that technology and cyber security incidents are addressed effectively, confirmed Kuros.

"At CIBC Mellon, we see growing client interest in our ability to affirm our strength, governance and preparedness, for example through our client governance programme which supports our clients in demonstrating to their stakeholders the oversight they have over our firm," he added.

Kuros observed that global investors and market participants in Canada also continue to seek efficiencies and stronger controls through operational transformation, which includes outsourcing additional activities and exploring new opportunities to capture and engage with data.

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CHILE

Unweighted	Score
Citi	4.98

Weighted	Score
Citi	6.29

The Santiago Stock Exchange, or Bolsa de Comercio de Santiago (BCS), trades equities, fixed income and international securities, money market instruments, and certain derivatives. The Contraparte Central de Liquidación de Valores (CCLV) acts as the central counterparty for equities and derivatives and as the clearinghouse for bonds, money market instruments and stock repos. Settlement and custody services are provided through the country's central securities depository, Depósito Central de Valores (DCV).

In 2018, the exchange celebrated its 125th anniversary and DCV marked 25 years since its founding. Fernando Yáñez, chief executive officer at DCV, said: "DCV has modernized the securities market, eradicating practices that remained unchanged for decades, and providing the possibility to operate with securities in secure and efficient environments. In these 25 years, the company has always been proactive in the search for new technologies. In light of this, we are currently engaged in the most important project to modernize our systems, in order to include international standards and best industry practices, thus providing a renewed and certainly better service experience."

Chile's CSD has partnered with Nasdaq to overhaul its technological infrastructure. The new platform aims to bolster DCV's settlement, custody, corporate event management, and registry capabilities, providing coverage across multiple currencies and all types of securities.

The Santiago Stock Exchange is also taking steps to deploy advanced technologies. In June 2018, it launched a blockchain application for its securities lending system. This is the first blockchain application to be introduced at the exchange, which plans to utilize the technology to improve other operational processes through a collaboration with IBM.

José Antonio Martínez, chief executive officer at the exchange, stated: "Given that technology and fintech services rendered to the local financial market's institutions is a strategic pillar of the Santiago Exchange, innovation undoubtedly resides at the core of our development. The first blockchain technology live application enables us to bring a world-class solution and a leading positioning in the region, which we hope turns into a real contribution for a better development of the financial and capital markets, bringing operational efficiency and facilitating the execution of our clients' businesses."

> **Chile's CSD has partnered with Nasdaq to overhaul its technological infrastructure. The new platform aims to bolster DCV's settlement, custody, corporate event management, and registry capabilities, providing coverage across multiple currencies and all types of securities.**

COLOMBIA

Unweighted	Score
BNP Paribas Securities Services	5.84
Citi	5.01

Weighted	Score
Citi	7.27
BNP Paribas Securities Services	4.89

Newly-elected president Iván Duque Márquez took office in August 2018, pledging support for economic growth and business-friendly policies. Citi's Armanda Mago, head of securities services, LATAM, ex. Brazil and Mexico, said: "2018 was crucial for Colombia as it was a Presidential election year. From an industry perspective, the outcome meant that the team appointed by the new government to regulate the capital market was maintained, leading to an expectation of continuity in terms of initiatives to develop the market.

"Initiatives aiming to reduce costs for investors while increasing their revenues, such as agency lending, are included on the agenda of regulators, who are open and willing to listen to and implement benefits for investors. This initiative, specifically, grants access to investment opportunities that foreign investors did not have before."

The country's exchange, Bolsa de Valores de Colombia (BVC), merged with the Colombian central securities depository, Deceval, in December 2017. As a result, it now offers clearing, settlement and custody services as well as managing trading and recording

systems for the equities, fixed income, derivatives, FX and OTC markets. BVC also holds a stake in the Colombian central counterparty Cámara de Riesgo Central de Contraparte (CRCC) and FX clearinghouse Cámara de Compensación de Divisas (CCDC).

The exchange is due to extend its central counterparty (CCP) mechanism to include equities through the CRCC. It is also set to align with other markets in Latin America and beyond by moving to a T+2 settlement cycle for equities by the close of 2019.

Mago added: "Colombia has been looking to implement international standards and replicate good practice witnessed in other markets across the globe. For instance, the rollout of CCP for equities, scheduled for September 2019; the change in settlement cycle from T+3 to T+2, which should be effective once CCP is implemented; and remote voting, which continues to be on the regulatory agenda for 2019, are some of the topics under discussion".

MEXICO

Unweighted	Score
Citi	5.32

Weighted	Score
Citi	7.24

Mexico, the second largest economy in Latin America, faces a complex backdrop, marked by a more challenging external outlook and domestic uncertainty regarding the direction of macro policy under the new government.

The country voted in 2018 to shake up the political status-quo and choose Andrés Manuel López Obrador as the new President, also giving his movement a majority in Congress that is very close to having the power to change the Constitution.

According to analysts at Santander, investors' confidence in the new government has been undermined since mid-October 2018, especially after the cancellation of the construction of the new Mexico City airport following a public consultation (a third of the airport had already been built).

Today, institutional ETF allocations continue to rise throughout Latin American, reaching 13% of all invested assets during 2017, according to Greenwich Associates, which represents a nearly two-fold increase year on year. Mexico maintains front-runner status, with ETFs averaging roughly 40% of the country's total share volume, compared with 25% in the US.

In February 2019, the finance committee of Mexico's lower house of Congress approved a draft law by the ruling National Regeneration Movement (MORENA) that it says will give pension funds more flexibility in how to invest their portfolios.

Specifically, the corporate governance of Pension Investment Companies (Siefores) will be replaced by Pension Investment Funds (Fiefores).

Fiefores will have access to greater investment opportunities than Siefores had, including the ability to carry out securities lending transactions and repurchase agreements.

In addition, the funds will be authorized to receive cash deposits in the form of collateral from their counterparties derived from repo agreements, securities lending and derivative financial instruments.

The vehicles will also be able to invest more money in foreign stocks and carry out short transactions with securities used as collateral under pledge agreements.

In January 2019, the International Quotation System (SIC) - a platform run by Indeval, Mexico's central securities depository (CSD) used by Mexican investors to buy foreign stocks - picked Citi as the single custody provider for US assets.

PERU

Unweighted	Score
Citi	5.13

Weighted	Score
Citi	6.89

The Lima Stock Exchange can trace its roots back to 1861, although it would be a further 110 years before the current iteration of the exchange - Bolsa de Valores de Lima (BVL) – was established. Effective from January 2003, BVL became a public company.

The exchange holds a majority stake in Cavali, the Peruvian central securities depository. Cavali's settled traded volume was $398 million in 2018. Peru transitioned to a T+2 settlement cycle for equities in September 2017.

Peru is a member of Mercados Integrados Latinoamericanos (MILA) alongside Chile, Colombia, and Mexico. The MILA initiative was set up in 2011 to improve investment opportunities through the integration of member countries' stock exchanges and depositories.

In March 2019, Peru launched a new

securities lending platform aimed at increasing market liquidity and enhancing opportunities for investment in the country. The platform is the product of a two-year collaboration between BVL, Cavali, Scotia Capital USA, Scotia Bolsa, Citi Peru, and pension fund manager AFP Integra.

Commenting on the launch, Miguel Ángel Zapatero, head of business at BVL, said: "Stock lending is a solution that complements efforts to boost local liquidity by facilitating price formation, channel funds back to the market, and attract new kinds of investors."

The platform includes a formal legal structure incorporating industry standard documentation, an operating platform that allows for USD and equity as collateral, in addition to full visibility into Cavali's Wari platform via Citi Peru's custody and clearing services.

UNITED STATES

Unweighted	Score
BNP Paribas Securities Services	6.19
Citi	5.67

Weighted	Score
BNP Paribas Securities Services	4.97
Citi	4.37

While the stability and resiliency of the US financial marketplace has improved significantly since the 2008 crisis, the market's post-trade provider The Depository Trust & Clearing Corporation (DTCC) outlined key risks facing the industry at the end of 2018 and opportunities to mitigate them.

One opportunity includes expanding the scope of central clearing for both cash and derivatives markets to more fully take advantage of the risk management benefits provided by central counterparties.

Boosting regulatory harmonization and cooperation among all stakeholders is another area of focus, along with improving risk transparency by globally mandating the use of Legal Entity Identifiers (LEIs) in regulatory reporting.

Further optimizing and accelerating the US equity settlement cycle beyond T+2 to further reduce the exposure associated with unsettled trades was also listed as a work area by the DTCC.

Meanwhile, ensuring that enterprise data management capabilities become foundational to financial firms' risk management frameworks is also one of DTCC's desirable objectives.

According to Florent Thiry, head of financial intermediaries and corporates, Americas at BNP Paribas Securities Services, investment in technology and the pace of innovation have drastically increased.

"Significant advancements in AI, cloud computing, big data analytics and blockchain are having a truly transformative effect on financial markets and institutions," Thiry said.

He added: "Our digital team at BNP Paribas is working on three key priorities: improving the customer experience, automating our processes and building services for tomorrow. Hundreds of Robotics Process Automation (RPA) tools are currently being deployed throughout our securities services division. The immediate advantages are an increase in employee and client satisfaction, given manual processes are prone to human error and can be time consuming."

URUGUAY

Unweighted	Score
Banco Itau	4.91

Weighted	Score
Banco Itau	7.00

The small South American country's exchange, Bolsa de Valores Montevideo, trades equities and fixed income products, and can trace its roots back to 1867. BVM is unusual among its peer group in that it still operates an open outcry trading floor and settles trades directly with the central bank rather than through a central securities depository.

Equities settle on a T+3 cycle while debt settles on T+2 but settlement cycles are negotiable between counterparties. The Central Bank of Uruguay is the clearing agent for the exchange and the exchange has some 35 brokers, according to its website. There are no short selling or foreign ownership restrictions.

Asia Pacific

AUSTRALIA

Unweighted	Score
BNP Paribas Securities Services	6.11
HSBC	5.19

Weighted	Score
HSBC	6.78
BNP Paribas Securities Services	5.09

The managing director of the Australian Securities Exchange (ASX) recently stated that it had made good progress on a number of core initiatives, including the upgrade of its secondary data centre to strengthen market resilience and the restructuring of its listings compliance team.

The ASX has also commenced a three-year journey to replace its post-trade equities platform CHESS explained Peter Snodgrass, head of direct custody and clearing Australia at HSBC. In September 2018, in its response to the CHESS replacement consultation paper, the ASX provided revised timelines of a go live date of April 2021.

The ASX plans to release the technical specifications in what it terms a 'waterfall' method whereby data components for the various CHESS functions to be replaced will be made available to the market each quarter. The first - Customer Development Environment 1 or CDE1 - was released in December 2018, and the second in April 2019.

"HSBC will test each drop through 'point to point' user testing with full market-wide end to end testing scheduled for mid to late 2020," stated Snodgrass.

HSBC continues to actively participate in the ASX business committee and various technical committees and is working closely with the ASX on CDE1 and 2.

"CDE1 covers our connectivity with the ASX, either via node or SWIFT, account creation and maintenance (for example, creation of a new HIN) and demand transfers, which refers to free of payments transactions between different participants or within the same participants," said Snodgrass.

CDE2 will cover trade capture, trade registration and novation. "The functional specs have not yet been released but we believe these will relate more to brokers, hence will be applicable to account operators," continued Snodgrass.

"The adoption of distributed ledger technology at the ASX will allow further innovation and products to be brought to the market and we are a key advocate of this change across the industry," added Mark Wootton, head of custody product for Australia & New Zealand at BNP Paribas.

BANGLADESH

Unweighted	Score
Standard Chartered	4.43

Weighted	Score
Standard Chartered	6.34

In 2017, Dhaka Stock Exchange Limited (DSE), Chittagong Stock Exchange Limited (CSE) and Central Depository Bangladesh Limited (CDBL) formed clearing house Central Counterparty Bangladesh Limited.

Two years later the CCP is still in the process of forming its functionalities and operating model, according to Standard Chartered experts who are working with the CCP to formulate processes and provide feedback on issues that may impact foreign investment settlement. A formal regulatory framework is also a work in progress, and is expected to provide more clarity in the market once introduced.

Separately, unlisted mutual funds are presently not allowed to be invested through the Non Resident Investors Taka Account (NITA). New mutual funds are mostly unlisted, limiting foreign investment in this asset class. In early 2019, Standard Chartered said it was guiding three asset managers in discussions with Bangladesh Bank to include unlisted mutual funds in NITA.

According to M Nazmul Hasan, head of HSBC Securities Services, Bangladesh, prior to 2019 there has been a fear of instability around the general election that impacted the whole capital market during 2018.

"The DSEX index dropped around

14.5% in USD terms," Hasan said. "After the recent election, there is less uncertainty and continued political stability which should be positive for market sentiment."

Bangladesh is also actively involved in China's Belt and Road Initiative (BRI), said Hasan. As part of BRI, DSE sold its 25% stake to Chinese Consortium (Shanghai Stock Exchange and Shenzhen Stock Exchange) in 2018, which will provide infrastructure and capacity building support.

"As a result, we are observing an overall steady start of 2019 with the DSEX index up by 17% in February 2019 in comparison to February 2018," Hasan added.

CHINA

Unweighted	Score
Deutsche Bank AG	5.78
HSBC	5.72
Standard Chartered	5.09
Industrial and Commercial Bank of China	4.20
China Construction Bank	3.74

Weighted	Score
HSBC	7.58
Standard Chartered	6.31
Deutsche Bank AG	6.27
Industrial and Commercial Bank of China	6.08
China Construction Bank	5.44

Some sectors of China's financial industry, such as digital payments, set an example for the rest of the world.

Other areas across the country's capital market are behind the curve but beginning to modernise and open up, much to the interest of international investors.

"China's capital market continues to broaden access for foreign investors with Chinese regulators delivering on their commitment to further liberalize access for international investors," said Allen Kuo, head of securities services at Deutsche Bank China.

In August 2018, China announced a three-year tax holiday for foreign investors investing in its onshore bond market. That was preceded by a push from the People's Bank of China and State Administration of Foreign Exchange to further relax repatriation requirements and permit onshore CNY FX hedging.

Meanwhile, the merger of Qualified Foreign Institutional Investor (QFII) and Renminbi Qualified Foreign Institutional Investor (RQFII) schemes is around the corner with the expansion of the QFII/RQFII's investment scope, according to Kuo and Bing Bing Chen, VP, account manager at Deutsche Bank China.

"All these developments are an expansive gesture of welcome to the inclusion of China A-shares and China bonds into major global indices," added Kuo.

According to Standard Chartered Bank, more international asset managers will look to increase their exposure in China's domestic markets in 2019 through the setup of wholly-owned entities and the convergence of onshore China market development, including onshore fund custody build out.

Sophia Chung, head of HSBC Securities Services China, has also seen more foreign investors shifting their investment focus to China and building up their local experience with China's capital markets development.

She explained: "[This includes] MSCI's recent announcement to increase the China A-share weighting to four times more than the existing weighting; FTSE Russell's and S&P Dow Jones' inclusion of China A-share into their global benchmarks; and China's bond index inclusion plans announced by the fixed income index providers such as Bloomberg."

However, according to Deutsche Bank's Kuo and Chen, further reforms need to take place in order to attract more foreign capital in to China's A-share and bond market. For example, said Kuo: "A standardized default handling process in China Interbank Bond Market would improve international investors' confidence and interest in China's capital market. For the future, we anticipate further capital market growth from securitisation, demands for retirement financial products, as well as conversions of domestic non-fund products into fund structures."

HONG KONG

Unweighted	Score
Deutsche Bank AG	5.92
HSBC	5.63
Standard Chartered	5.29
BNP Paribas Securities Services	5.22

Weighted	Score
Standard Chartered	7.37
HSBC	6.64
BNP Paribas Securities Services	3.92
Deutsche Bank AG	3.80

Hong Kong Exchanges and Clearing (HKEx) published its 2019-2021 strategic plan at the end of February, mapping out its vision to connect international investors with Hong Kong and mainland China.

Much of the work over the next three years is set to revolve around Stock Connect and Bond Connect - mutual market access schemes designed to allow investors from mainland China and overseas to trade in each other's equity and bond markets.

MSCI's Emerging Markets Index inclusion of China large cap A-Shares and FTSE Russell's confirmation of China A-Shares market to be promoted to secondary emerging market status are recent, notable events.

Under the Bond Connect platform, the market has successfully implemented three key important changes, according to Andrew Law, head of HSBC Securities Services in Hong Kong.

Law said: "First, the introduction of Block Trade Allocations. Second, the move to a fully DVP market where the Central Moneymarkets Unit (CMU) has successfully implemented the new DVP settlement with China Central Depository & Clearing Co, Ltd (CCDC).

"Third, the clarification on taxation, in which the State Council announced that foreign investors will be temporarily exempted from corporate income tax and value added tax for CIBM bond investment for three years from November 7 2018 to November 6 2021."

HKEx is working with Digital Asset, a pioneer in distributed ledger technology (DLT), to explore the development of a blockchain-based post-trade allocation and processing platform for Stock Connect Northbound trading.

Law noted that HSBC initiated discussions with the mainland depository to allow fail trade reporting to be completed by the sub-custodian on behalf of Bond Connect investors.

Meanwhile, Standard Chartered Bank explained that it has been actively advocating for further enhancements to Stock Connect, such as leading discussions on the proposed Super SPSA (Special Segregated Account) model, and supporting initiatives such as holiday trading and adding ETFs and other assets to the Connect scheme.

HKEx is working with onshore regulators to introduce stock borrowing and lending for Southbound holdings and to allow short-selling by Northbound capital under existing mechanisms on the onshore markets.

It also plans to launch A-share futures products to support hedging of China equities by international investors, enabling an increase in China A-shares' weighting in international benchmark indices.

In addition, HKEx is set to upgrade risk management and post-trade infrastructure to provide for the cross-border custody and settlement needs of both mainland and international investors.

INDIA

Unweighted	Score
Deutsche Bank AG	6.07
HSBC	5.71
Citi	5.70

Weighted	Score
Citi	8.47
HSBC	7.22
Deutsche Bank AG	5.61

A number of factors are converging that have been giving India prominence on the global economic stage of late.

This includes high growth rates in the industrial and service sectors, significant population growth, strong domestic demand, as well as a government that is pro-business.

"This mix, in our eyes, subsequently makes the country hard to ignore as a long-term investment opportunity," Sheridan Admans, investment manager at The Share Centre, wrote on April 4.

After a wobbly start to 2019, India's stock market has been on a bit of a tear since mid-February, boosted in mid-March after two opinion polls indicated that the incumbent Prime Minister Narendra Modi would be re-elected following elections due to take place between April 11 and May 19 2019.

In terms of specific developments relating to custodians and investors, India has witnessed broad market development from market structure through to data governance, digital, cybersecurity and investor integrity.

Deutsche Bank's Sriram-A Krishnan, managing director and head of securities services India, and Samir Dhamankar, director, securities services India, pointed to interoperability among clearing corporations as a notable move.

"Clearing members will be able to tie up with one clearing corporation for settlement of trades executed in different stock exchanges. This will be a transformational change for post-trade participants, with the need for extensive process and system changes," Krishnan explained.

In September 2018, the Securities and Exchange Board of India (SEBI) approved interoperability among clearing corporations, which means trades can be cleared at any CCP, regardless of the stock exchange on which the trade is executed.

Interoperability will be operationalised at the earliest but not later than June 1 2019, Standard Chartered experts noted in a recent report.

Meanwhile, Deutsche Bank's Krishnan and Dhamankar suggested there is a government and regulatory push for data localisation or near real-time mirroring of data related to the Indian market, while commodities are to be added as a permitted asset class for mutual funds and custodians.

"Cyber security and cyber resilience are also a focus area for both banking and securities market regulators, along with stricter enforcement of KYC rules and increasing digitization in banking and capital market segments," added Krishnan.

INDONESIA

Unweighted	Score
Deutsche Bank AG	6.07
Standard Chartered	5.19

Weighted	Score
Standard Chartered	6.64
Deutsche Bank AG	4.96

Indonesia is pursuing key changes in its market infrastructure and investor protection that can lead to further innovation, interest in the market and new services in the securities post-trade space, according to Elwin Karyadi, head of GTB and Securities Services Indonesia at Deutsche Bank Indonesia.

"The Indonesian market successfully moved from a T+3 to T+2 settlement cycle environment on November 26 2018 as the first trading day followed by November 28 2018 as the first settlement day under T+2," said Karyadi. "Transactions have been seamlessly settled and no failed trades were experienced by DB Indonesia."

In 2019, local market regulators plan to introduce e-Proxy/voting. According to Karyadi, this mechanism may lead to shorter deadlines for investors to submit instructions. "e-Proxy/voting platforms are currently being developed and the related regulations are being prepared. The regulators are expected to release the regulations by this year and to become effective to all public companies at the latest one year from the issuance date," added Karyadi.

On the whole, Indonesia's exchange and financial authorities continue to improve market efficiency and be more aligned and competitive with the regional markets.

Standard Chartered said it had successfully obtained an endorsement from the Financial Services Authority of Indonesia (OJK) of multi-share classes for mutual funds in December 2018, as part of lobbying efforts for a multinational insurer client who wants to launch this first-in-market product capability in 2019.

Standard Chartered is also working with OJK and Indonesia Central Securities Depository (KSEI) and the client to launch the first multi-asset share class for mutual funds in 2019.

One of the bank's other key focus areas in 2019 is the launch of the first-in-market T+0 redemption product capability.

JAPAN

Unweighted	Score
Mizuho Bank Ltd	6.52
HSBC	6.18

Weighted	Score
HSBC	8.31
Mizuho Bank Ltd	6.65

The settlement cycle of Japanese cash equities is scheduled to be shortened from T+3 to T+2 on and after July 16 2019.

According to Yasuhiro Ohno, head of custody sales and client services team, settlement and clearing services department at Mizuho Bank, non-residents sending out instructions from countries with a wide time gap with Japan are likely to face challenges in repairing instruction if unmatched at the first try, most likely on S-1.

"If instructions cannot be repaired in time for settlement, settlement fails may increase," Ohno added. "Given this point, Japan Securities Dealers Association has been recommending non-residents release instructions as early as possible to enable pre-settlement matching to be completed also at the earliest possible timing.

"Aiming to support a smooth and speedy pre-matching process under T+2, Mizuho Bank has been making continuous efforts and researches to utilize Distributed Ledger Technology (DLT) to instruction pre-matching process for cross-border securities transactions."

In March, the Japan Exchange Group (JPX) agreed to buy the Tokyo Commodity Exchange (TOCOM) in a bid to invigorate Japan's derivatives market by creating a "one-stop exchange".

JPX will start the takeover process of TOCOM between the end of June and September, with the settlement of the offer scheduled for October 2019.

The earliest possible date for completing the product transfers and consolidation of clearing organisations is the 2020 fiscal year.

The exchanges said that whilst "one-stop exchanges" had become mainstream in the world, in Japan the multiple exchanges have different legal bases which is less convenient for investors and which challenges the sustainability of Japan's commodity derivatives market.

MALAYSIA

Unweighted	Score
Deutsche Bank AG	5.55
Standard Chartered	5.34
HSBC	5.16

Weighted	Score
HSBC	7.40
Standard Chartered	5.81
Deutsche Bank AG	3.72

Malaysia announced its transition to T+2 settlement cycle, which is scheduled for April 29 2019. Industry testing commenced in February 2019 and concluded in March 2019.

Standard Chartered experts said they had been one of several service providers included in the testing and feedback period to ensure Bank Negara Malaysia (BNM), the central bank, could effectively gauge the transition impact for domestic and foreign clients.

Jacqui Williams, managing director and head of securities services Malaysia at Deutsche Bank, said: "A key theme is the broad-base improvement of market structure capabilities, efficiency and risks in the securities post-trade market. This would also set the stage for further market innovation and new services.

"In line with trends in the global securities industry, Malaysia will be moving to a shorter settlement cycle of T+2 and this new framework is welcomed by all market participants. There is also increasing focus on streamlining other post-trade processes with the changing market dynamics as Malaysia continues with its digitization agenda to provide, amongst others, seamless and efficient post-trade settlement experience including automation of corporate actions."

Bursa Malaysia has stated that the move to a shorter settlement cycle will improve operational efficiency, reduce counterparty risk and improve the competitiveness of Malaysia's capital market.

Separately, BNM has held discussions on the migration from ISO15022 to ISO20022, allowing Standard Chartered and others to share best practices with BNM on past migrations carried out in other markets. These best practices will undergo testing for changes scheduled for November 2019.

Previously applicable only to proprietary day traders, intraday short selling was extended to all investors in April 2018.

Malaysia's Securities Commission also liberalised margin finance rules in 2018 and revised its guidelines on listed real estate investment trusts last year.

According to Aloysius Wee, head of HSBC Securities Services, Malaysia, the Financial Markets Committee (FMC) together with BNM announced a number of initiatives to broaden and deepen the onshore financial market, strengthen financial market infrastructure for greater transparency, and to facilitate surveillance in the onshore financial market.

"One of the major developments arising from these initiatives was the large value payment system, Real-time Electronic Transfer of Funds and Securities System (RENTAS) implementation of segregated securities account structure for investors investing in Malaysian debt securities on May 21 2018, using the globally recognised Legal Entity Identifier (LEI) as a unique identifier in addition to the securities account number," Wee explained.

On the tax front, the Ministry of Finance implemented the Sales and Services Tax (SST) on September 1 2018 with the provision of services taxed at 6% under the reintroduced SST while the sale of goods will incur a 10% tax.

"The Goods and Services Tax (GST) was subsequently abolished," HSBC's Wee added. "The Malaysian government further announced the expansion of taxable services under the Service Tax Act 2018 to include brokerage and underwriting services with effect from March 1 2019."

NEW ZEALAND

Unweighted	Score
HSBC	5.40
BNP Paribas Securities Services	5.32

Weighted	Score
HSBC	6.90
BNP Paribas Securities Services	3.04

In January, the New Zealand Stock Exchange (NZX) and the Financial Markets Authority (FMA) initiated an industry-led review of New Zealand's capital markets designed to deliver a 10-year vision and growth agenda for the sector.

Capital Markets 2029 will consider the current framework and broader ecosystem of New Zealand's capital markets and outline recommendations for the creation of wider, more active participation and increased diversity of product.

New Zealand's capital markets have performed well in a number of areas, such as KiwiSaver and debt issuance. However, equity listings have remained subdued and the listed equity market is underdeveloped relative to global peers.

Mark Peterson, chief executive officer at NZX, commented that while NZX has delivered some fundamental changes to the market over the past 15 months - such as increasing on-market liquidity and simplifying the markets structure and rule set – it is only one part of New Zealand's capital markets ecosystem.

The review was commissioned in response to concerns expressed about the overall depth and breadth of the country's capital markets according to FMA chief executive officer Rob Everett. He reckons that from early-stage capital raising and investment opportunities all the way up to main board listings and institutional investor appetite, the time is right to plan for the future.

The findings of the Capital Markets 2029 review are expected to be published in the third quarter of 2019.

Mark Wootton, head of custody product for Australia and New Zealand at BNP Paribas, noted that the landscape in New Zealand continues to undergo deep changes, with regulations under review on custodial practices as well as significant infrastructure changes with the replacement of the Reserve Bank's settlement platform.

"BNP Paribas Securities services will soon add the NZX settlement platform to its product offering, making us the first global custodian able to provide clients with an agnostic approach for both settlement platforms in the local market," he said.

PAKISTAN

Unweighted	Score
Deutsche Bank AG	5.64
Standard Chartered	5.05
Citi	4.77

Weighted	Score
Deutsche Bank AG	7.03
Standard Chartered	6.13
Citi	4.68

In March, Pakistan Stock Exchange (PSX) and Qatar Financial Centre (QFC) signed a memorandum of understanding that will see them collaborate on a variety of initiatives, including promoting bilateral business development opportunities, facilitating the mutual cross-selling of financial products, facilitating trade and investment between companies in Pakistan and Qatar, and exploring the possibility of establishing an international financial centre in Pakistan. This is the latest example of the progress being made by the PSX to improve investor protection with a focus on broker regulations and the investor protection fund as well as introducing new products in the form of ETFs and Shariah compliant instruments and deepening the fixed income and derivatives market range, explained Hammad Izz-Hamid, head of securities services Pakistan at Deutsche Bank.

"Streamlining of market access with simplification of account opening documentation remains an important theme," noted Izz-Hamid. "The requirement for identification has been made more structured by the Central Bank and the electronic dividend and voting mechanisms have been rolled out under the directives of the Securities & Exchange Commission of Pakistan and the lead of the Central Depository Company."

Enhancements to the operating platforms are under discussion to facilitate coverage of the investor base within the custodian intermediaries framework. The National Clearing Company of Pakistan has mandated settlement funds transfer via the Central Bank and is reviewing enhancements in the risk management mechanisms applicable to investors and participants.

Izz-Hamid described 2018 as a tumultuous year for the Pakistan market with global emerging market developments, local general elections and macroeconomic headwinds weighing down on the investment climate. However, with a structural reform-oriented government agenda in place, ongoing stabilisation in economic fundamentals and the relative discount to emerging markets, the stage is being set for a gradual return of foreign portfolio investors to Pakistan.

He observed that the government has made certain revisions in the tax regime, some of which are likely to have a favourable consequential impact on the capital markets. "These include the removal of tax on bonus shares issue (which was previously 5% of market value); a reduction in the super tax on companies other than banking companies to 0% with effect from the tax year 2020; and corporate tax rates for companies other than banking companies to be reduced from 30% to 25% over a period of five years."

In 2018, Standard Chartered successfully advocated for the waiver of ID documents for foreign institutional investors.

PHILIPPINES

Unweighted	Score
Deutsche Bank AG	6.04
Standard Chartered	5.14
HSBC	4.98

Weighted	Score
HSBC	7.08
Standard Chartered	6.32
Deutsche Bank AG	4.71

Hannah Nuñez, director, head of securities services Philippines at Deutsche Bank AG Manila Branch, sees the greatest innovation within the domestic market as the growth in international participation through foreign exchange reforms and the increase in investment limits.

She said: "The Bangko Sentral ng Pilipinas (BSP) recently issued Circular 1030, which amended FX regulations to lift the 50% minimum utilisation requirement to allow FX sale for disapproved subscriptions or oversubscriptions to equity and debt investments and to include foreign investment registration privileges for Securities Borrowing and Lending (SBL) transactions."

The regulator has issued a proposal to lift foreign ownership limits under the 1987 Constitution while the TRAIN Law uplifts the tax landscape for capital markets transactions.

Nuñez added: "House Bill 8645, if passed into law under package 4 of the comprehensive tax reform program (CTRP), will benefit the capital markets through reduced stock transaction taxes, unified reduced tax rate for certain passive income such as interest, dividend and capital gains, and reduced or removal of DST rates on certain transactions, among others."

The Philippines market has also introduced changes to the local market infrastructure and technology to ramp up competitiveness and financial inclusion

Nuñez said: "Implementation of the NRoSS system of the Bureau of the Treasury (BTr) for government securities consolidates two platforms, the previous RoSS operated by the BTr and the Sub-Registry system operated by the PDS Group."

Maris Flores, head of HSBC Securities Services Philippines, said the out-

look for the Philippines is bullish.

Flores said: "The Philippines remained one of the fastest growing economies in Asia given the surge in government spending in line with its commitment to its "Build, Build, Build" initiative. It has implemented the first package of the Comprehensive Tax Reform Program (CTRP) in January 2018 to help fund the said initiative.

"In the capital market, initiatives and policy reforms were implemented to increase market efficiencies, attract foreign investors, and provide new investment products. The Bureau of the Treasury (BTR) implemented two major initiatives, namely: the launch of its enhanced registry system, National Registry of Scripless Securities (NRoSS), which provides true-DVP settlement for government bonds; and the roll-out of a new trading system for fixed income market, Bloomberg Fixed Income Quote (FIQ), to provide a more robust benchmarking and valuation methodologies."

The Philippine Stock Exchange (PSE) has also released guidelines on short selling which has increased trading activity in the equities market, according to Flores.

"The market is also anticipating the launch of short selling and the release of the amended Real Estate Investment Trust (REIT) rules. Other tax reforms such as lowering of corporate income tax rate and simplified capital income tax rates are also being deliberated in the Senate. The Philippines will also hold its mid-term elections in May 2019 which may be instrumental in the enactment of the said tax reforms," Flores concluded.

Standard Chartered Bank said it led discussions with Philippine Depository and Trust Corporation (PDTC) to drive market change for an earlier pre-matching practice and improve the eClear and Settle (eCS) system, specifically for trade instruction amendment and messaging capability.

This was to encourage the industry to do pre-matching on an earlier timeline to avoid trade failures, and optimise the use of the depository's auto pre-matching capability.

SINGAPORE

Unweighted	Score
Deutsche Bank AG	5.83
HSBC	5.82
Standard Chartered	5.47
DBS Bank Ltd (formerly Development Bank of Singapore)	5.41
BNP Paribas Securities Services	5.09

Weighted	Score
DBS Bank Ltd (formerly Development Bank of Singapore)	7.61
HSBC	6.86
Standard Chartered	6.67
Deutsche Bank AG	3.78
BNP Paribas Securities Services	3.04

The Singapore Exchange and the Singapore authorities have been working hard to improve that market's post-trade infrastructure. Gopu Maniam, head of direct custody and clearing, Singapore at HSBC, said: "In the second phase of the post-trade system changes which took place on December 10 2018, it introduced greater compliance with industry standards (such as Principles for financial market infrastructures) and adopted relevant international best practices in the settlement process."

He continued: "The new Post Trade System (PTS Phase 2) introduced an earlier settlement cycle from T+3 to T+2 coupled with a batch run from end of day to mid-day between 1.30pm to 3.30pm. During this batch run both securities and cash are exchanged simultaneously. In addition Real Time Gross Settlement (RTGS) on a trade by trade basis has also been introduced as an optional settlement mode. This brought about increased efficiency in the market with reduced settlement risk and market exposure as compared to an overnight batch run where the cash is settled earlier on T+3 settlement cycle while the securities was made available only the next day. To settle using the RTGS a specific indication in the settlement instructions is a mandatory matching criteria. From a market practice perspective, tolerance levels will not be applicable for RTGS instructions and this mode can only take place

outside of the batch run cycle."

Standard Chartered Bank said it was a "key participant" in all industry-wide testing of the new post-trade system, adding: "SCB was the first to query SGX on conformance testing parameters. SGX changed some of their original specifications after considering SCB's feedback, which underscores SCB's leadership in the securities clearing business. A dedicated testing cycle was created for SCB at its request due to SCB's 60% market share in volume of trades."

SCB continued: "Another significant development in the fund management industry is the upcoming launch of the Singapore Variable Capital Company (VCC). After a consultation process run by the Monetary Authority of Singapore (MAS), the VCC Bill was passed in Parliament on October 1 2018. It is expected to come into effect in 2019 following the legislative process. SCB has been spearheading discussions with clients and will be hosting a series of client talks on VCC in key cities globally in the latter half of 2019."

SOUTH KOREA

Unweighted	Score
HSBC	5.50

Weighted	Score
HSBC	7.49

Sang-Joon Park, head of securities services Korea at Deutsche Bank AG, Seoul Branch, said South Korea has introduced tax reforms. "A key theme is an easier claim of reduced tax rate for cross-border investments that can result in better returns for investors and more efficient administration for fund managers that can alleviate some costs," stated Park.

"The tax law was revised to enable certain CIVs (Collective Investment Vehicles) to be treated as a single BO (Beneficial Owner) with respect to CIV's claim of applicable tax treaty rates as opposed to the current rule. This will relieve global fund managers' burden on tax documentation to claim reduced tax treaty rates. The revised tax law will be effective from 2020 and some technical clarifications should be made. The custody industry association of which SES is a participant, submitted a paper to the regulator to seek clarifications," added Park, who noted that the outcome is pending.

Rajesh Atal, head of HSBC Securities Services, South Korea, said his bank had worked with local authorities to deliver to the Ministry of Economy and Finance (MOEF) "our recommendations on the draft revised tax forms that reflect the amended regulations effective January 1 2020". Atal said HSBC collected the local custodians' recommendations and feedback on the draft revised tax forms.

He added: "As of August 28 2018, under the 'Enforcement Decree of the Act on Reporting and Use of Certain Financial Transaction information', account holders are required to provide information on the representative of the account holder. However, the related regulations were not amended and continued to stipulate that the required information on the representative are more excessive than the Enforcement Decree.

"As this may cause confusion in the market amongst various financial institutions, HSBC is working through various channels with related regulators to align the regulations and understanding with the market participants."

Atal added: "Local sub-custodians have agreed to submit a collective request for clarification on the CDD requirement via the Federation Bank Association such that for OIV clients, the CDD requirement shall be subject to the global custodians of the OIV. Should the outcome be positive, we expect that CDD requirements related to account opening may be simplified."

Atal also noted that HSBC has been working with the South Korean depository to support a new client model. He said: "The Korean Securities Depository (KSD) has completed the system enhancement to support the account operator model and HSBC led the industry meetings with KSD to discuss the feasibility of Account Operator model in Korea. The discussions were around whether "domestic (local) institutions" can use the account operator model."

Atal continued: "Thereafter, the KSD announced that it has completed the system enhancement to support the account operator model from January 11 2019. The next steps are to explore if the model can be extended to foreign institutions."

Standard Chartered Bank has participated in the Financial Supervisory Service Task Force meeting to establish best practice for internal controls on short-selling trades; presented on the development plans of the local Securities Borrowing and Lending market at the KSD senior advisory council; and represented market participants and led discussions on behalf of the industry.

SRI LANKA

Unweighted	Score
HSBC	5.44

Weighted	Score
HSBC	7.23

The Sri Lankan market has been working on reforms such as the introduction of a central counterparty for a while and saw some key milestones in 2018.

Shehan Patterson, head of HSBC Securities Services, Sri Lanka, said: "The Colombo Stock Exchange (CSE) has amended the Listing Rules to facilitate the listing of shares by foreign companies on the new 'Multi Currency Board' (MCB) of the CSE under the Alternate Market Segment. In this regard, the CSE has also amended the Trading Rules and the Depository Rules to facilitate the MCB."

Patterson continued: "As per the amended Listing Rules, a foreign entity may list its shares denominated in a currency approved by the Central Bank of Sri Lanka on the MCB of the CSE. Investing and trading in such shares will be permitted only to non-resident investors who operate through a custodian bank of the depository.

"The market is also expected to move into a new DVP (Delivery Vs Payment Model) with the Securities and Exchange Commission (SEC) approving the same. The CSE is driving this change and it is widely expected that this will come into effect towards the latter part of 2019."

Standard Chartered Bank said it is a key participant of the Foreign Bank's Custodian Forum, and previously provided feedback on operational efficiency. The bank added: "This has successfully led to a reduction of turnaround time for account opening in the central securities depository."

Sri Lanka's Central Depository Systems (CDS) and China Securities Depository and Clearing Corporation Limited (CSDC) signed an agreement in December to work on a cooperative relationship in the areas of securities clearing and depository.

CDS Chairman Ray Abeywardena said in December 2018: "With this Memorandum of Understanding (MoU), we are pleased to establish a formal channel of collaboration with CSDC, which is a depository that plays a crucial role in the Chinese capital market and the rest of the Asian region."

Abeywardena added: "We anticipate that the MoU will open new possibilities of collaboration between the two depositories. We are particularly keen to work with CSDC on further developing our clearing and settlement function, particularly in the areas of strengthening registration and settlement infrastructure, capacity building and improving the services offered to stakeholders of the Sri Lankan capital markets. Cooperation with peer depositories and international markets is essential to raising the bar in the Sri Lankan capital market and we pleased to collaborate with CSDC in this regard."

TAIWAN

Unweighted	Score
Deutsche Bank AG	5.85
HSBC	5.83
Standard Chartered	5.79
Bank of Taiwan	5.53
JPMorgan	5.30

Weighted	Score
Bank of Taiwan	7.97
JPMorgan	7.62
HSBC	7.38
Standard Chartered	7.28
Deutsche Bank AG	6.16

In line with the Financial Supervisory Commission's Corporate Governance Roadmap, electronic voting become mandatory for companies listed on the Taiwan Stock Exchange Corporation (TWSE) and Taipei Exchange (TPEx) in January 2018. According to the Taiwan Depository and Clearing Corporation (TDCC), approximately 1,700 listed companies adopted the e-voting system last year.

2018 also saw the TDCC launch a new securities depository system, which was developed together with IBM. The launch was the culmination of a four-year project aimed at strengthening the depository's data system and reducing data processing time.

"Taiwan regulators continue to seek the improvement of market transparency and efficiency in order to attract more foreign investors. This focus is translated into key themes on increasing automation, strengthening investor protection and calibrating market risk management," said Tracy lee, director at Deutsche Bank AG Taipei Branch.

"Custodians have been proactively working with TDCC and Broker Association (BA) to achieve automation. An initiative driven by Deutsche Bank is for custodians to be able to download new trading account opening and changes from the TDCC platform in a consistent format," added Lee.

A range of operational, risk management and corporate governance developments are underway in the market. Key changes highlighted by custodians active in the region include: a move to continuous trading, expected to launch in March 2020; all listed companies will be required to adopt a nomination system for the election of directors and supervisors from January 2021; the reduced rate for securities transaction tax on stock day trading, lowered to 0.15% in April 2017, will now remain in place until December 31 2021.

Effective from the start of 2019, Taiwan ceased Saturday trading and settlement activities, noted Hsiao-Chi Wang, head of securities services at Citi Taiwan. According to a TWSE statement announcing the change, forgoing Saturday trading will allow the exchange to 'align with global practices and reduce investors' investment risk'.

Taiwan has also been stepping up its anti-money laundering controls over the last few years, including the establishment of an Anti-Money Laundering Office in 2017 to coordinate national efforts in this area.

Wang said: "Under more stringent know your customer (KYC) requirements, Citi Taiwan proactively connects local brokers with investors to expedite the opening of brokerage trading accounts."

More broadly, Standard Chartered noted a growing trend of Taiwanese entrepreneurs returning to the country, which could drive up demand for private wealth management products in 2019. At the same time, the bank expects Taiwanese demand for Chinese investments to continue to rise. "Standard Chartered Taiwan continues to be an integral part of the industry to support local investors accessing China," stated the bank.

THAILAND

Unweighted	Score
Standard Chartered	5.75
Deutsche Bank AG	5.71
HSBC	5.26

Weighted	Score
Standard Chartered	7.23
HSBC	5.22
Deutsche Bank AG	4.01

In January 2019, the Stock Exchange of Thailand (SET) outlined its strategic plan for 2019-2021 centring around four key pillars: expanding its business activities; exploring new opportunities with technology; reforming regulations and streamlining processes; restructuring its business model to reduce costs while enhancing efficiency and adding value for stakeholders. The latter will see SET restructure its portfolio into three business groups comprising core business, new business and infrastructure development, and capital market development.

SET, which is supervised by the country's Securities and Exchange Commission (SEC), operates the Thailand Clearing House (TCH) and the Thailand Securities Depository (TSD). In addition to SET's three-year strategic plan, the exchange and its subsidiaries have been taking steps to improve digital infrastructure in line with its mission 'to make the capital market work for everyone'.

Utumporn Viranuvatti, head of HSBC Securities Services, Thailand, said: "In 2018, TSD continued working with market participants to enhance their operational process and services, mainly focusing on corporate actions areas. The enhancement is aimed at increasing efficiency in corporate actions process by adopting [an] electronic platform to help reduce manual work process.

"On March 4 2019, the TSD extended the digital subscription for right offering (RO) to equities, offering the flexibility to custodian banks and brokers to make subscription via the TSD's electronic channel instead of filling paper-based form. The e-subscription is available for the corporate events: XR (right offering), XB (other benefits in share subscription), and XE (warrant exercise). HSBC Thailand closely worked with the TSD on the system requirement and message specification."

HSBC was also among the custodian banks that TSD consulted during the development of its e-proxy voting services, which aim to reduce paperwork processing by enabling custodian banks to submit proxy forms via an electronic platform on behalf of their foreign institutional clients. Implementation of the first phase of the e-proxy voting services was tentatively scheduled for 1Q19, noted Viranuvatti, with

the next phase set to be extended to cover asset management firms and retail investors.

On March 2 2018, Thailand transitioned from a T+3 to a T+2 settlement cycle. "Local market regulators have continued with improving the pending settlement concept and enhancement of unmatched trade reports post the market's transition to T+2 settlement cycle," stated Standard Chartered Bank. The bank has engaged with market participants and industry associations on these developments and others, including providing feedback on concerns faced by foreign investors with respect to pending settlement and leading lobbying efforts that propose the TSD consider using an electronic payment mode for high value amounts and reducing the use of cheque payments for dividends and interest payments. Standard Chartered confirmed that it will continue to work with the TSD and TCH on initiatives such as streamlining free of payment (FOP) transactions outside net clearing, and developing straight-through processing (STP) for depository services.

VIETNAM

Unweighted	Score
HSBC	5.60

Weighted	Score
HSBC	8.03

In early 2019, Prime Minister Nguyen Xuan Phuc approved the establishment of the Vietnam Stock Exchange (VSE), which will be wholly owned by the state. The VSE will take the form of a holding company under which the country's two existing exchanges – Ho Chi Minh City Stock Exchange (HOSE) and Hanoi Stock Exchange (HNX) - will operate as independently-operated subsidiaries. The new holding company's headquarters will be located in Hanoi.

Vietnam is also working to strengthen its securities market through proposed amendments to its Securities Law. The changes aim to increase transparency and investor protections, and promote the sustainable development of Vietnam's securities market over the long term. Perhaps the most notable amendment is the removal of the foreign ownership limit in public companies, a change that could help to attract foreign capital to the country. The State Securities Commission released the draft of the amended law in November 2018 for public feedback. The revised Securities Law is due to be submitted to the National Assembly in 1Q19 for consideration, and is expected to be passed into law by the end of the year.

However, the Securities Law has not been the only regulation under review. Dao Phan, head of HSBC Securities Services Vietnam, said: "As a leading custodian in the market representing a large pool of foreign institutional investors (FIIs), HSBC Vietnam has worked closely and actively with the State Bank of Vietnam (SBV) as well as the Ministry of Finance, State Securities Commission, and the Ministry of Investment and Planning on a regulation of SBV regarding payment accounts (Circular 32) which was expected to have a big impact on FIIs.

"Following the spirit of Vietnam Civil Code, it required non-legal entities' accounts to be converted to individual or joint accounts, otherwise they would be forced to close. Through our continuous conversations, engagements and escalation to the competent regulatory bodies, as well as our recommendations to the SBV to consider the impacts on FIIs and provide a few alternative solutions, the SBV has finally revoked Circular 32 and issued a new regulation to ensure business-as-usual to FIIs."

Meanwhile, Standard Chartered Bank (SCB) noted the introduction of a new pension funds scheme in 2018. "Being a leading market participant in the local securities services business, SCB was consulted during the process of establishing the legal and operational framework for the pension funds scheme in Vietnam. One successful advocacy effort SCB made was explaining to regulators the challenges of having segregation of duties between supervisory and custodian banks servicing pension funds," SCB stated. This segregation requirement was amended in a government circular issued in November 2018, enabling custodians to also provide supervisory services. ■

Europe

AUSTRIA

Unweighted	Score
UniCredit	5.87
BNP Paribas Securities Services	5.81
Deutsche Bank AG	5.59

Weighted	Score
Deutsche Bank AG	7.31
UniCredit	6.76
BNP Paribas Securities Services	4.12

The Vienna Stock Exchange, or Wiener Börse, dates back to 1771. Figures released by the exchange in March 2019 indicate an average monthly trading volume of €5.3 billion and market capitalization of €112.18 billion. Share turnover increased from €63.95 billion in 2017 to €67.97 billion in 2018 (as of December 14), 86% of which was attributed to international members of the exchange.

The Vienna Stock Exchange completed the upgrade of its trading system in 1Q19, and plans to implement further improvements to system availability and trading quality in 2Q19. Effective from May 2 2019, the exchange will also extend the closing auction for ATX stocks by two minutes in order to accommodate the rising trading volume in closing auctions.

The exchange is making trading systems available on selected Austrian public holidays for the first time this year. The first instance of this will be on Ascension Day on May 30 2019. Going forward, unless they fall on a weekend, the Vienna Stock Exchange will also remain open on Epiphany, Corpus Christi, Assumption Day, Immaculate Conception, and All Saints Day. This will entail access to the complete trading infrastructure, including clearing and settlement through Central Counterparty Austria GmbH (CCP.A) and the central securities depository OeKB CSD GmbH.

When announcing the change, Christoph Boschan, chief executive officer at Wiener Börse and its holding company CEESEG, said: "By taking these measures we are aiming to harmonise our trading set-up with EU standards. We will be offering our customers more service and more availability than ever before. 85% of our trading volume comes from abroad. Demand for Austrian stocks continues unabated even on Austrian bank holidays – so our trading members shouldn't have to make use of other trading venues on those days."

CCP.A is set to introduce a new clearing system at the end of September 2019. The change was announced to members in May 2018.

BELGIUM

Unweighted	Score
BNP Paribas Securities Services	5.57
Deutsche Bank AG	5.38

Weighted	Score
Deutsche Bank AG	7.31
BNP Paribas Securities Services	5.65

Belgian exchange Euronext Brussels is operated by Euronext, the pan-European exchange group that spans Belgium, France, the Netherlands, Portugal, the UK and Ireland.

Central counterparty LCH SA provides clearing services for the Belgian market as the result of an agreement between Euronext and LCH Group.

Settlement activities are conducted by Euroclear Belgium, which forms part of the Euroclear Settlement of Euronext-zone Securities (ESES), a group of central securities depositories that also includes Euroclear France and Euroclear Nederland.

In November 2018, Euroclear announced that it had moved the legal seat of its holding company from the UK to Belgium after gaining approval from the UK High Court. The relocation guarantees that the company's legal seat remains inside of the European Union following the UK's departure from the EU, the deadline for which had been pushed back to October 31 2019 at the time of writing.

The Financial Services and Markets Authority (FSMA) is the supervisory body for Belgium's financial sector

BOSNIA AND HERZEGOVINA

Sarajevo Stock Exchange (SASE) is the exchange for Bosnia and Herzegovina's Federation of Bosnia and Herzegovina entity, and securities are traded on the Banja Luka Stock Exchange (BLSE) in the Republic of Srpska entity.

The market infrastructure for each entity is also distinct: clearing and settlement activities are conducted through the Central Registry of Securities in the Republic of Srpska and the market is regulated by the Republic of Srpska Securities Commission, while these activities are conducted by the Registry of Securities and the Securities Commission of the Federation of Bosnia and Herzegovina, respectively, in the Federation of Bosnia and Herzegovina.

The settlement cycle for both markets is T+2, and both exchanges organize securities into an Official Market segment and a Free Market segment.

Lejla Sablica, head of UniCredit Global Securities Services Bosnia and Herzegovina at UniCredit Bank d.d., said: "Changes to regulation impacting the securities market over the last twelve months refer to the New Rulebook on Withholding Tax in Republic of Srpska adopted by the Ministry of Finance of Republic of Srpska. Among other things, this new Rulebook prescribes the form of Statement on Income and Income Beneficiary to be used for the purpose of obtaining tax relief at source."

"Other market developments refer to the recent establishment of the management company for voluntary pension funds in Republic of Srpska and the first voluntary pension fund in Republic of Srpska," added Sablica, noting that the first voluntary pension fund became active in 2018.

Back in June 2017, the European Bank for Reconstruction and Development and the Enterprise Expansion Fund acquired a stake in the European Voluntary Pension Fund Management Company (EPF), alongside Skupna pokojninska družba and the Pension Reserve Fund of Republika Srpska, facilitating the establishment of the first provider of private pension management services in the region.

"Additionally, last year was characterised by the transformation of the closed-end investment funds established upon the Law on Privatisation Investment Funds and Privatisation Funds Management Companies into open-end funds within three years," Sablica concluded.

BULGARIA

Unweighted	Score
Eurobank	6.38
Citi	5.16

Weighted	Score
Citi	7.26
Eurobank	3.51

Bulgaria's status as a modern market was underlined at the annual meeting of the European Market Implementation Group of General Meetings (GMs E- MIG), hosted by the central depository in Sofia in December 2018. The high rating for Bulgaria and the central depository came after the presentation of the innovative electronic platform for general meetings.

In September 2018, the central securities depository acquired a licence to operate in EU member states directly or via links with other depositories. The licence issued by the Financial Supervision Commission certifies that the depository is compliant with Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on the improvement of the securities settlement in the European Union and for Central Securities Depositories, and amending Directives 98/26 / EC and 2014/65 / EU and Regulation (EU) No 236/2012.

CROATIA

Unweighted	Score
OTP banka d.d.	6.48
Privredna Banka Zagreb d.d.	5.48
UniCredit	5.00

Weighted	Score
UniCredit	6.89
Privredna Banka Zagreb d.d.	5.46
OTP banka d.d.	4.39

The quarterly market report from the Central Depository & Clearing Company for the final quarter of 2018 refers to a slight fall in the number of orders submitted on the basis of received documentation.

However, Valerija Bezak Kecerin, head of UniCredit Global Securities Services in Croatia, suggested that one of the most significant developments in this market over the last 12 months was the amendment of the Mandatory Pension Fund Act enabling local custodians to provide depositary bank services to all mandatory pension funds except their own.

CSDR, as well as any sanctions-related changes, will continue to have the highest priority and influence in defining the custody business strategy, observed Kecerin.

"The CSD is running a project of harmonisation with provisions of CSDR, whereby a significant portion of CSDR provisions concern settlement discipline," she said. "Particular focus is reserved for the buy-in process, settlement fails penalties, financial instruments valuation, supervision of timely settlement, activities concerning instructions matching, hold and release mechanism, partial settlement and tolerance level for cash settlement amounts."

Yet the main change in the Croatian market is expected when the CCP goes live, added Kecerin. The launch of the CCP will result in the abolition of the contractual settlement model, and the scope of the CCP's business activities has been defined in line with EMIR. If introduced, the CCP will mean that settlement of on-exchange and OTC trades is formally separated for the first time in the history of Croatia's capital market.

Marina Šonje Tomorad, head of the custody unit in the securities services department of OTP Banka, noted that in December 2018 the Croatian Parliament approved changes to the Profit Tax Act.

"The increased withholding tax rate of 20% is applicable when the investor is based in one of the countries from the EU list of non-cooperative tax jurisdictions and if there is no tax treaty in place between countries investors are based in and Croatia," she explained.

Tomorad added that in July 2018 the new Capital Market Act was adopted, introducing Mifid II into the law of the Republic of Croatia, along with the enhanced business behaviour policy; obligation to provide quality information and thus increased protection of the investor; greater pre- and post-trade transparency; more thorough regulation of the supervisor and other competent authorities and regulated obligation to respect the limits set to the positions of each participant in derivatives trades; and prescribed sanctions.

CYPRUS

Unweighted	Score
BNP Paribas Securities Services	5.77

Weighted	Score
BNP Paribas Securities Services	7.18

The Nicosia-based Cyprus Stock Exchange commenced operations back in 1996. In addition to securities trading and the listing of stocks, bonds, rights, warrants and other securities, the exchange is also responsible for managing the Central Depository and Central Register (CDCR).

As part of its strategic plan, the exchange is looking to introduce and identify new services, markets and products that could create new opportunities in key sectors for economic growth. Recent steps it has taken in line with this plan include taking a 10% stake in the Hellenic Energy Exchange in December 2018.

The Cyprus Securities and Exchange Commission (CySEC) supervises the country's investment services market, transactions in transferable securities, collective investment and asset management industry. In November 2018, CySEC became a member of the Mediterranean Partnership of Securities Regulators, which aims to increase cooperation between members in order to help better facilitate cross-border investments.

Cyprus experienced GDP growth of 3.9% in 2018, although growth momentum is expected to ease in 2019. An April 2019 note by Fitch Ratings states: "Fitch forecasts growth to slow in 2019 and 2020 to 3.5% and 2.8%, respectively, as the spare capacity in the economy has been gradually absorbed and the external environment becomes less supportive."

CZECH REPUBLIC

Unweighted	Score
Société Générale Securities Services	6.22
Deutsche Bank AG	6.09

Weighted	Score
Société Générale Securities Services	4.72
Deutsche Bank AG	3.59

Pavel Kandravy, head of UniCredit Global Securities Services for Czech Republic and Slovakia, said the Czech Republic is making progress with domestic market reforms.

"The announced application of the Czech CSD (CDCP) to obtain the CSDR licence has recently gained some momentum. Last year, the CSD published the information that it has successfully completed the process required by the Czech National Bank (CNB) and has been granted the full CSDR licence on December 21 2018."

Kandravy continued: "The relevant parties also appreciate the CSD's new 'Project 2020' that has been presented to all market participants describing in detail the implications, the planned schedule of various market changes and new requirements that are connected with this Directive implementation."

He added: "Out of all of these changes introduced, the most challenging not only for Czech custodians but also for clients is the partial settlement, which will be defined by the CSD according to the SMPG Standards, the Penalties for non-settlement and buy-ins, the Late Matching Fail Penalty (LMFP) and Settlement Fail Penalty (SEFP). It is apparent that all the parties would need to think about how these newly presented fees could be minimised and how to overcome the technical difficulties connected with monitoring and invoicing."

Kandravy concluded: "At the last 'Project 2020' workshop held on January 8 2019 the CSD presented its idea on how the settlement clearing should be introduced in 2020, i.e. whether it should be the daytime settlement cycles and the non-binding settlement finality after each cycle, the over-night settlement cycle and the daytime settlement cycles with RTGS between these cycles or the over-night settlement cycle and the RTGS during the day. During the meeting another idea came from the market to increase the number of settlement cycles and no RTGS, it seems this one is favoured by the majority so it is believed that more discussions on this topic will be required."

DENMARK

Unweighted	Score
SEB	5.98
Nordea Bank	4.36

Weighted	Score
SEB	6.28
Nordea Bank	5.48

The Danish market is still undergoing changes in multiple areas, driven largely by regulation and harmonization, according to Lasse Larsen, head of


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investor services, Denmark at SEB.

Larsen said: "The primary ongoing topic in the Danish market is the recently conducted migration of DKK settlement to T2S."

In October, Denmark's Nationalbank connected its Kronos2 settlement system to the European T2S platform, meaning that for the first time securities transactions priced in Danish kroner could be settled on T2S.

Larsen continued: "Although the market has now migrated and made DKK settlement on T2S a reality, the migration itself and particularly the weeks and months after the migration displayed a number of issues and challenges - some of which are still being worked upon in the market in general."

He continued: "There is a high focus and attention from market participants, local as well as global, to regain a smooth and efficient low risk market that is harmonized in line with the overall objective of T2S.

"There will be further need for calibration and adjustments in the market, as well as for a continued post migration evaluation and information sharing in relation to efforts of rebuilding trust in the Danish market as a whole. A level of stability has been achieved by now, however an optimal and longterm sustainable situation in relation to the many issues and challenges experienced and identified during migration is still to be agreed upon."

He added: "The international confidence in the Danish market from a post-trade perspective is wearing very thin and a complete and transparent Post Mortem documentation, an independent investigation on what went less optimally and a clear and unified plan for the next few years are all absolute necessities."

The second topic that has been flagged locally and internationally is the Danish dividend tax situation, added Larsen. "Work is still ongoing for the new tax regime that will be implemented a few years ahead with the objective to present a long-term solution that will minimize public risk to the highest extent possible, while at the same time ensuring that investors' entitlements are protected. Several solutions have been presented and although what is currently at the drawing board admittedly has its flaws, there is a positive drive in the development."

The Danish CSD and its market participants are separately entering the final stages of their Central Securities Depository Regulation preparations. Nasdaq Copenhagen has also expanded the scope of instruments cleared by a Central Counterparty (CCP) on Nasdaq Copenhagen to include shares in the Small Cap segment.

ESTONIA

Unweighted	Score
SEB	6.33

Weighted	Score
SEB	6.08

The Estonian market is busy introducing reforms on various fronts including tax reforms and regulation to enable covered bonds, according to Kadi Eichhorn, custody client services manager at SEB.

Eichhorn said: "As of January 1 2019, new rules will apply concerning withholding tax on dividends from Estonian companies to private persons."

On December 13 2017, the Estonian Parliament adopted amendments to the Securities Market Act (SMA) to transpose Mifid II and the accompanying implementing directive.

Amendments to the SMA include, among others: introducing product governance regulation; enhanced information provision requirements to investors (e.g. inducements); stricter rules on managing of conflict of interest; amendments related to information on costs and charges; amended rules on investment advice, order execution and asset safekeeping; and obligations to nominate safeguarding officer introduced.

Eichhorn said: "The President of the Republic of Estonia has declared a Covered Bonds Act and it will enter into force on March 1 2019. This would create a way for Estonian banks to issue new type of bonds and for investors to invest money in them, thus stimulating the Estonian capital market. The covered bonds are secured by banks' claims against real estate loan recipients or against state and local government units. The issuing of covered bonds is accompanied by strengthened financial supervision of the credit institutions. To issue covered bonds, credit institutions have to apply for an additional authorisation."

The Estonian authorities are also working on a real-time payments service. "Instant payments will make it possible to make euro payments around the clock in just seconds," said Eichhorn. "The objective is for instant payments to start functioning among the first banks in autumn 2018 and for instant payment to become the new standard for making payments."

Eichhorn continued: "We see the benefits and new opportunities for the Baltic capital market arising following the migration of Nasdaq CSD to T2S in 2017, as well as further financial integration of the Baltic market in Europe, its growth potential and opportunities for strengthening the region's competitiveness."

FINLAND

Unweighted	Score
SEB	5.87
Nordea Bank	5.06

Weighted	Score
Nordea Bank	6.21
SEB	5.58

The Finnish market, like its Nordic counterparts, has been investing in its market structure. Jopi Sairio, head of investor services, Finland at SEB, said: "The major event during 2018 in Finland was the deployment of Release 2 to the Infinity system, after also equities are finally in the new CSD environment. In order to reach the set target date of May 7, Euroclear Finland (the CSD) had to de-scope some functionality of the system. This means, for example, that dividend processing is still done outside Infinity. The launch itself was deemed as successful but there were severe quality issues during the first production months. The quality improved during the late fall to an acceptable level and further quality enhancements are carried out by continuous production releases."

Sairio continued: "During 2018, Euroclear Finland complemented its CSDR license by adding supplementary documentation to the original application. This means that the local authorities have now declared the application as complete and the CSDR license should be granted at latest Q3 2019.

"Due to the above mentioned issues the roadmap for Finland towards T2S remains unclear. Additional features such as partial settlement and full dividend processing need to be deployed to Infinity before joining T2S. Also the changes deriving from Shareholder Rights Directive II and Settlement Penalty Regime need to be implemented."

The Finnish authorities are also weighing up tax reforms. Sairio continued: "In the past year, there has been growing interest on taxation-related matters and nominee registration in particular. In June 2017, when the Finnish government approved the Government bill in relation to the CSDR, the prerequisite by the Finnish Parliament was that the government will draft a new Government bill allowing the Finnish tax authorities to obtain information about nominee-registered beneficiaries. Consequently, a new Government Bill was drafted and circulated to the market participants."

He said: "Eventually a subsequent bill was approved by the parliament on March 13 2019, even after Finnish Government had resigned less than a week earlier. The bill contains substantial changes to the current dividend handling on nominee registered holdings, e.g. the current simplified withholding process will be abolished and the non-treaty rate will be increased to 35%.

"In essence, the aim is to receive more detailed information about the ultimate beneficial owner under nominee-registered holding. The bill and impacted laws will to a large extent be applied as of 2021. This trend on tougher and more detailed tax regimes is seen all across the Nordics and is also evident on a global basis," Sairio concluded.

FRANCE

Unweighted	Score
BNP Paribas Securities Services	5.70
Deutsche Bank AG	5.35

Weighted	Score
Deutsche Bank AG	7.05
BNP Paribas Securities Services	4.89

France has one of the world's most mature post-trade market infrastructures in the world. Euroclear France is the central securities depository for equities and debt instruments, and also provides functions such as clearing and settlement, registration and corporate action processing.

Euroclear, which operates CSDs in key European markets such as Paris,

Amsterdam, Brussels, Lisbon, London and Dublin, delivers efficiency partly by operating a single technology platform across multiple national CSDs.

In November, the French CSD published a report in conjunction with consultancy Ailancy to promote investor transparency by proposing a series of concrete measures to allow issuers to better know the owners of their securities.

Brigitte Daurelle, chief executive officer at Euroclear France, said in November: "We are very proud to have worked together with financial market participants to improve shareholder transparency and governance. Through such initiatives, the Place de Paris is taking concrete steps to become an even more attractive, competitive and transparent European financial market."

In June 2018, Euroclear, ABN AMRO Clearing, EuroCCP and Nasdaq completed a joint distributed ledger technology-based proof of concept to make more efficient the use of securities for margin calls.

The solution was designed to address significant business challenges and inefficiencies related to the current provision of collateral to central counterparties (CCPs).

These issues have been heightened by recent market changes such as extended trading hours by stock exchanges and the requirement to centrally clear derivatives traded bilaterally under the European Market Infrastructure Regulation.

Walter Verbeke, global head of business model and innovation at Euroclear, said: "As a major collateral house, holding €28.5 trillion worth of assets, we are pleased to participate in this initiative. It demonstrates that a smart combination of NewTech and the resilience of the Central Securities Depository can work effectively and in full compliance with regulatory requirements."

The underlying collateral transfers were processed by Euroclear's Central Securities Depository, ensuring settlement finality and regulatory compliance.

GERMANY

Unweighted	Score
BNP Paribas Securities Services	5.84
Deutsche Bank AG	5.38
CACEIS Bank	5.23
Commerzbank	4.73

Weighted	Score
Deutsche Bank AG	6.26
BNP Paribas Securities Services	4.21
CACEIS Bank	3.49
Commerzbank	3.33

Germany's post-trade market structure is based on the clearing and settlement services offered by Deutsche Boerse Group. Eurex Clearing is the main Deutsche Boerse group clearing house based in Frankfurt while Clearstream is the depository based in Luxembourg.

As one of the largest depositories in Europe, Clearstream is at the forefront of the implementation of the European Central Securities Depository Regulation, according to Mike Clarke, head of EMEA securities services product management at Deutsche Bank.

Clarke believes the implementation of CSDR, which has taken years after it initially entered into force in September 2014, has the potential to shake-up depository and custody services in Europe.

He said: "The implementation of the CSD Regulation (CSDR) requirements, including the mandatory offering of segregated and omnibus accounts, as well as the settlement discipline regime, will result in a review of the custody product to make it compliant with legal requirements."

Clarke also feels the update to the Shareholder Rights Directive (SRD II), which is likely to be implemented before June 2019, is material.

"The revised Shareholder Rights Directive will require intermediaries to disclose shareholder information to issuers upon their request. Deutsche Bank will also be required to ensure that information related to the above events is transmitted to underlying clients in a timely manner. The technical standards in this regard have been adopted by the European Commission in September 2018 and need to be implemented by September 2020," Clarke added.

GREECE

Unweighted	Score
BNP Paribas Securities Services	5.72

Weighted	Score
BNP Paribas Securities Services	5.63

Hellenic Central Securities Depository (ATHEXCSD) applied for authorization under the Central Securities Depositories Regulation (CSDR) to the Hellenic Capital Market Commission in 2017. An important milestone towards the compliance of the Greek capital market with CSDR was reached in October 2018 when a law implementing various adjustments to domestic legislation to comply with CSDR was published.

CSDR will bring some changes to ATHEXCSD's offering. "In more detail, apart from the changes in its rulebook regarding the settlement discipline and internalised settlement reporting, ATHEXCSD should make the necessary amendments in order to offer its members an omnibus accounts structure," said Alexandros Efstratopoulos, head of HSBC Securities Services Greece.

He added: "This is quite a change for the ATHEXCSD since the market previously operated under an end investor account opening model. Moreover, the Greek state issued for the first time since the beginning of the economic crisis a 10 year bond and Greece is gradually trying to normalise its access to the capital markets through new bond issuances."

Kelly Kakanaki, head of Greece for BNP Paribas Securities Services, notes that Greece continues to present a challenging economic climate where the main reforms aim to simplify the investment framework and attract foreign investment to drive the country's long-term economic recovery.

"The various regulations have been the main players of the domestic market (MiFID II, CSDR and SRD II). The CSDR plays a pivotal role in harmonising post-trade processes and the financial market infrastructures in the European Union," Kakanaki said.

Kakanaki observed that BNP Paribas Securities Services Greece is closely monitoring CSD adaptations to the new regulatory framework and actively participating in structural changes to the main market.

HUNGARY

Unweighted	Score
BNP Paribas Securities Services	6.65
Raiffeisen Bank International	5.72
UniCredit	5.53
Citi	5.37

Weighted	Score
UniCredit	7.53
Citi	7.31
Raiffeisen Bank International	5.88
BNP Paribas Securities Services	4.39

In January KELER, the Hungarian CSD, announced amendments to the margin requirements of the Budapest Stock Exchange securities cash market as a result of product margin review in response to changing risk levels.

Livia Meszaros, head of UniCredit Global Securities Services Hungary, observed that in May 2018, KELER - together with the Central Bank of Hungary - published the corporate actions reforms document in order to harmonise corporate action processes with T2S and according to the expectations of the ECB.

The major targets of the reform are the creation of a central corporate action database (golden source); the standardization of the proxy documentation; the introduction of an automatic market claim; transformation and buyer protection in market practice as well as the introduction of an institutionalized tax refund procedure (quick refund); and the full nominee concept to cover both shares and fixed income securities.

"Four working groups have been established by the national stakeholders group, of which two are dedicated to deal with the different topics of the corporate actions reforms," explained Meszaros.

A working group has been established to analyse the impacts of the settlement discipline as well as to work out the framework around the rules. KELER is already partially compliant with CSDR – the T+2 settlement cycle and daily reconciliation are already in place, asset segregation at the CSD is theoretically possible up to beneficial owner level and KELER complies with the capital requirements.

"The Hungarian CSD also decided to fully redesign its strategic modernisation programme," added Meszaros. "The aim of KELER is the gradual replacement of its system. This constitutes the first milestone which shall be completed by Q3 2020 in line with the effective date of CSDR settlement discipline."

Additionally, within this time frame the target is to have the automation of the current T2S-connection (which is manual at the moment), the introduction of some additional T2S functionalities - such as DCP function and account segregation in T2S, currently not available in the Hungarian T2S environment - the achievement of full CSDR compliance and the plan to introduce ISO20022 standards.

The focus of the second milestone will be on the developments related to KELER's background business procedures.

"KELER confirmed its aims to prepare additional developments at a later stage," said Meszaros. "However, the time frame and exact scope have not been set yet - these developments will be related to corporate actions and new securities services such as linked transactions, back-to-back transactions, optimisation and securities lending."

ICELAND

Unweighted	Score
Landsbankinn hf	4.73

Weighted	Score
Landsbankinn hf	6.72

Iceland's stock exchange is part of Nasdaq Nordic alongside exchanges in Copenhagen, Helsinki, and Stockholm. Trades executed on Nasdaq Iceland are cleared and settled through Nasdaq CSD Iceland (NCSDI), with a T+2 settlement cycle.

In 2018, two new companies listed on Nasdaq Iceland's main market and one company was admitted to trading on First North Iceland, according to Nasdaq's *Nordic Surveillance Annual Report*, published in January 2019.

The Financial Supervisory Authority is the regulatory body for Iceland's financial enterprises. In October 2018, the country's Ministerial Committee on Economic Affairs and Restructuring of the Financial System announced a review of the statutory framework for monetary policy, macroprudential policy, and financial market supervision. This includes the merger of the Financial Supervisory Authority and the Central Bank of Iceland. The government intends the two 'to be merged in a manner that builds greater trust and ensures efficiency in the implementation of macroprudential policy and financial market supervision'.

IRELAND

In March 2018, Euronext completed the acquisition of 100% of the shares and voting rights of the Irish Stock Exchange.

The transaction was expected to increase market choice to existing and future Irish listed companies and the Irish capital markets' ecosystem, with a single pool of liquidity and leveraging of Euronext corporate services for SME and technology companies to support scaling companies in Ireland.

Peter Stewart, head of securities services UK and Ireland at Citi, noted that as a result of the decision of the United Kingdom of Great Britain and Northern Ireland to leave the European Union - and in order to secure a transition period in the event of a no-deal scenario - Euronext Dublin selected Euroclear Bank as its preferred partner for a long-term solution for Irish securities settlement post Brexit from March 2021.

Euroclear UK and Ireland (EUI) has been granted approval by the European Securities and Markets Association to continue to support the settlement of Irish securities in the interim period.

"In relation to CSD Regulation, Citi worked closely with the regulators and the local central depository (Euroclear UK and Ireland) to define the operational requirements related to the settlement of transactions in USD within the local depository to evolve from an assured payment mechanism to a type one DVP real time gross settlement basis to ensure compliance with CSD Regulation," explained Stewart.

ITALY

Unweighted	Score
Deutsche Bank AG	5.63
BNP Paribas Securities Services	5.56

Weighted	Score
Deutsche Bank AG	6.18
BNP Paribas Securities Services	5.28

In August 2018 Banca d'Italia and Consob, the regulator of financial markets in Italy, issued joint legislation across post-trade, introducing new rules governing central counterparties, central securities depositories and central depository services. The changes replaced the previous regulation dating back to 2008.

The main new feature of the rules was the revision of the reporting requirements towards supervisory authorities, which will only affect central counterparties and central securities depositories.

In November, Banca d'Italia held seminars dedicated to promoting best practices in the post-trading phase of central bank monetary policy operations and investment transactions.

The settlement process for different financial instruments was examined, as well as issues related to accounting and to the relationship with custodians. Specific sessions were dedicated to securities lending and collateral management and to the treatment of futures and interest rate swaps, as well as the related clearing issues.

The development and operation of European securities settlement engine TARGET2-Securities (T2S) was originally assigned to Italy's central bank, along with central banks in France, Germany and Spain.

In its role as platform operator, Banca d'Italia is - together with Deutsche Bundesbank - the first point of contact for all participating national central banks and central securities depositories; it intervenes in the event of a malfunction, monitors compliance with the expected service levels and helps to maintain and develop the system as well as to manage the administrative, legal and security aspects.

Monte Titoli, part of the London Stock Exchange Group, was one of the first CSDs to migrate to T2S, as early as August 2015.

In 2015 Banca d'Italia assessed the readiness of the depository and of Italy's financial market, and coordinated the preparation for an orderly migration. Other depositories moved to T2S at various times between September 2016 and September 2017.

Assogestioni is the representative association of the Italian investment management industry.

LATVIA

Complex measures implemented in 2018 have altered the Latvian banks' customer base and enabled the introduction of new business models with a focus on the servicing and attraction of domestic and European Union (EU) customers.

According to Latvia's Financial and Capital Market Commission (FCMC), domestic and EU deposits are dominating in the Latvian banks, reaching 91% of all banking deposits, of which 80% are deposited by local customers, 11% by residents of other EU member states, and 9% by customers from other countries.

In May 2018, amendments to the Law on the Prevention of Money Laundering and Terrorism Financing took effect, imposing a requirement on financial market participants in Latvia, within 60 days, to distance themselves from firms that meet two features of shell companies.

As noted by Gatis Simsons, senior manager of custody services, Latvia at SEB, new rules were also applied at the start of 2018 concerning withholding tax on dividends and interest payments.

The tax rate is not applied for dividends from Latvian enterprises (profit gained after 2018) if corporate income tax for the profit is paid.

Also, the tax rate is not applied for interest payments from Latvian government bonds and corporate bonds, if interest payment is paid for foreign investors (entities and individuals).

According to Simsons, the biggest challenge for the Latvian market in 2018 was the implementation of new EU regulations, such as Mifid II, the Central Securities Depositories Regulation (CSDR) and the General Data Protection Regulation (GDPR).

"CSDR was implemented in local law in the last quarter of 2017, which made new requirements for market participants in 2018, such as additional reporting to CSDs and additional obligations to global custodians," Simsons explained.

"In 2019, Latvian institutions and companies will be undergoing changes again for new EU regulations coming in including the Shareholder Rights Directive II which will be implemented into Latvian law. The changes mostly cover disclosure of shareholders' details, voting services and overall shareholder engagement."

LITHUANIA

Unweighted	Score
SEB	6.33

Weighted	Score
SEB	6.07

After the successful merger in 2017 of the Estonian, Latvian and Lithuanian CSDs, the countries are continuing to align processes in the area of custody services.

"The latest developments positively impacted the size of market capitalization value and companies are also increasing their performance," said Dovile Stanyte, custody client services manager at SEB.

According to Stanyte, the biggest challenge for the Lithuanian market in 2018 was new EU regulations, such as MIFID II and GDPR.

"These measures have strongly improved client asset safety by means of correct segregation and proper use of financial instruments. At the same time, alterations were made in the Lithuanian market by implementing new KYC and AML procedures and to administer clients' data in a more secure way," Stanyte said.

Separately, financial literacy progress in Lithuania is significantly increasing resident investors' securities portfolios, added Stanyte.

In 2019, Lithuanian legal institutions and companies will be undergoing changes again ahead of new regulations such as the Shareholder Rights Directive II, which will be implemented into Lithuanian law.

The changes mostly cover disclosure of shareholders' details, voting services and overall shareholder engagement.

LUXEMBOURG

Unweighted	Score
Clearstream	6.38

Weighted	Score
Clearstream	5.51

Luxembourg remains the favourite domicile for Undertakings for Collective Investment in Transferable Securities (UCITS) – the most commonly accepted regulatory standard for funds around the world.

A report in 2018 by US fintech Broadridge suggested UCITS assets have the potential to grow at a compound rate of 5% in the next three decades, with average annual net sales flows rising from €201 billion in 2017 to €860 billion in thirty years.

More than one third of funds domiciled in Europe are sourcing assets from multiple European and global markets and, of these, 64% are based in Luxembourg according to the Association of the Luxembourg Fund Industry (ALFI).

According to the *Luxembourg Private Equity and Venture Capital Investment Fund Survey*, published by Deloitte and ALFI in November 2018, assets under management have increased by 20% year on year, confirming Luxembourg's attractiveness as a domicile for alternative investment funds.

In January, the Securities and Futures Commission (SFC) of Hong Kong and the Commission de Surveillance du Secteur Financier (CSSF) of Luxembourg signed an agreement providing a framework for the mutual recognition of covered funds offered, marketed and distributed to the public in Hong Kong and to retail investors in Luxembourg.

It serves as a facilitator for the approval and marketing of investment funds in both jurisdictions.

Depositaries will have to comply with new rules on safekeeping in April 2020, following the publication of two Commission Delegated Regulations in the EU's Official Journal on October 30 2018.

Depositaries of both UCITS and AIFs are currently subject to a number of obligations relating to the safe-keeping of assets.

However, there is a divergence in the level of protection for financial instruments held in custody by depositaries as a result of differing national and insolvency laws.

The two Commission Delegated Regulations seek to ensure more clarity and consistency in how assets are kept separated so that investors are better protected and to ensure more market efficiency.

NETHERLANDS

Unweighted	Score
BNP Paribas Securities Services	5.70
Deutsche Bank AG	5.24

Weighted	Score
BNP Paribas Securities Services	5.90
Deutsche Bank AG	5.71

While banks opt for Frankfurt and Paris for their post-Brexit offices on the European continent and portfolio managers relocate their European activities to Luxembourg and Dublin, the Netherlands has been welcoming financial trading infrastructure, in particular equity and bond platforms.

Many trading platforms have applied for a licence from the Authority for the Financial Markets (AFM), positioning the Netherlands as the centre for financial trading infrastructure of the European Union (EU).

In early 2019 the AFM conducted more than 150 interviews with companies that are interested in applying for a licence.

"We assume that between thirty to forty percent of the European trade in financial instruments will opt for the Netherlands as a location," said Merel van Vroonhoven, chair of the AFM.

"The arrival of these parties will also attract other service providers. Moreover, it strengthens the access of Dutch pension funds and other portfolio managers to the capital market."

The migration of trading infrastructure to the Netherlands also offers good safeguards for uniform supervision and high standards for governance and the protection of investors.

However, this does mean an expansion of the tasks of the AFM. The watchdog has said investments in extra capacity, knowledge and support services, such as the processing of transaction data, are necessary.

As the Dutch Central Securities Depository, Euroclear Nederland is regulated by AMF. The official stock exchange is Euronext Amsterdam.

NORWAY

Unweighted	Score
SEB	5.91
Handelsbanken	5.54
Nordea Bank	5.09

Weighted	Score
Nordea Bank	6.45
SEB	5.89
Handelsbanken	5.15

According to Jonas Modigh, head of sales, securities services at Handelsbanken, there were significant changes in the Nordics during 2018 including the implementation of Infinity system release 2 in Euroclear Finland, Denmark joining T2S, and new rules and documentation requirements for obtaining tax relief at source in Norway.

"During 2019, the Nordic CSDs will fully adapt to CSDR and becoming compliant, impacting the market participants with new functionalities such as partial settlement, hold and release, and third settlement cycle in Norway," Modigh added. "There will also be changes in the taxation area for foreign investors in the whole Nordic region with limited possibilities for tax reclaims and increased requirements on documentation going forward.

"We see an increased interest in our different account operator models, where larger foreign investors such as CCPs, ICSDs and global custodians open accounts directly at the local CSD and not through a local agent bank as traditionally is the case. Thanks to our brand new Nordic platform, we are able to offer asset servicing on a standalone basis to these clients."

Rune Eriksen, head of investor services Norway at SEB, noted that equities traded on Oslo Børs and Oslo Axess have qualified for clearing through EuroCCP since November 2018.

"With the new clearing link, trading participants on Oslo Børs and Oslo Axess will have a choice between three clearing houses: SIX x-clear, LCH and EuroCCP," Eriksen added.

Separately, the new tax administration act came into effect on January 1 2019. This means that new rules apply concerning withholding taxation of dividends from Norwegian companies to foreign shareholders at a reduced rate compared to the ordinary rate of 25%.

"In general the new rules require much more documentation than previously from both the investors and the custodians," SEB's Eriksen added.

Oslo Børs has announced that it has decided to make preparations to enable shares denominated in currencies other than NOK to be listed and traded. The currencies involved are EUR, SEK and DKK but others might come into scope. This product is expected to be in place at some point in the first six months of 2019.

Meanwhile, Euronext and Nasdaq have both published offers to acquire all issued and outstanding shares of Oslo Børs VPS Holding. This, as Eriksen noted, will be a story worth following in the coming months.

Ola Mjorud, head of securities services, Nordics at Citi, said: "Should Nasdaq be the successful bidder, the Nordics will have one common exchange across all Nordic markets, comprised of Norway, Sweden, Finland and Denmark of which only Denmark is a member of T2S.

"While the complexities of the four markets may not reduce in the near future, certain harmonization at trading level may be a result of a potential exchange consolidation. The Nordic markets will still have four currencies and national laws, widely different market practices, and four distinctly different central securities depositories."

POLAND

Unweighted	Score
BNP Paribas Securities Services	6.11
Bank Pekao SA	5.80
ING	5.62
Citi	5.55

Weighted	Score
Citi	7.34
ING	6.65
BNP Paribas Securities Services	5.78
Bank Pekao SA	5.50

In August 2018, the Polish Ministry of Finance published draft amendments to the corporate income tax, personal income tax and tax ordinance act. These amendments included several regulations designed to reduce complexity in the tax system.

The new tax regulations have negatively impacted availability of relief at source for investors and require local custodians to perform due diligence of investors to whom relief at source is offered, explained Mariusz Piękoś, head of financial institutions at Bank Pekao.

"In addition, penalties and the scope of the local custodian's responsibility for improper performance of withholding tax agent duties have substantially increased," he said. "As a consequence, relief at source is offered only to limited types of investors such as central banks or supranationals."

The main goals of the local custodian industry remain full netting, not only at CCP level but also in the books of local custodians acting as local clearing agents for Warsaw Stock Exchange (WSE) remote members; and automation of the pre-matching process between market participants.

"The Polish CSD is continuing implementation of the changes related to CSDR," added Piękoś. "The main focus is now on the second phase of tests of ISO 20022 for corporate action."

The Polish banking sector is still pretty fragmented on the back of a series of changes in recent years mainly because of the low interest rate environment, which makes it more difficult for smaller banks to compete.

"In addition to the disposal of UniCredit's stake in Bank Pekao to PZU, Deutsche Bank sold its Polish retail and commercial banking units to Santander, BNP Paribas took over Raiffeisen's Polish arm and Societe Generale sold its Polish retail franchise (Euro Bank) to Bank Millenium," observed Piękoś. "However, the above changes haven't influenced the number of the providers offering custody services in Poland."

It will definitely be an interesting year for the Polish post-transactional landscape, added Natalia Pawluś, sales and relationship manager at BNP Paribas Securities Services Poland. "Amongst several upcoming changes, the most significant is the e-voting project, launched by KDPW in cooperation with IBM Poland."

The electronic voting platform is based on blockchain technology, explained Pawluś, and should not only boost the effectiveness of proxy voting handling, but also increase the responsibility, engagement and transparency of the shareholders – which is in line with the Shareholder Rights Directive II assumptions.

PORTUGAL

Unweighted	Score
BNP Paribas Securities Services	5.80

Weighted	Score
BNP Paribas Securities Services	5.88

Isabel Ucha was appointed chief executive officer at Portuguese exchange Euronext Lisbon, effective from January 1 2019, following the resignation of Paulo Rodrigues da Silva. Ucha has been with Euronext since 2007, and became a board member of Euronext Lisbon in 2014.

Ucha also took on the chief executive role at Interbolsa, the Portuguese national CSD owned by Euronext, which provides settlement services for Euronext Lisbon. Clearing is conducted via LCH SA.

Fabrice Segui, head of BNP Paribas Securities Services in Portugal, said: "Portugal has finished transposing Mifid II and new initiatives are expected to follow, such as the transposing Shareholder Rights Directive II, or implementing the settlement discipline regime introduced by CSD Regulation (CSDR).

"From an infrastructure evolution perspective, the Portuguese CSD, Interbolsa, has been granted the licence to operate according to the European CSDR. As such, we are among the first CSDs in the EU to be re-authorised under this regulation. Interbolsa has also extended its links with foreign CSDs, namely by setting up a relayed link with the Securities Settlement System of the National Bank of Belgium thus enabling cross-border settlements of Belgium Bonds via TARGET2-Securities."

Segui added: "More recently, the Portuguese government introduced the Investment and Property Management Companies (SIGIs), commonly known as Real Estate Investment Trusts (REITs) in other jurisdictions, as part of a set of initiatives that aims to promote investment in the economy and competitiveness in the securities market."

ROMANIA

Unweighted	Score
Société Générale Securities Services	6.64
Citi	5.62

Weighted	Score
Citi	8.00
Société Générale Securities Services	3.81

In January, shareholders of the Bucharest Stock Exchange (BVB) approved the establishment of a new company authorized to act as the local CCP. The exchange's CEO stated that the locally established counterparty takes into account the specifics of the Romanian market, where brokerage companies are weakly capitalized.

Only weeks earlier, the BVB had expressed concerns about the major downturn in stock market indices as a result of the government emergency ordinance. The exchange observed that the local capital market - which includes Romanian companies that account for more than 10% of the country's gross domestic product - was in a position that could endanger prospects for future development.

Irina Savastre, head of UniCredit Global Securities Services Romania, explained that in terms of market infrastructure, in September 2018 the market saw the introduction of liberalization of OTC for all type of financial instruments, including equities.

"This was achieved by implementing plain OTC transactions settled through the central depository," Savastre said. "The latter has also kept the OTC turnaround transactions. In terms of regulatory changes, the central depository in Romania is currently under reauthorisation by all competent authorities: FSA, Romanian Central Bank and European Central Bank according to the CSDR for EUR settlements."

RUSSIA

Unweighted	Score
Société Générale Securities Services	6.53
Citi	5.35

Weighted	Score
Citi	7.35
Société Générale Securities Services	4.28

The largest exchange in Russia is located in Moscow. The total market capitalization of companies listed on the Moscow Exchange (MOEX) reached RUB40 trillion ($576.1 billion) as of December 31 2018, according to the exchange's full-year 2018 results.

Clearing and central counterparty functions are performed by the Central Counterparty National Clearing Centre (CCP NCC), which is owned by the Moscow Exchange Group. The National Settlement Depository (NSD) serves as Russia's central securities depository.

Natalia Sidorova, head of UniCredit Global Securities Services Russia at AO

UniCredit Bank, said: "Over the last year, there has been quite a number of radical legislative and market changes in Russia in relation to the securities market infrastructure. This is a clear sign that Russia constitutes an example of dynamic yet evolutionary market development in the region. In particular, this includes a major revision of basic regulations on custody activity and their adaption to the modern reality, termination of the legacy regulatory acts, introduction of the perspective payment system and standardized trading and settlement cycles, simplification of listing requirements, adjustment of taxation rules and refinement of corporate governance."

The NSD has also been driving developments in the market. Sidorova pointed to the evolution of corporate action reform, adaption to ISO 20022 standards, and the implementation of a direct access model as examples of this.

"The latter initiative gives the right to NSD to open accounts of foreign nominee holder (FNH) to any foreign legal entity which in compliance with its personal law is entitled to register and transfer rights to securities," explained Sidorova. "Prior to those amendments, FNH accounts could be opened only to ICSDs. Such a structure may potentially change the sub-custodian's role in the market and serves as an alternative to the currently used model of a foreign custodian acting through its local sub-custodian. Under the direct access model, in case a foreign custodian opts to open a direct account with the CSD, it is expected that the local sub-custodian will serve as an operator of such an account with the CSD, which would eliminate the foreign custodian's risks of direct interaction with the CSD and cater for the operational side of such an interaction."

She added: "The major Russian regulator, the Bank of Russia also has ideas to further transform the infrastructure of the Russian securities market, in particular, the potential merger of custody and registrar licences, the introduction of segregated securities accounting up to the final beneficial owner, the development of securities lending, etc."

The last 12 months have also seen the application of new technologies in Russia's securities market. Sidorova said: "NSD has successfully tested an e-proxy voting system running on a distributed ledger technology while the Bank of Russia, together with the other market participants, has initiated the establishment of the Marketplace for financial services. The platform allows individual users to easily access financial services placed by Russian financial institutions (banks, asset management companies, insurance companies) online, compare them and purchase remotely from anywhere in the world. Such financial services include the remote opening of deposit accounts, the online purchase of insurance products, securities and credit offers."

The NSD, acting as financial transaction registrar, registered the first transaction through the Marketplace project in December 2018. MOEX announced the completion of the development phase of the platform to remotely open deposit accounts in February 2019. The platform will be made available once relevant amendments to the legislative framework have been made.

SERBIA

Unweighted	Score
Société Générale Securities Services	6.35
UniCredit	5.53

Weighted	Score
UniCredit	7.43
Société Générale Securities Services	4.43

The Belgrade Stock Exchange was founded in 1894, although the legal framework for its establishment dates back to 1886.

The country's Central Securities Depository and Clearing House was established in 2001 as a division of the National Bank of Serbia. It was registered as a joint-stock company in 2003 and is wholly-owned by the state.

The Republic of Serbia Securities Commission oversees the application of relevant market legislation, safeguards the functioning, integrity, efficiency and transparency of Serbia's capital market, and enhances investor protections.

One of the most notable developments over the last year was the enforcement of declared dividends. "Dividend payment discipline was one of the topics of discussion between market regulators and market infrastructure," explained Jasmina Jankovic, head of UniCredit Global Securities Services Serbia at UniCredit Bank Serbia JSC, who noted that issuers were under no obligation to announce a dividend payment date or even perform payment within a certain period of time.

Jankovic added: "The discussions resulted in a big step forward into a greater commitment of the issuers to introduce the dividend payment period. Issuers now have six months from the day of the decision on dividend payment to honor their obligations vis-à-vis the shareholders. The new dividend payment rule was incorporated in the Law on Companies and became applicable as of October 1 2018."

Meanwhile, the Belgrade Stock Exchange has been working to stimulate awareness and investment in the country's capital market through 'Serbia: IPO Go!' This project was launched in March 2018 to encourage Serbian companies to list on the exchange.

In 2018, Fintel Energija listed on the exchange following a gap of more than 80 years. The company's shares were admitted to the Prime Listing segment of the exchange, and began trading in November.

SLOVAKIA

Unweighted	Score
UniCredit	5.07

Weighted	Score
UniCredit	4.62

Market data from Centrálny depozitár cenných papierov SR (CDCP) for 2018 shows that the central depository executed 5.9% more DvP transfers of securities and processed almost 50% more transfer orders than in 2017. The value of securities transferred in 2018 as free of payment transfers was down by 42%, although transfers increased by almost 13%.

The value of book-entry securities rose slightly. The highest increase was recorded in the value of 'other securities', which include issues of government treasury bills.

"Last year, both Národný centrálny depozitár cenných papierov (NCDCP) and CDCP put a lot of effort into changing their organisation and operations to fulfil CSDR requirements," explains Tosca Cicuttova, head of UniCredit Global Securities Services Slovakia. "Their efforts were rewarded when they were granted licences by the National Bank of Slovakia to operate under CSDR."

Being granted the CSDR licence is just the beginning of the transformation process, though. "The next challenge for both the CSDs and the market is the introduction of the so-called penalty mechanism related to settlement discipline as set out in Delegated regulation (EU) 2018/1229 by 2020," added Cicuttova.

SLOVENIA

Unweighted	Score
UniCredit	5.47

Weighted	Score
UniCredit	7.72

The Ljubljana Stock Exchange (LJSE) will turn 30 this year. Today's exchange was established in December 1989, replacing the country's first exchange, which was founded in 1924 and ceased trading during the Second World War.

The LJSE is Slovenia's only exchange, covering the equity, bond, money-market instruments, and structured products market. In July 2018, the exchange introduced a pre-listing support programme for small and medium-sized enterprises in collaboration with the European Bank for Reconstruction and Development (EBRD). Initially launched as a 24-month pilot project, the scheme sets out to help smaller Slovenian companies access the capital market through an IPO or the issuance of corporate bonds.

LJSE trades settle on a T+2 basis. Clearing and settlement is carried out by the Ljubljana-based Central Securities Clearing Corporation (KDD), established in 1995.

Slovenia's capital market is supervised by the Securities Market Agency, which is also based in the country's capital city.

The main regulatory items on Slovenia's agenda last year were EU directives - the markets in financial instruments regime (Mifid II), the Central Securities Depositories Regulation (CSDR), and the General Data Protection Regulation (GDPR) – said Jana Badovinac Zunek, head of UniCredit Global Securities Services Slovenia at UniCredit Banka Slovenija d.d.

Badovinac Zunek added: "In particular, Mifid II was implemented in Slovenia at a later stage. The first draft of the Market in Financial Instruments Act, which implements Mifid II, was prepared for a public discussion at the end of January 2018 and the Act was finally approved by parliament in December 2018. In addition to Mifid II and MiFIR requirements, the Act detailed the regulation of the guarantee scheme and bankruptcy of a brokerage house and defined the Securities Market Agency competencies in this process. New legal requirements of Mifid II introduced changes to client reporting obligations, related to securities information and fees. The brokerage houses and banks have to comply with the new act within six months from its adoption. Moreover, the Securities Market Agency will issue underlying regulations that are necessary for the implementation of this Act within six months of its validity."

The KDD has been working hard on the implementation of CSDR, noted Badovinac Zunek. "An application for a licence in a line with the CSDR requirements was presented to the Securities Market Agency in September 2017. Upon the request of the Securities Agency, KDD prepared additional documentation, mainly related to the management of KDD. It is expected that the licence will be approved in the second half of this year as regulators require some additional amendments to apply for the licence."

"In line with the CSDR Directive and new Market in Financial Instruments Act, KDD prepared new Operational Rules and Regulations, which entered into force on January 1 2019," Badovinac Zunek continued. "The main changes, prescribed in the new Operational Rules and Regulations, are related to the protection of securities against insolvency of KDD, the procedure in a case of insolvency of a systemic participant, obligatory daily reconciliation of securities positions with the KDD, supervision of KDD's participants and the establishment of a Committee of KDD's Participants."

SPAIN

Unweighted	Score
Société Générale Securities Services	5.81
BBVA	5.74
BNP Paribas Securities Services	5.55
Deutsche Bank AG	5.44

Weighted	Score
Deutsche Bank AG	5.81
BBVA	5.70
Société Générale Securities Services	5.51
BNP Paribas Securities Services	5.46

Bolsa y Mercados Españoles (BME) is the main market infrastructure provider in Spain, including the Madrid, Barcelona, Bilbao, and Valencia Stock Exchanges, and Mercado Alternativo Bursátil (MAB) – the alternative equity market for smaller companies. In 2018, five new companies listed on Spain's main exchanges and 23 joined the MAB.

BME also operates the Spanish central securities depository Iberclear, which launched a cross-border custody and settlement service in December 2018. Iberclear migrated to the TAR-

GET2-Securities (T2S) settlement platform in September 2017, which marked the second phase of the reform of the country's clearing, settlement and registration system.

James Foster, market specialist - sales at BNP Paribas Spain, said: "The Spanish market has been under constant change over the last few years, triggered by the radical Spanish Market Reform implemented in 2016, and a seamless migration to the T2S platform in September 2017.

"BNP Paribas' efforts have been intense to bring Spain in alignment with other European markets and to increase settlement efficiency in the market in preparation for the implementation of the CSDR settlement penalty regime next year. As a result, some important changes are scheduled for 4Q19 which should bring some significant improvements to the complicated registration system in this market."

According to Alexis F. Thompson, head of global securities services at BBVA, T2S is fostering an increasingly competitive scenario that could result in changes to the roles and business models of custodians and CSDs.

Thompson explained: "We anticipate big opportunities for every player in the post-trading infrastructure. We think that the recent changes in the Spanish and European marketplaces give BBVA the opportunity to increase the service offering to those financial institutions which will be demanding new products and services.

"The expertise of local agents is increasingly under demand, with the local touch a must-have for markets such as Spain. The focus on value-added services such as corporate action and tax reclaim services will be 'the name of the game' in the T2S environment. BBVA is well positioned to provide its bespoke solutions in the post T2S world, as a result of our continuous effort to implement innovative services for the new environment."

Elsewhere, Rafael Gonzalez Aller, head of securities services, Southern Europe at Citi, noted that Citi Spain had made substantial progress implementing the Single Legal Vehicle

structure, which is already in place for several countries as part of Citi Direct Custody and Clearing's franchise in Western Europe T2S markets. The expected execution date is late 3Q19.

2019 is a general election year for Spain, which is having some impact on pending legislation. Aller said: "Due to the upcoming general election scheduled for April 2019, the much discussed Spanish Financial Transaction Tax program has been included in the 2019 budgeting law proposal, and was put on hold as a result.

"In the meantime, several industry forums have been established to enable a broad industry representation of relevant parties (including market infrastructures, the Banking Association and subject expert groups) around the discussion to understand the potential impact of the Transaction Tax on business. Citi is actively involved in all forums on behalf of its client base and lends expertise from other markets where similar tax programs have been applied, to share views, anticipate and reduce the impact of the planned tax reform on the market."

In April 2018, Spain launched a public consultation on the securities lending framework for Spanish mutual funds. In its response to the consultation, the International Securities Lending Association (ISLA) said: "ISLA welcomes the consideration of developing a regulatory framework to enable the implementation of securities lending activity for mutual funds in Spain. Securities lending is increasingly recognised as a critical aspect of well-functioning markets, with regulators recognising both the systemic benefits, but also those to the end investors who can received improved performance from funds that are able to participate in this low risk activity."

SWEDEN

Unweighted	Score
SEB	5.94
Nordea Bank	5.31
Handelsbanken	5.10

Weighted	Score
Nordea Bank	6.73
SEB	6.09
Handelsbanken	4.32

The main exchange in Sweden is Nasdaq Stockholm. It forms part of the Nasdaq Nordic exchange group, alongside Nasdaq Copenhagen, Nasdaq Helsinki, and Nasdaq Iceland.

The Nordic Growth Market (NGM) is a regulated exchange that is wholly-owned by Boerse Stuttgart and supervised by the Swedish Financial Supervisory Authority. It trades Swedish, Finnish, Norwegian and Danish securities. In November 2018, NGM extend-

ed its trading hours to 8pm in response to investor demand.

Euroclear Sweden serves as Sweden's central securities depository (CSD). The organization has been active in the Swedish market since 1971, and became part of the Euroclear group in 2008.

Alexander Lantz, head of client services sub-custody Sweden, investor services at SEB, said: "During 2015-2016 several measures were taken by the local Swedish CSD, Euroclear Sweden, in order to improve settlement performance since it has been declining for the vast part of the last decade."

As outlined by Lantz, the measures implemented include: a SEK50,000 penalty for CCP deliveries that fail to settle, per intended settlement date; Euroclear Sweden distributes settlement efficiency reports, one report based on value and one report based on volume, including all clearing members' settlement ratios to all market participants for further distribution to all clearing members; the CSD also sends requests for an explanation of failing trades to clearing members, and sends a compiled report of market fails to the regulator. This applies when the Swedish market has a settlement ratio for CCP cleared transactions below 90% of settlement value for a specific day and the total value of fails in the Swedish market is above SEK2 billion, Lantz explained.

Yet, these measures did not have as positive an impact on the settlement ratio as expected, said Lantz. "As a result, in December 2018 Euroclear Sweden presented a new settlement efficiency model intended to be effective from March 1 2019. This included an economic incentive where participants with a settlement value ratio of 95% or higher would be exempt from penalties, but where for those failing to reach this threshold, the scope of penalties would be expanded to also cover failing OTC deliveries. However, after concerns raised by participants of Euroclear Sweden and international interests, Euroclear Sweden decided to re-evaluate the new model and consequently it was not implemented. The objective to decrease the amount of settlement fails remains, therefore there are continued discussions about what the next measures will be."

Lantz continued: "Euroclear Sweden decided in October 2015 to implement a new CSD platform (based on Euroclear Finland's Infinity system) in Sweden as the best way to achieve CSDR compliance but decided 14 months later to abandon those plans. Instead, it was decided to rebuild the current VPC system to make it CSDR compliant. A number of changes related to settlement discipline, such as intended settlement date, partial (split) settlement functionality and settlement transaction type codes, are planned to be implemented on November 18 2019. Further changes, supporting penalties and buy-in, are tentatively planned to be implemented in September 2020.

"There are ongoing discussions in the market about possibly expanding the scope of CCP-clearing to securities listed on Nasdaq's Small Cap and First North segments. If decided, the intention is to introduce the CCP clearing for these segments at the end of 2Q19."

SWITZERLAND

Unweighted	Score
BNP Paribas Securities Services	5.74
UBS AG	5.59
Credit Suisse	5.48

Weighted	Score
Credit Suisse	6.49
UBS AG	6.09
BNP Paribas Securities Services	4.16

The SIX Swiss Exchange is part of market infrastructure provider SIX Group, which was formed in 2008 through a merger of SWX Group, Telekurs Group, and SIS Group.

SIX Sis is Switzerland's central securities depository for the local market and for international securities. Central counterparty SIX x-clear delivers clearing services for cash equities, fixed income, and exchange-traded funds (ETFs).

In April 2018, SIX completed a strategic realignment of its business structure, which included bundling its listing, trading, settlement, and custody activities into a single securities and exchanges business unit.

The group has also been taking steps to leverage the opportunities provided by emerging technologies. In July 2018, it unveiled its plans to build a fully-integrated trading, settlement and custody infrastructure for digital assets. The SIX Digital Exchange (SDX) service will mainly be based on distributed ledger technology (DLT).

Three months later, the group also announced that it had signed a memorandum of understanding with Cortica and Duotem Capital focused on artificial intelligence (AI) applications. The firms will work together to develop AI-based services spanning collateral and cash optimization for the post-trade industry.

Feriz Hasani, head custody banks advisory, executive director at UBS Switzerland AG, said: "The biggest trends in the Swiss market are related to innovation based on new technologies, such as the design of a new ecosystem/marketplace for digital and token-based assets. UBS is highly engaged on a market level to develop fully-integrated digital asset, trading, settlement and custody in Switzerland, such as the SDX project from SIX, to the benefit of the Swiss market."

The Swiss bank has also been exploring advanced technologies to further enhance its automation capacity, noted Hasani. "With the support of OCR (image recognition) we are already now in a position to figure out the most relevant information/requirements, e.g. of a fund prospectus, within a few minutes," he said.

Hasani continued: "We see a new trend where clients are looking for partnership opportunities in innovation to jointly shape market standards and sharing co-operation benefits. UBS have developed new more integrated business models that generate significant mutual benefits front-to-back along the value chain."

TURKEY

Unweighted	Score
BNP Paribas Securities Services	6.59
Deutsche Bank AG	5.82
Citi	5.36

Weighted	Score
Citi	7.32
Deutsche Bank AG	6.45
BNP Paribas Securities Services	4.76

The Turkish Capital Markets Board is among the most proactive in the world, regularly updating legislation to address what it perceives to be gaps in the market and address economic imbalances.

Ibrahim Yurtlu, head of HSBC Securities Services Turkey, observed that Turkish capital markets have been undergoing a profound transformation. Capital Markets Law prepared in accordance with the EU sets a new framework for financial markets with the goal of fostering a more robust and well-functioning financial system while strengthening investor protection by way of extending disclosure requirements for issuers and significantly increasing issuers' liabilities for inaccurate or misleading information in their disclosure documents.

"Requirements for initial public offerings have been eased, a gold-backed bond and lease certificate issuance programme has been launched and the legislative framework of equity-based crowdfunding activities has been laid out to create an alternative financing tool," Yurtlu added.

In the local funds industry, an electronic fund distribution platform has begun to operate, allowing investors access to all mutual funds through a single platform. Additionally, new rules for trade reporting and the introduction of a trade repository have been published, regulating the procedures and principles regarding the notifications to be made to the trade repositories through electronic data storage systems by legal entities and financial institutions in relation to information on derivative transactions in organised and OTC markets.

Nasdaq and Borsa Istanbul (BIST) signed a strategic partnership agreement in 2014 for infrastructure changes designed to replace all platforms (execution, clearing, settlement) via Nasdaq OMX technologies, a project that was successfully completed last year.

"Other infrastructure providers of the Turkish capital markets such as Takasbank (securities clearing house) and the Central Registry Agency are also continuously working on system and process enhancements for an efficient market environment," added Hakan Ulutaş, head of securities services Turkey at Deutsche Bank.

"All market infrastructure providers regularly meet with the local custodians to understand the specific needs of the market and requests to enhance necessary systems and processes," he said. "Turkey has also set specific economic targets to achieve by 2023, the centennial of the republic. One of these targets is to transform Istanbul into a prominent financial centre."

Ertunc Gurson, head of TEB/BNP Securities Services Turkey, described the completion of the Nasdaq/Borsa Istanbul project and Takasbank's status as the CCP for all Borsa Istanbul main markets as a milestone for the industry.

"With support from providers, Borsa Istanbul's capabilities - combined with the new exchange clearing model - allow alternative service models to market members and investors."

Trading and settlement in EUR through the T2S interface has been available as of September 2017. However, as only instruments traded on exchange in EUR are currently available for settlement in T2S, the pool of securities settling in EUR is limited.

UKRAINE

Unweighted	Score
Citi	4.97

Weighted	Score
Citi	6.90

Ukraine held its first round of 2019 presidential elections in March, although no votes were held in Russia-annexed Crimea and the separatist-held areas of Donetsk and Luhansk in the east. As the fallout from 2014's political turbulence continues to be felt, polls suggested comedian Volodymyr Zelensky was leading the presidential race at the time of writing. He will go up against incumbent Petro Poroshenko in April's run-off.

The World Bank expects GDP growth to fall to 2.7% in 2019, compared to growth of 3.3% in 2018. GDP growth for 2020 and 2021 is currently forecast at 3.4% and 3.8%, respectively. In March 2019, Ukrainian Prime Minister, Volodymyr Groysman, said that the government's main economic benchmark for this year was to accelerate economic growth by more than 3%.

There are several regional exchanges in the country, including the Ukrainian Exchange (UX) and the Perspektiva Stock Exchange. The UX announced the launch of a new trading platform on March 1 2019, following the completion of beta-testing in January and February.

The National Depository of Ukraine (NDU) serves as the depository for securities with the exception of government securities, such as treasury bills and government bonds, which fall under the remit of the National Bank of Ukraine.

UNITED KINGDOM

Unweighted	Score
BNP Paribas Securities Services	6.18
Deutsche Bank AG	5.48
HSBC	4.66

Weighted	Score
HSBC	5.49
BNP Paribas Securities Services	4.31
Deutsche Bank AG	3.07

Euroclear UK & Ireland said in early March 2019 that the European Securities and Markets Authority (Esma) had recognised Euroclear UK & Ireland as a third country CSD in accordance with Article 25 of the EU CSD Regulation.

This ensured that Euroclear UK & Ireland will be able to continue its Irish securities settlement services after March 2019 in a no-deal Brexit scenario. Euroclear UK & Ireland's recognition will apply from 30 March 2019 to 30 March 2021, by which time it is expected that the Irish securities market will have migrated to Euroclear Bank.

Peter Stewart, head of securities services, UK and Ireland, at Citi, said: "Regulation and associated market change continues to challenge custodians, investors and brokers in the United Kingdom's securities market; Brexit legal discussions continue to shape and define the changes necessary to provide clearing, custody and settlement services to clients."

In late January 2019, Euroclear announced that the London Stock Exchange Group plc (LSEG) was to become a shareholder, acquiring 4.92% of the company's total shares in issue.

In accordance with the company's Articles of Association, the request to register the transfer of the shares to LSEG was reviewed and approved by the Euroclear Holding SA/NV Board on January 29 2019. Following LSEG's minority investment in Euroclear, LSEG and Euroclear anticipate that a representative of LSEG will join the Board of Euroclear Holding SA/NV.

Marc Antoine Autheman, chairman of Euroclear Holding SA/NV, said in January: "The addition of LSEG to our shareholder base reflects the attractiveness of a neutral open architecture model to players in the capital markets ecosystem, including other financial market infrastructures."

BNP Paribas Securities Services said it aims to help clients navigate regulation and unlock new opportunities.

Stanislas Beneteau, head of financial intermediaries and corporates client line at BNP Paribas Securities Services UK, Middle East and South Africa, said: "One example is the London-Shanghai scheme, due to launch in 2019, which will open China's locally-listed companies to international investors. We expect significant interest from mid-tier foreign investors, who will gain China access for the first time."

He added: "The scheme could help UK issuers tap China's institutional investor base and vast equity market and, with Brexit in mind, could reinforce London's status as a global financial centre. In addition, different settlement cycles and time zones between London and China could leave brokers with a funding gap, opening up opportunities for liquidity providers." ■

The evolution of network management

Massimiliano Notarianni, Global Head of Network Management at Societe Generale's wholesale banking division, discusses some of the key issues affecting network managers, including the current and potential future impact of technology and the prospect of increased collaboration in the area of sub-custodian evaluation.

Managing the sub-custody network of an institution the size of Societe Generale is a considerable undertaking. We manage 85 markets and work with more than 130 sub-custodians. It is our responsibility to ensure that we select the most appropriate sub-custodian, for our clients' activities and also for other wholesale business lines within the Societe Generale Group.

Over the last five years we have performed a number of sub-custodian migrations as the bar is set high by regulations. This does not necessarily mean that these sub-custodians don't do a good job but rather their capacity to consistently maintain the high level we need them to operate at in the medium to long term is limited.

Our objective is to identify sub-custodians with a perspective that they are fit for purpose for the next five years and from the role my team plays in the oversight of sub-custodians, we are well aware that regulation has increased in relation to issues such as protection of client assets. AIFMD, UCITS V, and MIFID2 to cite just some examples underline the requirement for depository banks to undertake robust monitoring of the sub-custodians that hold their clients' assets.

Applying external approaches internally

This has raised the bar in terms of how we inspect our sub-custodians, but within our own organisation we have also seen increased interest in applying the procedures we have adopted for clients to other business lines within the bank.

The number of sub-custodians over which we have oversight has grown and we are looking at other suppliers such as market infrastructures, which presents further challenges.

How we monitor these sub-custodians and infrastructures has also evolved to more in-depth analysis to ensure there are no potential structural issues for us as a client and ultimately for our clients in the long term.

The due diligence process we perform has traditionally been seen as a snapshot exercise where we issue and review questionnaires, conduct pre-analysis and go into the market to reach a conclusion over whether the custodian is fit for purpose. These questionnaires are typically issued on an annual basis and subject to on-site due diligence reviews where the responses are discussed and verified.

While the standard questionnaire can be adapted to meet the specific requirements of the institution undertaking the evaluation, Thomas Murray refers to a number of common points in these documents. These include:

- Credentials – such as the respondent's information; exact bank name; description of the regulatory environment; the bank's group businesses; insurance policy for custody; and a description of the department and its business performance
- Asset safety and custody – including regulations; laws and market practices for custody; the account structure; information on the national central securities depository; control and reconciliation practices; and descriptions of any physical holdings
- Risk mitigation – for example, operational controls; audit; IT disaster recovery; business continuity; cyber security; financial crime prevention and know-your-client checks; and data protection
- Systems – such as reporting; protection of systems integrity; plans for system development; and IT performance
- Core services – including settlements; asset servicing; taxation; cash; securities lending and borrowing; and client service management

Multifaceted approach to supplier review

The questionnaire can also include general client questions. However, even though the questionnaire and due diligence process addresses a wide range of risk subjects, we still have a hands-on 'run the bank' approach to the management and monitoring of these suppliers on a daily basis which supplements the formal questionnaire process.

Events of the last 18 months have increased the intensity in which we undertake monitoring. Throughout 2018, we have had instances where both sub-custodians and infrastructures have experienced significant system issues, which have had subsequent impacts on our business lines.

My view here is that there is a significant IT and regulatory catch-up taking place to change legacy systems and as a result of that pressure we are seeing more IT issues arise. It should therefore not come as a surprise that systems go down for significant periods of time as a result.

Massimiliano Notarianni, Global Head of Network Management at Societe Generale's wholesale banking division

The upshot of the developments outlined above is that it is impossible to capture everything in the due diligence process – there will be new issues that arise and no matter what level of resources you devote to the due diligence process, it will never be watertight ex-ante.

We have conducted reviews of these issues to understand why they happened and particularly whether there are potential structural issues behind these system problems that might lead us to consider alternative suppliers.

Leveraging risk manager expertise

This has obvious implications for the network management team in terms of workload, although we have also drawn on the expertise of risk managers within the group to discuss issues such as business continuity.

Our second line of defences is working much more closely with the network management team, not only to identify potential structural issues but also to build into our own business continuity procedures as to how we would react in the event of problems with our most significant sub-custodians and infrastructures.

In relation to cyber security, we are witnessing positive developments whereby regulators are organising business continuity exercises in the event that a major infrastructure is hit by a cyberattack. Internally, for every custodian we view as critical (that is, having a large amount of client and bank assets and/or presenting market concentration) we are documenting how we would react.

Internal contingency procedures reinforced

Increased regulatory focus on systemic banks means we also have to look to reinforce our own contingency procedures, which means demonstrating how we would support our clients' day-to-day activities if we were in difficulty. One of the most important aspects of this is our migratory plan – in other words, how we would migrate client assets in an orderly fashion.

The most important response to any new issue is to ensure that lessons are learnt. When we go through the post mortem process there can be usually an assurance that external auditors will be engaged to provide an independent view and we have had instances where we have also been called into workshops to look at how resilience can be improved.

There is certainly a collegial approach to dealing with system issues and recognition that we can learn from each other's experiences, which should provide additional assurance to investors. In the area of cyber risk, for example, I would expect that in the event of an attack, there would be co-operation across the industry to ensure the impact was minimised and all related parties learnt from the experience.

Another challenge we face as an industry is how we can introduce technology to assist us in the sub-custodian evaluation process. With the increased number of inspections we have to perform and the need to perform them more in-depth, I would ultimately like to see some form of technology that could automate at least the basic aspects of these reviews.

The role of technology

Artificial intelligence may be the solution to increasing the bandwidth of the team to undertake more on-site, value added monitoring and spending more hands-on time with agent banks to undertake the actions required to mitigate risks rather than spending time on processing and documenting the due diligence process itself.

Societe Generale is already using artificial intelligence to perform evaluations in less complex areas of the business, for example reviewing simple legal contracts in the case of non-disclosure agreements and we are assessing whether this can be leveraged.

The time we invest in more complex due diligence and documenting the process to ensure we are able to prove to regulators that we have completed the process, is considerable. This activity accounts for a significant percentage of our total workload, so I am constantly seeking ways in which my team can spend more time with our sub-custodians to mitigate the actual risks.

The future of sub-custodian evaluation

I have referred to the potential of artificial intelligence, although my initial perceptions are it would require considerable investment. There is also a case to be made for network managers from different institutions to work in a more collegial fashion given that we are all essentially conducting the same reviews on the same sub-custodians.

We have managed to standardise the due diligence questionnaire - can we do the same with the evaluation process? Perhaps that is the next challenge facing our industry. ■

Middle East & Africa

BAHRAIN

Unweighted	Score
HSBC	5.64

Weighted	Score
HSBC	7.84

Bahrain Bourse, established in 2010, is working hard to implement international standards in line with the country's ambition to become a strong regional financial centre.

Currently, the exchange and its central securities depository offer fast and efficient trading backed up by delivery versus payment on a T+2 basis. The Bahrain Financial Exchange (BFX) is a multi-asset exchange to list derivatives and cash instruments on multiple asset classes such as currencies, commodities, and securities-related products for trading.

Francis Dassou, head of HSBC Securities Services Bahrain, said: "In its continuous efforts to improve investor protection and mitigate investment risk in the Kingdom, Bahrain Bourse has appointed the Central Bank of Bahrain as the settlement bank and will be introducing a DVP model with a trade rejection facility shortly."

Dassou said the British banking giant is in close collaboration with market stakeholders (including the Central Bank, the CSD and the largest local broker) on multiple key initiatives, including advocating for the Central Bank of Bahrain to be the settlement bank.

HSBC is also collaborating with the relevant authorities on corporate actions processing to "facilitate a more efficient, accurate and automated dividend distribution process". Dassou added: "We are working on the automation of the dividend distribution away from the traditional method of cheques and via the newly introduced IBAN method."

He continued: "Effective bankruptcy and insolvency legislation is a pivotal consideration when foreign investors are purchasing local securities in Bahrain. Bahrain has introduced bankruptcy laws mirroring the Chapter 11 process in the US, which outlines measures enabling a company to reorganise itself with management in place. The rules also permit business operations to continue during the administration process."

Standard Chartered Bank said it has worked closely with the Bahrain Bourse's central depository, preparing collateral management/pledging proposition for Securities Services clients.

With regards to regulations for securities transactions by borrowing and short selling, Standard Chartered took part in the initial stages of discussions with other market participants.

On March 21 2019, the Central Bank of Bahrain issued a resolution for regulations that will introduce short selling and securities lending. The regulations aim to develop Bahrain's financial sector in line with international best practices, improve liquidity and attract new, sophisticated investors. The Bahrain Bourse and clearing house will issue their own rules and guidelines to establish effective controls and procedures according to the provisions in the resolution.

BOTSWANA

Unweighted	Score
Standard Chartered	5.37

Weighted	Score
Standard Chartered	7.32

In August 2018, the Botswana Stock Exchange completed its demutualisation process to become a public company. Thapelo Tsheole, chief executive officer at the Botswana Stock Exchange Limited, said: "This demutualization and immediate corporatization of the exchange brings forth enormous efficiencies that will enable the bourse to discharge its mandate and drive value for shareholders and stakeholders as we strive to become a world-class securities exchange."

The exchange currently trades equities, bonds and exchange traded funds (ETFs). Trades settle on a T+3 cycle. The Central Securities Depository Botswana was established in 2008, but a new system is being developed with functionalities such as securities lending and borrowing, repo management, and online investor access. This is expected to go live in 2019.

The upgrade forms part of the exchange group's three-pronged approach to improving market liquidity: automation; market education; regulation. This strategy includes the introduction of a new website and mobile app, as well as a data analysis reporting system (DARS) for clearing and settlement – both slated for a 2019 launch. Pending regulatory approval, the exchange will also introduce securities lending and borrowing this year and will potentially be open to the issuance of Global Depositary Receipts (GDRs).

On the regulatory front, a number of changes came into force at the start of 2019. As noted by Standard Chartered Bank, the new Tshipidi SME Board allows smaller firms to raise capital under less stringent listing requirements.

Vincent Baituti, head of investor services at Stanbic Bank Botswana, added: "During 2018 the market made slow but steady progress towards developments that could stimulate liquidity in the market. The Non-Bank Financial Institutions Regulatory Authority (NBFIRA) has approved both the Botswana Stock Exchange (BSE) Limited Equity Listings Requirements, and the Rules for Market Makers (rules are meant to introduce market making in Botswana). These both became effective on January 1 2019. The BSE also managed to complete the demutualisation process, which is a remarkable achievement that should contribute positively to the development of the market.

"The CSD has started the process of implementing a new system which is expected to be compatible with Swift standards; will allow the CSD to link to the Botswana Interbank Settlement System (BISS); will integrate with custodian; as well as have modules for securities borrowing and lending and e-voting."

CÔTE D'IVOIRE

Unweighted	Score
Standard Chartered	4.45

Weighted	Score
Standard Chartered	6.32

Côte D'Ivoire is a member of the Bourse Régionale des Valeurs Mobilières (BRVM), which is headquartered in Abidjan. BRVM is the regional stock exchange for members of the West African Economic and Monetary Union (WAEMU), encompassing Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo. The exchange was founded in 1996, as was the region's central securities depository and settlement house Dépositaire Central/Banque de Règlement. The exchange covers the equity and bond market and operates on a T+3 settlement cycle.

In March 2019, BRVM signed an agreement with Nasdaq for the implementation of its market surveillance technology. This will enable the regional exchange to monitor cross-market and multi-asset trading activity.

Commenting on the agreement, Félix Edoh Kossi Amenounve, chief executive officer at BRVM, said: "We are excited to begin this new collaboration with Nasdaq using its world-leading SMARTS market surveillance technology. Over the past five years, we have taken a number of aggressive steps to reinvigorate our market and increase investment opportunities in West African member states. The BRVM is seeking to implement its growth strategy for 2019-2020, in particular by looking for opportunities to take advantage of new technologies to create an even stronger and healthier capital market in our sub region."

Amenounve also serves as vice president of the Association of African Stock Exchanges (ASEA), of which BRVM is a member. In November 2018, ASEA signed a memorandum of understanding with the World Federation of Exchanges designed to support the development of market infrastructures and the broader capital market ecosystem in Africa, as well as supporting best practices based on global standards.

Meanwhile, Standard Chartered Bank stated that it has successfully lobbied for the West African Monetary Union's central bank to complete the 17F-7 questionnaire after two years, as well as advocating for the development of an 'investor's protection fund' to improve investor protection in the market. The latter project has now been established.

EGYPT

Unweighted	Score
HSBC	5.44
Citi	5.14

Weighted	Score
HSBC	7.09
Citi	6.89

The Egyptian Exchange (EGX) is the country's main exchange, while the Nile Stock Exchange (NILEX) focuses on small and medium-sized enterprises. Misr for Central Clearing, Depository and Registry (MCDR) is Egypt's central securities depository, based in Cairo. The Financial Regulatory Authority (FRA) is tasked with supervising and regulating non-banking financial markets and instruments, including the capital market and the exchange. In addition to regulating the market, its goal is to ensure its stability and competitiveness and to attract local and foreign investment.

Ehab Eissa, head of HSBC Securities Services Egypt, said: "Egypt's economy has recovered well as have its FX reserves and overall risk profile, which led to increased activity and volumes on the interbank market. The return of stability convinced the Central Bank to terminate the repatriation mechanism on December 4 2018 for any new foreign currency portfolio investments looking to transact in the local currency, Egyptian T-Bills, or any listed securities on the EGX.

"The Central Bank of Egypt (CBE) had established its FX repatriation mechanism at a time when the country was suffering from a severe shortage of foreign currency, a consequence of the capital controls that had been imposed."

In February 2019, the Executive Board of the International Monetary Fund (IMF) completed the fourth review of Egypt's economic reform programme under the Extended Fund Facility. According to the IMF Executive Board, the country's macroeconomic outlook remains favourable. IMF projections for 2019-2020 put net foreign direct investment at $11.2 billion.

"Local debt securities remain attractive to foreign institutional investors as the Central Bank held off cutting interest rates due to recurring inflationary fears and the broader challenges presently facing many emerging market economies," added Eissa.

"Egypt has also made a lot of progress to attract inward investment, introducing a DVP model, transitioning to a T+2 settlement cycle for purchases and sales of equities and corporate bonds, and enacting STP (straight-through processing) across a lot of its market infrastructure processes. The Central Bank also introduced a depository system to manage the settlement and clearing of treasury bills. HSBC was actively involved in the preparation phase of this process and is the only provider in the Egypt market whose system is linked to the Central Bank's infrastructure.

"Egypt has amended its Investment Law, and now requires all shareholding companies to register their shares with the local depository (MCDR). The government hopes this initiative will result in better corporate governance from both a market and taxation perspective."

The country is also gearing up to introduce short selling to the market. The FRA issued regulatory guidance for its implementation in February 2019, and the EGX and MCDR have been finalising technical systems in preparation for its launch.

ESWATINI

Unweighted	Score
Standard Bank	4.77

Weighted	Score
Standard Bank	6.49

The Eswatini Stock Exchange (ESE) was formed in 2018 after the small country in the south of Africa changed its name from Swaziland to Eswatini.

The exchange, which can trace its roots back to 1990 before becoming a fully listed market in 1999, offers equities, corporate and government bonds, is regulated by the Capital Markets Development Unit of the Central Bank.

There are six listed companies, four dealing members and the Central Bank of Eswatini (formerly the Central Bank of Swaziland) acts as the sole plan sponsor. The Financial Markets department of the Central Bank is responsible for the country's central securities depository and automated clearing house.

Lindiwe Manana, manager, investor services at Standard Bank Swaziland Limited, said the major development at the ESE was a trading technology upgrade.

Manana said: "In mid-February 2019, the local stock exchange – now called the Eswatini Stock Exchange (ESE) – launched its long-awaited automated trading system (ATS). It is hoped that this will assist with improved trading volumes and possibly the launch of an equities CSD in the market. This could attract foreign investor activity in the securities market outside of South African institutions."

Manana noted that foreign participation in Eswatini shares has been limited until now: "Although the market has been open to foreign investors for over 10 years, the ESE still comprises 100% domestic investors. On April 19 2018, King Mswati III, the King of Swaziland, announced that the country's name has been changed to Eswatini. The name change has been officially recognised by the United Nations (UN). All financial market infrastructure, including the central bank and stock exchange have adopted the new country name. Standard Bank Swaziland Limited is awaiting approvals for our name change."

GHANA

Unweighted	Score
Standard Chartered	4.29

Weighted	Score
Standard Chartered	6.11

According to William Sowah, head of investor services at Stanbic Bank Ghana Limited, 2018 was characterised by a consolidation in the Ghanaian banking sector as the Bank of Ghana revoked the licences of a number of banks and created Consolidated Bank Ghana Limited to take over the deposits of these banks.

Separately, Sowah added that the Bank of Ghana has issued directives with the aim of facilitating the effective supervision of regulated financial institutions as well as a new minimum capital requirement to strengthen the banking sector.

"In 2018, we saw the CSD advance several digital initiatives," he explained. "These include an online initial public offering portal which will enable brokers to place bids electronically for equity IPOs; a web-based portal granting clients real-time access to securities account balances at CSD; and e-voting at AGMs."

It is hoped these initiatives will all go live this year. Meanwhile, the CSD and stock exchange are also looking for a cost-efficient Swift messaging model for brokers to create a more Swift-enabled market.

The introduction of Swift messaging for market stakeholder communications is expected in Ghana before the end of 2019.

Stanbic's Sowah is hopeful that global depository receipts will be launched in the market this year.

In a recent market update, Standard Chartered experts said they have spent time advocating the standardisation of settlement processes and regulatory oversight over fixed deposits, with attention on the risks introduced to local funds.

The bank has also engaged with Ghana's Securities Exchange Commission (SEC) for the standardisation of funding deadlines for foreign investor transactions.

The key financial instruments available to foreign investors in the Ghanaian capital and money market are equities and bonds (both government and corporate).

ISRAEL

Unweighted	Score
Citi	5.53
Bank Hapoalim	4.51

Weighted	Score
Citi	6.72
Bank Hapoalim	5.77

The Tel Aviv Stock Exchange (TASE) is traded mostly by domestic entities but it is keen to boost international participation which is largely facilitated by global custodians that have partnership agreements with local clearing members. Citigroup and HSBC are the only non-Israeli banks that are clearing members.

The exchange has an equities clearing house called the TASE Clearing House (TASECH), which was established in 1966 and has some 16 members in total. The TASECH is a wholly-owned subsidiary of TASE and is supervised by the Israel Securities Authority.

TASE also owns and operates a derivatives clearing house called the MAOF Clearing House Ltd.

The Bank of Israel is responsible for the issuance of treasury bills; supervision of the banks; regulating monetary policy; promoting financial stability;

managing the foreign currency market and foreign exchange reserves. In conjunction with the Committee of Banks, it also regulates the clearing of electronic payments and checks.

JORDAN

Unweighted	Score
Bank of Jordan	6.62
Standard Chartered	5.38

Weighted	Score
Standard Chartered	7.29
Bank of Jordan	4.89

Jordan's Amman Stock Exchange (ASE) experienced a sharp sell-off at the end of 2018, largely blamed on the introduction of a tax on stock trading profits.

In December, the Chairman of the Jordan Securities Commission (JSC), Mohammed Saleh Al-Hourani, admitted that the local market had "shown difficulty" in the application of the tax.

During a meeting with JSC and tax authorities, brokers and investors suggested an alternative fixed tax, or fixed fee, be used as an alternative.

Foreign investors were responsible for 53% of overall trading on the ASE in 2018, according to the exchange's own statistics.

Aside from the negative effect of the tax, there are some notable improvements taking place to enhance market efficiency and attract both local and overseas investors.

Both ASE and JSC are soon to release an electronic system designed to improve the disclosure of financial and nonfinancial data of the companies across the market. The data will be provided in both Arabic and English.

In an update issued in the first quarter of 2019, experts at Standard Chartered said it was involved in a new settlement model implemented in the market, whereby Standard Chartered Jordan as a custodian became a direct member of the settlement process with the Securities Depository Center (SDC).

"The new settlement process allows custodian banks to directly settle trade transactions with SDC instead of local brokers," Standard Chartered's experts wrote.

"As a direct member of the settlement process with the central depository, SCB Jordan had regular engagements with the SDC to enhance the settlement cycle in the market."

Looking ahead, Jordan's local authorities are implementing a new trading surveillance system to monitor trading activity in the market.

Participants are also preparing for the introduction of new market products, including securities lending and borrowing, short selling and depository receipts.

KENYA

Unweighted	Score
Standard Chartered	5.41

Weighted	Score
Standard Chartered	7.71

In 2018 there were several developments geared towards deepening Kenya's capital markets. This includes the introduction of a derivatives market, which is expected to launch in the first half of 2019, noted Janet Waiguru, head of investor services at Stanbic Bank Kenya Limited.

A proposed securities lending and borrowing product is also planned along with a tech upgrade to the Nairobi Securities Exchange (NSE) and Central Depository and Settlement Corporation (CDSC) platform, which will include the enablement of Swift messaging capability.

Meanwhile, authorities are planning to establish an over-the-counter treasury bond exchange.

According to Waiguru, there were also several changes impacting investors. She explained: "These include new terms and conditions for the opening of CSD accounts for foreign investors at the Central Bank of Kenya; new rules on dormant accounts management at CSDs; an increase in excise duty levied on fees charged by the financial institutions from 10% to 20% which impacts local investors only; and the proposed introduction of a local tax identifier.

Waiguru added: "Stanbic Bank Kenya is working closely with the relevant regulators and market participants to ensure clarity and resolution. At the same time, the Capital Markets Authority is tightening up on corporate governance to encourage greater investment in the market."

In a recent note, Standard Chartered said it was working with Kenya's Capital Markets Authority (CMA) on the framework for securities lending, borrowing and short selling.

The bank is also involved in various market initiatives, such as ongoing lobbying to automate broker contract notes and playing a role in the development and testing of the depository system at the CDSC for equities and corporate bonds.

KUWAIT

Unweighted	Score
HSBC	5.65

Weighted	Score
HSBC	7.83

Since 2016, Kuwait has gradually phased in a number of reforms in both the trading as well as the post-trade space as part of its multi-phase market development plan. As Emma Almerzah, head of HSBC Securities Services Kuwait, explained, the post-trade initiatives have included the adoption of a harmonized (T+3) trade settlement cycle (previously T+0 for local investors and T+2 for foreign investors); the establishment of a custodian rejection facility; and the introduction of international standard corporate action dates.

"On the trading side, Boursa Kuwait introduced market segmentation whereby companies are included in the premium market, main market or auction market based on various criteria (i.e. market cap, daily trading volumes, price-to-par ratio, years of operations, and compliance with the terms and conditions of listing) in an effort to attract more investors and liquidity," Almerzah added.

In April 2018, the second phase of the market development plan introduced a late confirmation process, which allows custodians to accept a previously rejected trade, provided the executing broker agrees.

"This further minimises the incidences of valid trades being rejected as it gives clients additional time to arrange their funding and ensure trade instructions are in place," Almerzah explained. "Subsequently, the rejection process was further enhanced by the introduction of a process that allows settlement of previously rejected BUY trades up to T+4, whereby the cash settlement is completed between the custodian and the executing broker direct."

More recently, Kuwait's Capital Markets Authority (CMA) has said it will create a regime to support securities lending, borrowing and short selling and launch a trading platform for mutual funds including real estate investment trusts (REITS). Market testing is currently underway.

MALAWI

Malawi remains a small market in terms of foreign investor activity but active with regards to domestic clients, noted said Wilson Kuyokwa, manager of investor services at Standard Bank PLC. There are 14 listed companies on the Malawi Stock Exchange (MSE), two of which are foreign listed companies.

There are few listed government treasury notes and a corporate bond. The market is predominantly in the hands of local pension funds and institutions that are typically long-term focused.

To mitigate liquidity constraints, the MSE has started courting new companies to raise capital through the exchange and this has started yielding results. The most recent listing was concluded in January 2019 after a 10-year break.

The local exchange has also made great strides with its market structure, said Kuyokwa. "The major change in this market in 2018 was the long-awaited establishment of a CSD for listed equities and corporate bonds. At the same time the Malawi Stock Exchange automated its trading system, dematerialised listed securities and issued ISINs for all securities; and the settlement cycle was reduced from T+5 to T+3. This has led to improved trading in the market, though the dematerialisation of securities, especially those held by retail investors has been slower than anticipated."

Kuyokwa continued: "The Reserve Bank of Malawi (where the CSD resides) has announced that upgrades to the market will continue into 2019. The RBM has officially launched its 2019 to 2021 Strategic Plan to guide its operations for the next three years and has also developed the Malawi Kwacha Smartphone Application in its efforts to bring down counterfeit currency. In March 2019 the RBM implemented a new system for reporting data on cross-border financial transactions by banks and other financial institutions licensed to deal in foreign exchange."

MAURITIUS

Unweighted	Score
HSBC	5.89

Weighted	Score
HSBC	6.65

The Stock Exchange of Mauritius trades shares on two markets – its main, Blue Chip list and a secondary market called the Development and Enterprise Market which is tailored to smaller firms whose shares are not actively traded. SEM also trades corporate bonds and treasury bills.

The Central Depository and Settlement Company Ltd, which is majority owned by the Mauritius exchange group, is the clearing house and settlement depository for trades executed on SEM. The Bank of Mauritius is the clearing bank behind CDS. The settlement cycle is T+3 for equities and short selling is not allowed.

Feizal Hosany, head of HSBC Securities Services Mauritius, said the main innovation in Mauritius was the extension of its trading day, partly to support increased participation from firms based outside of the island state.

He said: "There has been an extension of the trading hours at the Stock Exchange of Mauritius to respond to market demand and thereby improve accessibility on the trading floor for both local and foreign investors."

Hosany continued: "Trading hours have been extended by one hour, from 9.00am to 2.30pm (local time) Mondays to Friday, as of June 12 2018. This initiative has been introduced to enable foreign investors to have extended real-time access, potentially improve the trading opportunities and enhance liquidity."

Standard Chartered Bank said the value of its assets under custody in Mauritius increased 50% in 2018, which it said reflects its "ability to support cross-border clients in one of our four international custody hubs".

MOROCCO

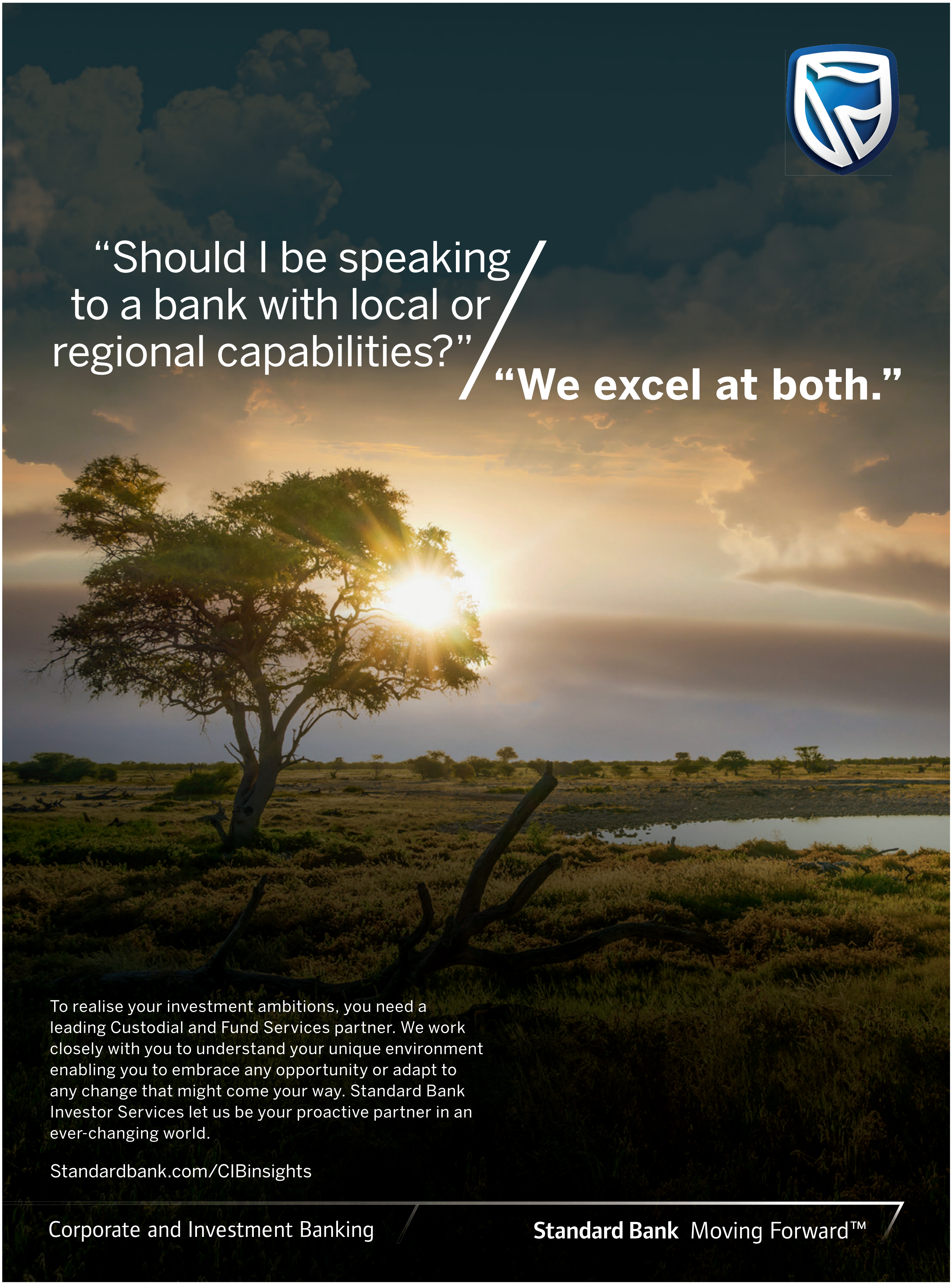
Unweighted	Score
BNP Paribas Securities Services	6.15
Citi	5.59

Weighted	Score
Citi	7.99
BNP Paribas Securities Services	5.94

The Casablanca Stock Exchange can trace its roots back to 1929 and established its central securities depositary Maroclear in 1998.

Maroclear supports delivery versus payments equities and primary market debt on a T+3 basis while secondary market debt is settled on trade date. Over-the-counter trades, which are exclusively in fixed income instruments, are also settled on T+0.

Short selling is not authorised and securities lending is not yet permissi-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To realise your investment ambitions, you need a leading Custodial and Fund Services partner. We work closely with you to understand your unique environment enabling you to embrace any opportunity or adapt to any change that might come your way. Standard Bank Investor Services let us be your proactive partner in an ever-changing world.
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ble but there has been talk about possibly relaxing these restrictions. Foreign investors are allowed to buy shares in Moroccan listed firms but there are restrictions around which types of companies are in play.

NAMIBIA

Unweighted	Score
Standard Bank	4.69

Weighted	Score
Standard Bank	6.84

Namibia is a relatively small market in terms of foreign investor activities. There are 35 listed companies on the Namibian Stock Exchange (NSX), of which ten are local listed companies. The bulk of the others have their primary listing in Johannesburg. There is also a small inward listing from Canada and Australia on the Mining Sector industry. The market is predominantly in the hands of local pension funds and institutional investors.

The biggest initiative underway in Namibia is the foundation of a central securities depository to manage share settlement.

Patrick Morgan, head of investor services at Standard Bank Namibia Limited, said: "Regarding the Financial Institutions Market (FIM) Bill and the subsequent establishment of a CSD, Namibia Financial Institutions Supervisory Authority (Namfisa) has concluded its reviews and industry engagements.

Morgan continued: "The bill is still with the Minister of Finance awaiting to be tabled in parliament. In Q4 of 2018, we were advised by an independent consultant that there is ongoing liaison with the legislative drafters for the correction of errors identified within the bill. We believe this to be the delay in the bill's promulgation. With the opening of parliament in February 2019, the FIM Bill was not part of the bills up for discussion this year. There is no indicative date as to the implementation date of this project. We will keep close to the market for any further update."

NSX is also courting new companies to raise capital through the exchange which will ultimately increase liquidity and free-floating investment opportunities.

The market expects NSX primary listing of local commercial banks by the end of 2019 in line with the Namibia Financial Sector Charter (NFSC).

NIGERIA

Unweighted	Score
Standard Bank	5.72

Weighted	Score
Standard Bank	6.23

The Nigerian Stock Exchange trades equities through its Automated Trading System (ATS) platform, bonds, exchange-traded products such as Real Estate Investment Trusts, and derivatives.

The NSE's equities trading book is made up equally of domestic and foreign participants, and trades 9.30am to 2.30pm local time.

The Nigerian Central Securities Clearing System (CSCS) switched to a new settlement platform in 2017, paving the way for the adoption of Swift, the international payments processing standard.

Akeem Oyewale, head of investor services at Stanbic IBTC Bank Limited, said: "The Nigerian capital markets continued to look at new initiatives in 2018, such as the use of Swift messages at the CSD for improving intra-market straight-through processing (STP)."

Short selling is allowed on the floor of the Nigerian Stock Exchange, provided that, prior to initiating a trade on a security, that security has been borrowed and is in the account of the seller. Naked short selling is banned for all participants on the NSE.

Oyewale continued: "The Nigerian Stock Exchange (NSE) released amendments to dealing members and retail securities lending, which should see securities lending transactions in the market on a larger scale in 2019."

At the beginning of 2019, ISINs were issued for primary market treasury bills (Tbills) issued by the Debt Management Office, bringing the market closer to the goal of having ISINs for all traded Tbills.

Oyewale added: "Stanbic IBTC Bank continues to engage regulators and the market on a range of issues such as the nominee concept and how we represent clients as custodians; using blockchain technology for corporate actions; issuance of ISINs for Open Market Operations Tbills issued by the Central Bank of Nigeria; and the extension of Swift messages in the market."

He concluded: "In addition, custodians will be given access to present their trades and monitor statuses on the fixed income FMDQ Q-ex platform. The Q-ex system will allow trades to be presented directly from the custodian sub-accounts with settlement banks."

Standard Chartered Bank said it plays a lead role working with the custodian association in driving market advocacy issues.

SCB noted that it was a key member of the steering committee and played a pivotal role in the implementation of the Electronic Certificate of Capital Importation (ECCI). The bank said: "SCB shared our in-house CCI tracking solution with vendors which was used as a prototype for the industry solution."

OMAN

Unweighted	Score
HSBC	5.61

Weighted	Score
HSBC	7.79

The Muscat Securities Market (MSM), established in 1988, moved to an electronic trading system from open outcry in 2003 and then introduced delivery-versus-payment settlement in December 2014.

The group had 112 listed companies and 17 brokers, according to the exchange's latest annual report.

The exchange offers shares, government bonds and corporate bonds. Equities settle on T+3 while bonds settle on T+2. Short selling or stock lending are not permissible.

Foreign investment is limited to 70% of Omani listed companies but the companies themselves can set their own restrictions, with most setting that level at 49% of tradeable shares.

Foreign firms accounted for about 28% of share trading, according to the exchange's annual report. In accordance with its plan to bring the MSM into line with international best practices, the exchange has committed to "develop and increase the efficiency of over-the-counter trading to be done electronically".

Gavin Serrao, head of HSBC Securities Services Oman, said: "Oman currently operates a dual trade settlement cycle for equities and bonds with equities settling on T+3 while bonds settle on T+2. HSBC in Oman has requested that the Capital Market Authority (CMA) to consider unifying settlement cycles for bonds and equities. The CMA has conceptually agreed with HBSC's recommendation, and is assessing the adoption of the T+2 framework for its standard trade settlement cycle."

He added: "In an effort to improve the voting process in AGMs and other shareholder meetings in Oman, HSBC has recommended to the MCD (Muscat Clearing and Depository), the introduction of an electronic voting platform through which shareholders/their custodians can register their votes. HSBC is also in discussions with the Central Bank of Oman to create a platform for investments in T-Bills. Currently while the regulations permit investors other than local banks to invest in T Bills, the lack of a platform does not enable them to do so."

Standard Chartered Bank said it has been working with the CMA on the implementation guideline for carrying out fund supervisory responsibilities for locally-domiciled funds.

SCB, a member of the Oman Securities Association, said it has also been working with market infrastructure entities to introduce international best practices in the market, which have been well-received.

QATAR

Unweighted	Score
HSBC	5.82

Weighted	Score
HSBC	6.95

The Doha Securities Market was founded in 1997 and changed its name in 2009 to the Qatar Stock Exchange (QSE). The QSE and the Qatar Central Bank own the Qatar Central Securities Depository (QCSD), which went live in January 2004.

QCSD supports equities, treasury bills and bonds, by providing safekeeping, clearing and settlement of all financial instruments listed on the Qatar Exchange. Short selling is not permitted and securities lending is restricted.

The local exchange has been working hard to grow its exchange-traded fund ETF segment, according to Shreen Abeysekara, head of HSBC Securities Services Qatar.

Abeysekara said: "Since 2017, Qatar has been on a drive to attract new investors and trade partners. HSBC worked closely with Qatar Stock Exchange and shared its expertise to introduce Exchange Traded Fund in Qatar. The first ETF (QETF), which follows the QE Index, was launched on March 5 2018 with enthusiastic feedback from the market. The second ETF, "Al Rayyan Qatar ETF", which is an Islamic ETF, was launched on March 21 2018 and according to the QSE is the largest single-country Islamic ETF in the world."

Abeysekara said the bank is also working on other fronts: "HSBC Qatar is also having ongoing dialogue with QSE and the Qatar Financial Markets Authority (QFMA) to introduce a Consolidated Order mechanism which allows aggregation of trade orders at broker level from eligible professional investors with the broker executing a single trade in the market.

"After trading closes brokers will have a window of time to allocate shares to the respective clients NINs. This mechanism enables the use of the weighted average price of these orders as a common price for the allocation process. HSBC's engagement with the QSE and QFMA has successfully resulted in the QFMA Board of directors approving the issuance of the rules governing the use of consolidated order accounts in November 2018."

Abeysekara added: "We await the operational procedures and account opening guidance from Qatar Central Securities Depository and QSE."

HSBC has also been working with the Qatar exchange group on reforms to its CSD. "We have also taken clients' feedback for changes to the process advised by QCSD and have accordingly suggested a more streamlined process to the QCSD and QFMA," Abeysekara concluded.

Standard Chartered Bank said it has worked with QCSD and Qatar Financial Markets Authority to simplify the account opening process especially after the introduction of the Ultimate Beneficial Ownership Declaration by the QCSD.

SAUDI ARABIA

Unweighted	Score
HSBC	5.79

Weighted	Score
HSBC	7.44

The Saudi Arabian market has attracted more attention than almost any other in the Gulf region, as the country has moved gradually to open up its vast domestic economy to international investors.

The main Saudi exchange has been growing steadily, largely due to the performance of its various state-backed utilities companies.

Madhur Bhandari, head of HSBC Securities Services Saudi Arabia, said: "Saudi Arabia's Tadawul is now ranked as the 25th biggest bourse in the world with a daily trading volume of around $1 billion. Saudi Arabia's deep liquidity pool coupled with the market liberalisation measures being promoted under Vision 2030, have turned the country into a major investment destination for foreign investment managers looking for returns."

Bhandari said: "The capital market liberalisation picked up steam in 2015 with the introduction of a Qualified Foreign Investor (QFI) framework allowing direct access for foreign investment into the Kingdom's capital markets.

"In addition to the relaxation of foreign ownership limits on domestic companies, Saudi Arabia also eased the entry requirements for qualified QFIs, making market accessibility available to any regulated bank, brokerage, fund manager, insurance company or securities firm with at least $500 million in assets under management."

Previously, only companies which had been engaged in securities or investment activities for five years and were from a jurisdiction in the CMA's approved list, could apply for QFI status. But the CMA has changed this requirement so QFI applicants do not now need to have any minimum investment experience.

Bhandari continued: "The CMA also said that custodians such as HSBC can act as an Assessing Authorised Person, who can authorise QFI registrations instead of requiring institutions to rely on the regulator. Other market improvements have included the launch of an independent custody model, a transition to T+2 and the roll out of delivery-versus-payment (DVP)."

Bhandari also listed other initiatives underway: "Further complementing these progressive measures, the CMA permitted the migration of daily trading limits from custodians to brokers allowing investors to enjoy larger trading limits; facilitated an e-voting service through custodians via an e-voting platform – Tadawulaty; introduced robust corporate governance standards designed to enhance shareholder and board member rights and bolster transparency; and helped launch a REIT market in what will further deepen liquidity."

During the first quarter of 2018, there were already 16 REITs listed with a market capitalisation of $3.3 billion.

Bandhari continued: "Measures have also been taken to expand the debt market with all the local currency government debt being listed on the stock exchange. Tadawul announced it would establish a CCP, which is expected to begin clearing listed futures from the second half of 2019."

The Saudi Depository Centre Company is a closed joint stock company fully owned by Tadawul and the sole entity authorised in the Kingdom to act as the securities depository centre, carrying out the deposit, transfer, clearing, settlement, and registry of ownership of securities traded on the exchange.

SOUTH AFRICA

Unweighted	Score
Standard Bank	6.17
RMB	5.24

Weighted	Score
RMB	6.28
Standard Bank	5.71

Perhaps the most significant development in South Africa in 2018 was the partnership between MTS and the Johannesburg Stock Exchange (JSE) to open the country's first electronic government bonds trading platform.

This initiative is designed to enable global access to - and enhance transparency in - the South African government bond market and follows on from the implementation of the Debt Instruments Solution (DIS) project that went live in September 2017, noted Rajesh Ramsundhar, head of investor services at Standard Bank of South Africa.

"Due to a lack of client demand and market capacity to support the project, the CSD has decided not to proceed with DIS Phase II," he explained.

A major project currently in progress in the South African market is the integrated trading and clearing initiative - the introduction of an integrated technology solution for the JSE's derivatives trading and clearing services - which is expected to go live in April.

Ramsundhar noted that following the promulgation of the Financial Sector Regulation Act, two new regulators came into effect in 2018 – the Prudential Authority and the Financial Sector Conduct Authority.

"There are also several legislative changes being proposed," he added. "These include the Draft Conduct of Financial Institutions Bill 2018; and changes to the Financial Matters Amendment Bill, which recommend changes to the Insolvency Act to align with the Financial Markets Act and global best practice in the OTC derivative market."

Standard Chartered noted its market advocacy efforts both globally and in the local market, and said that it would continue to play an active role in participating and contributing to the market's change agenda in 2019. This includes the introduction of an automated collateral management/pledge solution at the CSD and a pledge solution for margin management in respect of the derivatives clearing house.

TANZANIA

Unweighted	Score
Standard Chartered	4.57

Weighted	Score
Standard Chartered	6.58

The Dar es Salaam Stock Exchange (DSE), which offers shares and bonds, and is supervised by the Capital Markets and Securities Authority (CMSA), was founded in 1996, opened its central depository in 1999, launched treasury bonds in 2002 and introduced a new central depository system in 2013.

The exchange took measures in early 2017 to update its settlement guidelines to encourage greater participation from foreign and local investors.

Foreign investors are allowed to invest up to 60% in aggregate of the share capital of any listed company, which breaks down into a 1% cap for individuals and 5% limit for corporates, the company said on its website.

At this stage, treasury bills and government securities cannot be held by foreign investors from outside East Africa, but efforts are underway to allow all foreign clients to access these securities.

Andrew Mgunda, head of investor services at Stanbic Bank Tanzania Limited, said: "The key change in this market was the adoption of negative affirmation in settlement process by custodian banks. This has been adopted for buy trades. However, custodians need to write to the depository instead of doing this via the Central Depository System. Stanbic Bank Tanzania and other custodians in the market are lobbying for this to be changed. Unfortunately, the expected changes to increase the securities available to foreign investors did not materialise in 2018, but we are hoping this will change this year."

Mgunda said the market is evolving. "The equities market consists of 28 companies and six corporate bonds listed at the DSE. Six of these companies are dual listed on the Nairobi Stock Exchange (NSE) in Kenya. All securities in the market are issued, traded and held in dematerialized form at the CSD. Unlisted securities are traded over-the-counter (OTC) in the physical certificate form, however these have not been traded."

A draft of proposed foreign exchange regulation was recently shared with stakeholders for their review and comments. Stakeholders have reviewed and submitted feedback, and are now waiting for a response from the Tanzanian government.

Standard Chartered Bank (SCB) said it had participated in a DSE rule change that now allows a custodian, such as SCB, to act as a settlement bank and perform settlement using its settlement account.

The bank added: "SCB also advocated for the integration of the depository at DSE and Bank of Tanzania (BOT) depository to have a single depository specifically for government securities. This is now active, in which all government securities bought on the secondary market settle directly in the BOT depository."

TUNISIA

Unweighted	Score
Société Générale Securities Services	5.49

Weighted	Score
Société Générale Securities Services	6.17

Bourse de Tunis (the Tunis Stock Exchange) saw its modernisation efforts of recent years recognised in 2018 when it was admitted as a full member to the World Federation of Exchanges (WFE), putting it on a par with the world's largest exchange groups such as the CME and Deutsche Boerse.

In a statement, the exchange said that its membership was formalized at the 58th WFE General Assembly in October. This marked the culmination of a lengthy membership process that included a peer review of its processes in February 2018, which was the subject of a positive report to the WFE's Board meeting in June 2018.

The exchange added: "This evaluation mission confirmed that the Tunis Stock Exchange, the regulator, the central depository and all stakeholders of the Tunisian financial market meet the main standards and requirements of the WFE in terms of compliance with market principles, efficiency and good governance. These standards cover topics as diverse as market organisation, equal market access, negotiations, custodial services, supervision, conflict resolution and complaint handling."

The Tunis Stock Exchange (TSE) has long had an agreement in place with Euronext to provide the technology that underpins its trading platform. Foreign participation is allowed but the vast majority of trading is undertaken by the exchange's 23 local broking members.

Created in December 1993, Tunisie Clearing is the central securities depository and the securities settlement system manager. The main objectives of Tunisie Clearing are to: ensure the security of assets held centrally; ensure the settlement and clearing of transactions according to the LCP principle; reduce the risks associated with the delivery and payment transactions between the different counterparties; apply best practices and international recommendations in the securities field.

UGANDA

Unweighted	Score
Standard Bank	5.93
Standard Chartered	4.92

Weighted	Score
Standard Chartered	6.99
Standard Bank	3.72

Uganda's economy grew by 6.1% in FY17/18 and is expected to grow by 6.3% in FY18/19, according to figures from the International Monetary Fund (IMF).

In September 2018, Kampala-based pharmaceutical company Cipla Quality Chemical Industries Ltd made its debut on the Uganda Securities Exchange (USE). This was the first listing on the exchange for six years, following power distributor Umeme Ltd's IPO in 2012.

In May 2018, the Bank of Uganda announced that pricing treasury bills and bonds in primary auctions would change to a single price method from July 2 2018. The bank stated that the change would encourage secondary market trading.

Andrew Omiel, head of investor services and financial institutions at Stanbic Bank Holdings Limited, said: "The biggest change in the Ugandan market in 2018 was the adoption of a single pricing auction methodology for treasury bills and treasury bonds in July. This dealt with the challenges of maintaining original cost price at the CSD, when securities are traded in the secondary, i.e. where a new weighted average price is generated by the CSD because of incremental movement in holding on an existing position."

Over the last few years Uganda's Capital Markets Authority (CMA) has been looking to develop the country's capital markets through measures set out in its 2016/2017-2020/21 Strategic Plan and the Capital Markets Development Master Plan 2016/17-2026/27. The core objectives of the 10-year plan are to improve access to long-term finance for the public and private sectors; facilitate the deepening and broadening of Uganda's securities markets; improve efficiency in securities market regulation; facilitate the development of market intermediation services; maximize the supply of long-term finance. The CMA is in the process of reviewing and revising the capital markets legislation, including licensing and approval regulations and guidelines for domestic exchange traded funds (ETFs) and depository receipts (DRs).

"We continue to see slow progress in the advancement of the CMA 10-year strategy set out in 2016," said Omiel. "The guidelines on domestic ETFs and DRs aim at giving the market issuance guidelines and provide investors with new product lines, while licensing and approval regulations provide the criteria for issuing licenses and applicable fees to the different players in the capital markets industry in Uganda. While there have been no clear positions advised to the market for the changes/developments currently in progress, there remains a commitment to implementing the two plans. The delays are due to the lengthy government processes in dealing with legislation, procurement, regulations and stakeholder consultations."

Meanwhile, Standard Chartered Bank noted that it would continue to participate in industry consultations by the USE and CMA on enhancing regulations in the market and remain involved in the CMA's 10-year plan.

UNITED ARAB EMIRATES

Unweighted	Score
HSBC	5.86
Deutsche Bank AG	5.84

Weighted	Score
HSBC	7.70
Deutsche Bank AG	3.63

The Abu Dhabi Securities Exchange (ADX) and Dubai Financial Market (DFM) fall under the regulatory remit of the Securities and Commodities Authority (SCA), while Nasdaq Dubai is regulated by the Dubai Financial Services Authority (DFSA).

In March 2019, DFM announced a new organizational structure for its post-trade services, separating them from the exchange services of listing and trading securities. The reorganization includes the formation of a holding company for Dubai Central Securities Depository LLC and for Dubai Clear LLC. The two companies are due to begin operating once they are granted SCA approval.

Rocio Echague, head of HSBC Securities Services UAE, said: "The SCA introduced regulations covering the segregation of Trading and Clearing members, recognition of General Clearing Member (GCM) and introduction of Central Clearing Counterparty (CCP). The SCA, DFM, and ADX are formulating a workable operational model with implementation expected by the first half of 2020."

Echague added: "In its efforts to make the market more accessible to institutional investors, SCA approved regulations to permit multiple National Investor Numbers (NINs) to be issued at an investor level. The local exchanges are working on amending systems/processes to accommodate the change within this year."

"The UAE has been very proactive in expediting the NIN approval process. The DFM and ADX are now accepting scanned copies of investor documents for NIN applications which eliminated the requirement to hold physical/original copies," noted Echague, adding that this reform has made it easier for investors to acquire access to the local UAE market.

Other developments include the launch of an Allocation Account mechanism by DFM and Nasdaq Dubai, and efforts by the UAE's exchanges to improve operational efficiency through the introduction of an ongoing confirmation process for custodians. The latter will take place upon receipt and matching of client instructions by the

custodian as opposed to the current practice of submitting one obligation report to the market, explained Echague.

In November 2018, the SCA, DFSA, and the Financial Services Regulatory Authority of Abu Dhabi Global Market (ADGM) signed a regulatory agreement to facilitate the licensing of domestic funds by each authority across the UAE. The new regime aims to encourage the establishment of new investment funds, attract foreign investment, and enhance the process of conducting business in the UAE.

"Implementing the Passporting Agreement as a regulatory mechanism for the mutual promotion and oversight of investment funds established in the different jurisdictions within the UAE is an important step to inspire the development of the mutual funds market so as to achieve the goal of having more diversified investment opportunities and products," said Echague.

The exchanges are also looking to pave the way to new products. Standard Chartered Bank pointed to ADX's approval of its five-year strategic plan (2017-2022), which includes the implementation of efficient mechanisms to admit and attract a number of Shariah-compliant products. According to the bank, a derivatives clearing product is also under development at DFM.

ZAMBIA

Unweighted	Score
Standard Chartered	5.14

Weighted	Score
Standard Chartered	6.88

The IMF's *World Economic Outlook*, published in April 2019, projects real GDP growth of 3.1% in Zambia in 2019, down from 3.5% in 2018. The IMF expects growth to contract further in 2020 to 2.9%.

However, some awaited regulatory and market structure developments are expected to materialize in 2019.

According to Standard Chartered Bank (SCB), changes made by the country's Pensions and Insurance Authority, which are due to be enacted in 2019, will allow SCB and other international banks to provide custody to pension funds and insurers.

In addition, the Lusaka Securities Exchange (LuSE) is set to demutualize. This will enable the separation of the stock exchange and the LuSE Central Share Depository. The LuSE CSD offers depository, clearing, and settlement services for the country's equity and bond market while the Bank of Zambia CSD maintains the primary register of government securities and holders.

Chenge Mwenechanya, head of investor services at Stanbic Bank Zambia Limited, said: "2018 did not see a lot of market developments in Zambia. The de-merger of the LuSE CSD and LuSE is scheduled for 2019 as the shareholding structure has since been finalised and communicated to the regulator.

"The Zambian market, like most markets in the region, is grappled with a challenge of low liquidity owing to excessive capital chasing few investable assets available on LuSE. The market is predominantly in the hands of local pension funds and institutions that are typically long-term focused. In order to mitigate liquidity constraints, the LuSE, with the support of the Ministry of Finance, aggressively directed all listed companies to comply with the minimum free float of 25% in 2015."

In 2017, the Ministry of Finance launched the National Financial Inclusion Strategy (NFIS) 2017-2022 following a consultation process. The goal is "to achieve universal access and usage of a broad range of quality and affordable financial services that meet the needs of both individuals and enterprises." SCB stated that it continues to support the planning and implementation of NFIS initiatives.

ZIMBABWE

Unweighted	Score
Standard Bank	5.50

Weighted	Score
Standard Bank	5.58

In February 2019, the government introduced the Real Time Gross Settlement (RTGS) dollar in an effort to mitigate inflation and improve economic stability. In April 2019, Finance Minister Mthuli Ncube told Bloomberg that Zimbabwe was establishing a central bank reference rate to help it manage monetary policy, and that it intended to launch a fully-fledged currency in the next 12 months.

Takunda Magumise, head of investor services at Stanbic Bank Zimbabwe Limited, said: "Unfortunately, a lot of developments in this market have been overshadowed by political and economic constraints, such as the issuing of a local currency in February 2019 and the continued shortage of foreign currency. We are hoping that stability will return to the market during the year."

Magumise added: "Developments during 2018 included the Securities and Exchange Commission of Zimbabwe (SECZ) publishing the Securities Amendment Bill, 2019. The bill outlines the proposed revisions to the Securities and Exchange Act, with the aim of enhancing compliance with the requirements of the International Organization of the Securities Commissions (IOSCO) and aims to increase the powers and the effectiveness of the SECZ as well as to provide better protection to investors. The Securities and Exchange Commission of Zimbabwe issued a directive on nominee structures stipulating disclosure requirements and minimum operating requirements. The Zimbabwe Stock Exchange (ZSE) extended its trading hours by two and a half hours. The CSD, the Chengetedzai Depository Company Limited (CDC), also extended its market trading hours and successfully implemented the first and second settlement window."

Standard Chartered Bank noted its participation in discussions with the Custodians Association of Zimbabwe which precipitated the introduction of the second settlement cycle in 2018. The development has led to the facilitation of more opportunities for early settlement and more opportunities to fund a trade, reducing the potential settlement delays, added the bank. ■

Compression: a cycle of continuous evolution

Innovation in compression services has been relentless over the last few years and has no signs of slowing. If anything, a combination of capital burdens, operational efficiencies, and competition are expected to spur the evolution at a more rapid pace, writes Louisa Chender

Compression is a process which reduces the number of trades in a portfolio, or line items, while maintaining the same level of market risk. Whether referred to as 'terminating', 'netting' or 'tearing-up' a trade, essentially compression reduces the overall notional value of a portfolio by combining offsetting trades with compatible characteristics. This is particularly beneficial given that Basel III's leverage ratio requires participants to hold capital against cleared trades, and as such fewer line items could mean a lower capital charge. What is more regulations like Dodd-Frank and Emir both require participants to at least analyse and have procedures in place for portfolio compression under certain circumstances.

Compression started out as a tool for improving post-trade, operational efficiency. However, as participants recognise additional benefits across several asset classes, industry challenges, and operational pain points, more is being compressed now than ever before and services are continuing to evolve.

Bringing the notional down

Since its introduction in 2003, derivatives users have eliminated more than $1,470 trillion (as of March 2019) in notional principle using triOptima's multilateral compression service, triReduce.

Although this can be attributed to a combination of increased over-the-counter clearing activity, and increased participation, ongoing innovations like Trade Revision, which can change trade economics in the clearing house play a key role.

"Trade Revision was a tipping point for efficiency, allowing banks to revise their trades in notional, coupon and direction for compression gains of up to 50%," Peter Weibel, co-chief executive officer (CEO) of triOptima and CEO of the triReduce service - now part of CME Group - says.

Leverage ratio calculations are driven by notional outstanding and duration of derivatives risk. Although FX portfolios are typically shorter-dated than rates, global systemically important banks are subject to a capital add-on for FX forwards.

As increasingly more banks turn to compression to manage their gross notional exposures, triReduce responded to demand for different flavours of compression and optimisation.

This involved commingling notional compression with counterparty risk offsetting, and the next step is to add risk-weighted assets reduction.

"I think a growing trend is for optimisation and compression to become intertwined," Weibel says.

Looking further ahead he explains that by automating and streamlining the process, banks could keep compression close to the business and participate more frequently.

"At some stage in the future compression could be a simple end of day process. This is what triReduce's Low Touch Compression is all about. Participants would only need to click once on our website, which would be to accept the proposal," he says.

Transitioning from Libor

Compression will play a key role in one of the biggest industry-wide chal-

> "Trade Revision was a tipping point for efficiency, allowing banks to revise their trades in notional, coupon and direction for compression gains of up to 50%"
>
> **– Peter Weibel, triOptima**

lenges at present as people prepare for the likelihood that the widely-used Libor benchmark will fall away after 2021.

Weibel explains that with a wide liquidity pool, 70-80% sterling Libor trades will simply be torn up, which leaves 20-30% to be converted into risk-free-rates (RFRs).

"We are not expecting a big bang, but continuous use of triReduce compression cycles will enable participants to gradually transition their legacy Libor risk," he says.

"While benchmark conversion via compression will not solve the challenge completely, it can help create more liquidity in the new benchmark and provide greater transparency through more price data points between Libor and the new benchmark."

Mike Sweeting, global head of risk mitigation at BGC Partners, whose broking entity BGC Brokers includes compression service division Capitalab, says it is natural for interest rate swaps compression services to help the marketplace retire ibor swaps and replace them with new RFR swaps within customers' prescribed risk measures.

"However, while everyone has been focused on the larger OTC interest rate swaps markets, few have seemed to take any notice of interest rate options," he explains.

According to the last available Bank for International Settlements statistics, at the end of the first half of 2018 there were around $350 trillion of OTC interest rate swaps outstanding amongst surveyed banks but also around $47 trillion of OTC interest rate options.

"Although seemingly natural to follow swaps with a new RFR for old ibor options approach, the complexity of the valuation of old for new provides an operational problem of a different order entirely such that only one compression provider has so far come up with a workable solution, based itself in proprietary IP," Sweeting explains.

Opportunities in options

Options are in general much more difficult to compress than vanilla swaps or indices due to non-linear payoffs of

> **"While benchmark conversion via compression will not solve the challenge completely, it can help create more liquidity in the new benchmark and provide greater transparency through more price data points between Libor and the new benchmark"**
>
> **– Mike Sweeting, BGC Partners**

an option and the fact that options are generally not cleared.

Sweeting explains that option compression therefore requires more direct contact with trading desks and commensurately more portfolio constraints for the compression provider to respect.

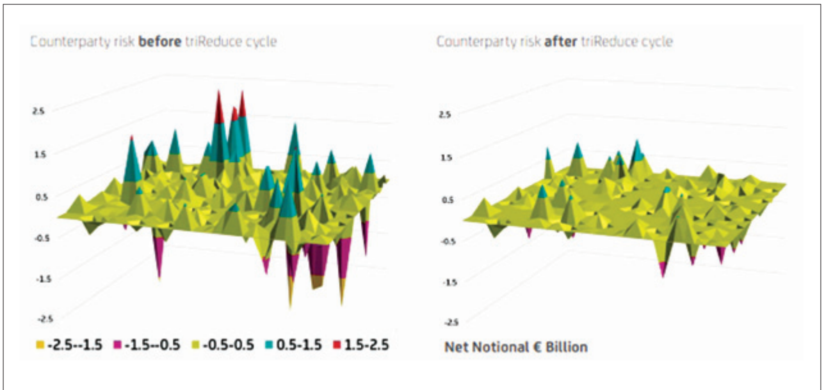
For example, traders may ask for multiple scenarios or changes to their constraints before or during the optimisation process and may need to provide tolerances for changes to a variety of option greeks – the delta, vega, gamma, and theta etc.

Nevertheless, where multiple products, like swaps and related options, are available to compress, combined compression brings both operational efficiencies and the ability to offset related constraints from the option to the swap portfolio and vice versa.

For example, traders are able to offset linear swap delta constraints from that portfolio versus the delta constraints from the non-linear portfolio. This enables the provider to keep within the overall constraints of the customer by offsetting delta from one book into another.

Targeting specific groups

Compression services have also evolved to cater to specific groups. For example, Chicago-based exchange CME Group conducted its first multilateral compression cycle for equity options last October in a bid to lower



Smoothing out bilateral counterparty risk exposures
Source: TriOptima - TriReduce portfolio compression factsheet

costs for liquidity providers who, because of the rules for calculating capital requirements, find holding line items on options expensive.

"We perceived this a topic that disproportionally affected the equity index community, so it was a first and primary area of focus for deploying it," Tim McCourt, CME's global head of equity index products and alternative investments, told FOW at the time.

"In theory these are benefits we are likely to expand and offer to all customers across all asset classes."

CME has since achieved eight multilateral equity option compression runs with 2.73 million total contract sides compressed.

Prior to that, CME opened the door to non-members that wanted to participate in its triReduce cycles. It conducted the first multilateral non-member OTC compression cycle in 2017, and six non-members have participated in triReduce cycles along with 19 non-members utilising coupon blending.

Meanwhile the multilateral compression and blending solutions for OTC products have reduced 1.1 million portfolio line items (worth $55 trillion in notional value) to date.

"Our solution for portfolio margining interest rate futures and CME-cleared swaps is generating over $4 billion in daily margin savings for our customers, with over 800 accounts now utilising the solution," Jack Callahan, CME Group executive director, OTC products and services, says.

> "We perceived this a topic that disproportionally affected the equity index community, so it was a first and primary area of focus for deploying it"
>
> **– Tim McCourt, CME**

Reducing the steady state

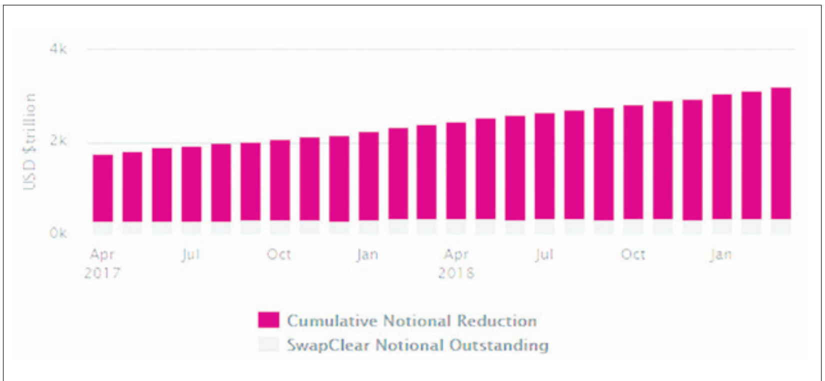
Having launched in 2015 to compete and innovate, Quantile Technologies is focusing on ways to improve risk reduction services in an operationally efficient way.

"A lot more can be done in this space to help banks reduce their resource usage and make markets more efficient for end users," Andrew Williams, Quantile co-founder and chief executive, says.

He points out that although the amount cleared at LCH is going up, the notional outstanding is largely at a steady state due to compression (see graphic below).

"We believe that we can improve compression results and create more efficiency to further reduce the steady state. From a technical perspective this is a business problem that requires good maths solutions and product innovation to yield better results," he adds.

Williams explains that you want a clearing house to clear as much as possible but have a low footprint, because that is what consumes the margin, costs etc.



Notional outstanding showing effect of compression
Source: LCH SwapClear

Quantile launched an initial margin service with AcadiaSoft which flattens the risk between counterparties and reduces margin.

"If we can move some of the risk into a clearing house or net it down, that is a benefit because the margin is lower," Williams adds.

While the initial margin service focuses on reducing counterparty gap risk, compression reduces the notional, and the two together work well in FX and anywhere in the uncleared space where there is a counterparty risk.

"Compression is here to stay because you have to keep compressing to keep your book efficient. Our job is to make that happen seamlessly and efficiently in the background.

"The aim is to get to a place where it is fully automated for all parties," Williams says.

Benefits at the CCP

LCH's SwapClear compressed over 19 million trades - $2.7 quadrillion notional - between February 2008 and February 2019, and last year it compressed away the equivalent of 72% of the total notional it cleared. While its range of proprietary services - including solo, solo with blended rate, duo and multilateral compression - and access to third party providers are beneficial to members and clients, compression also brings vital efficiencies to the clearing house.

"From an operational and default management perspective, compression makes it possible to auction off more streamlined portfolios.

"Operationally it is easier to manage the defaulter's position if there are fewer line items," Cameron Goh, global head of product, rates, LCH, says.

"The portfolio sizes tend to be smaller because the major dealers are mak-

> From an operational and default management perspective, compression makes it possible to auction off more streamlined portfolios. Operationally it is easier to manage the defaulter's position if there are fewer line items
>
> **– Cameron Goh, LCH**

ing an effort to use services such as compression to manage their notional outstanding. This is beneficial for ensuring effective operational management and default management at the clearing house," he adds.

From cleared to uncleared

The lack of standardisation has historically hampered the ability to compress non-cleared derivatives. However, LCH SwapAgent is based on cleared activity services like SwapClear.

"By bringing that level of standardisation to the bilateral market, we can increase the success rate of compression and bring down risk in the non-cleared derivatives market," Nathan Ondyak, global head of LCH SwapAgent, says.

Although SwapAgent does not do compression itself, the trades that it processes are eligible for compression at the relevant providers.

"The idea is to move the trades to standard collateral terms. This allows bilateral products to be fully fungible for the first time so we can transfer risk. It also provides a central infrastructure for the trades," Ondyak says.

"Initial margin compression is something that we will look to facilitate in a similar way to trade compression. There is an emerging market in risk compression and initial margin compression," he adds.

Evolution will continue

Danny Chart, head of fixed income business development at Eurex Clearing, says through the evolution of optimisation and compression services we will continue to see innovation drive efficiency.

This could include the ability to manage and optimise exposures across products and between CCPs.

"For example, recently we've seen Capitalab launch a new service that allows market participants to efficiently switch OTC IRS risk between CCPs to manage exposures and optimise initial margin requirements," he says.

Eurex Clearing currently offers three levels of risk-free compression (basic netting, including fees and rate blending) as well as a TriOptima connection.

"We intend to extend availability of compression services by connecting other compression providers in the market, such as Capitalab and Quantile," Chart says.

The clearing house plans to increase its cycle frequency, as well as connections to providers, to meet the demand for compression as its cleared portfolios continue to evolve.

Looking further ahead Chart expects the compression landscape to evolve in response to the wider array of use cases.

"When we look over the next few years, market participants need the ability to manage and optimise exposures across multiple liquidity pools, increasing opportunities to 'compress' not just gross notional but also initial margin, risk, capital etc - whether this is between cleared and non-cleared, between CCPs or across additional asset classes/products - this is where we will see most of the innovation." ■

> We believe that we can improve compression results and create more efficiency to further reduce the steady state
>
> **– Andrew Williams, Quantile**

Tethys looks to next generation of AI algos

Some fifteen years after Nitin Gambhir founded financial software firm Tethys Technology, its technology arm has emerged as a multi-award winning provider of trading algorithms. For the past decade, the Tethys execution research team has been working on machine learning (ML) and other artificial intelligence (AI) techniques, and incorporating these in its algorithms.

Gambhir, the chief executive of Tethys Technology, the leading independent provider of execution algorithms for global equities, futures, options and FX, is an expert in the application of AI to trading markets but admits the industry still has a long way to go in its use of these methods.

"At a high level, financial markets are ideal for machine learning and AI techniques. There is a lot of data, a lot of factors and the inter-relationships between factors are complex. Machine learning is a non-linear approach that facilitates the discovery of relationships that would otherwise be difficult to recognise with classical statistical techniques. Despite this, failures in applying ML/AI to trading and alpha models are not uncommon. Overfitting and resulting poor out-of-sample performance is the norm."

Gambhir said financial markets are dynamic and relationships therein are in flux at all times. "There are unlimited potential explanatory factors and signal to noise ratios are very low. Relationships appear and go away. It is hard to discern if this is because of regime sensitivity or just a random occurrence. Stable out-of-sample relationship identification is challenging. The industry is rife with examples of capable statisticians and AI experts failing to achieve success."

The Tethys chief argues the main reasons for these failings are the "lack of understanding of the financial markets and thus, the failure to recognise when no real economic drivers hold a model together" and a "lack of proper portfolio-approach".

For his part, Gambhir holds a BS from the Indian Institute of Technology in New Delhi, India, an MS in Engineering from Yale University and an MBA from the Yale School of Management, and worked for five years at JP Morgan before joining Bear Stearns where he quickly rose to Managing Director.

He continued: "At Tethys, we always start with an economic or behavioural hypothesis before formulating a model. We also believe that a model should be stable across market regimes and do well across asset classes and geography."

Gambhir also challenges the popular assertion that machine learning is only as good as the underlying data: "We say it is only as good as the data engineering framework and the financial engineers who work on it. If you look at a largely stable data set, such as the factors that determined the efficiency of a cement factory for example, you can use AI to simply establish what you need to do to produce cement more efficiently.

"Financial markets change constantly. Models created on one set of data may not be effective on a different day when the market conditions are very different. In addition to only using sensible explanatory factors with limited colinearity, we also use machine learning to do independent predictions of relevant factors. Our entire approach is that of "Bounded Machine Learning". If the models receive inputs that are not recognised (outside of expected bounds), the algorithms update in real-time and shift to overweighting the alternative including more classical models."

Gambhir said that his team uses machine learning and AI in reference to specific challenges.

"Tethys does not espouse an "all-encompassing" ML execution algorithm, rather we use ML to tackle micro-tasks within the algorithm logic. We are not trying to achieve the equivalent of inventing a car that will drive itself under any condition. Instead, we firmly believe that finance requires a blended approach. We are using ML to make micro-predictions such as projected volumes over the next five minutes. A notable Tethys achievement is our success in event modelling using machine learning techniques. Anti-gaming components of our algorithmic suite leverage this extensively."

Gambhir said his firm will continue to use ML and AI to develop better and better trading algorithms.

"Looking ahead, we are planning to deploy additional and larger data sets to look at a wider set of relationships. We are developing our own ML techniques that are faster and produce more stable results," he concluded. ■

New CEO Davidson plans Renaissance at OCC

John Davidson is charged with managing an ambitious technology overhaul and to maintain the OCC's newfound position as an advocate for the US options market, writes **Luke Jeffs**

John Davidson has some big shoes to fill. On February 20, he was approved by US regulator the Securities and Exchange Commission (SEC) as the new chief executive officer of the OCC, replacing Craig Donohue, the CEO and executive chairman since 2016 who has returned the position of OCC chair.

Donohue, also the chief executive of CME Group from 2004 to 2012, started in his OCC tenure a programme of modernisation and increasing commercialisation at the world's largest equity derivatives clearing house.

Donohue also repositioned in his time as chief the OCC as an advocate for the US equity options market, a nascent role that has seen in recent years the OCC represent the industry it serves in opposition to various reforms proposed by US authorities.

In his role as chief, Davidson is charged with continuing these initiatives. His immediate priority however is an ambitious initiative to modernise the clearing firm's aging technology.

The OCC's Renaissance Initiative was mooted at the end of Donohue's reign as chief executive in late 2018 and was officially launched in mid-January this year, just weeks before Davidson was approved as CEO.

Speaking to Global Investor Group, Davidson said his appointment as chief executive had been well-planned by Donohue, himself, OCC chief operating officer Scot Warren and the firm's board of directors.

The launch of the Renaissance Initiative was a priority when making this transition and will remain a key challenge for Davidson for his first years in charge.

The new OCC chief executive officer told Global Investor Group: "We launched in January our Renaissance Initiative to modernise our technology infrastructure, which is a three year, multi-million dollar project. We received approval from our board to start the initiative and we have already laid the groundwork for the risk systems."

Davidson said the plan is to replace the OCC's 20-year old clearing system called Encore which he described as "resilient and insensitive to volume spikes but relatively inflexible".

Renaissance aims to "redevelop and modernise the company's risk management, clearing and data systems". Donohue called it in January "perhaps the most important project undertaken by OCC in the past 20 years".

Davidson said the initiative comprises three streams: "First, we are using technology to build a whole new data infrastructure which will be hosted in the public cloud. The technology lead on this is reporting directly to the Chief Information Officer.

"Second, there is a transaction processing system which handles the matched trades coming from the exchanges. To help us build the system, we are working with Stockholm-based tech firm Cinnober, which has been acquired by Nasdaq."

Nasdaq, one of the US exchange groups that uses the OCC to clear its equity derivatives, completed in January its acquisition of Cinnober, a Stockholm, Sweden-based supplier of trading and clearing technology.

Davidson continued: "The third element is the risk management piece which uses a real-time set of models to identify risks which are then reflected in the risk margin calculations. The risk management piece, which we are developing internally, has had a head-start on the data and transaction processing functions."

The OCC chief executive said the data, transaction and risk management development stream will run in parallel with different technology teams but Davidson placed a particular emphasis on ensuring that "we have in place the right control environment".

"We clear some 970,000 different instruments, while single stock options are fungible on 16 exchanges each of which have different risk management environments," said Davidson.

Miami International Holdings, the parent of the Miami International Securities Exchange, launched on February 22 its third options market called MIAX Emerald, taking to 16 the number of exchanges that use the OCC to clear their trades.

Davidson said "the Renaissance Initiative is our main internal focus, but we have of course other areas of focus".

Under Donohue, the OCC became more vocal in its representation of the US options market and often found itself at odds with US authorities over proposed reforms that could have hurt the US options industry.

Most recently, the OCC suffered a setback in mid-February when the SEC rejected its plan to boost its cash reserves despite the US regulator having earlier backed the plan on three separate occasions.

Davidson said: "Our capital plan was disapproved in February by the SEC. When we started down this road in 2015, OCC had $25 million of operating capital, whereas thanks to Craig Donohue's leadership now we have well over $250 million, which is above our capital target base, so we are well-capitalised and way above the capital levels set by international regulators."

He continued: "The capital plan was a divisive issue and we are conscious that we need to work harder on some pieces of the plan. We are working with our board to develop a new capital management process."

The new OCC chief stressed the operating capital plan was "not part of the default waterfall" rather it was "designed to protect us against operational problems" and pointed to other areas where the OCC has worked with its regulator to benefit its clearing members, such as the OCC adopting a new SEC-approved methodology to size its clearing fund

He said: "Driving greater efficiencies is something that OCC needs to continue to work on and this was the rationale for the resizing of our clearing fund, which resulted in our returning over $3 billion in capital to our clearing firms."

Davidson said the OCC has also worked with its regulator to better protect the US options market from the prospect of clearing firm defaults.

"OCC's clearing fund had previously been designed to handle the default of only its largest clearing member (known as Cover One) from a risk perspective but we wanted to be more robust and able to handle the possible default of our largest two clearing members (known as Cover Two).

> "The Renaissance Initiative is our main internal focus, but we have of course other areas of focus"

"We made the changes to the clearing fund and our default process and worked with the SEC -- we were the first clearing house whose primary supervisory agency is the SEC to have its recovery tools and recovery wind down plan approved by them. Alongside that, we have introduced various additional enhancements to our clearing process so we are well along that path," Davidson added.

The OCC, with its subsidiary the Options Industry Council, is also active in helping to educate policy-makers and investors on the pros and cons of trading options. Davidson believes the unique structure of the US options market – many markets clearing through a single clearing house – makes it resilient.

He said: "Diversification is an important contributor to financial security and there is more diversification in the US equity options business than people might think. For example, the fastest growing sector among exchange-traded products is exchange-traded funds which might not have stocks or indices as their underlying."

Recently, the OCC has been raising awareness over the lack of clearing equivalence between the US and European authorities, an issue has been resolved for futures firms but not those trading options.

"This is reflected in the work we do in Washington, D.C. where we are helping the industry recognise the effects of the US regulatory regime on European firms that own OCC clearing members."

Davidson added: "We have also been involved in the equivalence negotiation and have found the Bank of England to be very responsive in that process. They have placed OCC and a number of other central counterparties on a recognised basis for three years while we put in our applications.

He continued: "We need however the European Union to recognise the equivalence of the SEC so we can then refresh our application to be recognised in Europe, which is important for the European-based parents of various OCC clearing members."

The OCC is a very different firm to the one that Craig Donohue joined in 2014. The challenge for Davidson is maintaining that pace of reform starting with the Renaissance Initiative. ■

Davidson's CV in Brief

- John Davidson was confirmed as chief executive officer of the OCC on February 20, after the US clearing house received approval from its regulator the Securities and Exchange Commission, which had to approve a change to its bylaws.
- Davidson replaced former chief and executive chairman Craig Donohue who gave up the CEO post but has retained the chairman role.
- Davidson was previously the president and chief operating officer of the world's largest equity derivatives clearing house, responsible for its technology and operations.
- He held that position for some 18 months after joining the Chicago-based clearer in 2017 from Citigroup, where he worked in various roles including chief compliance officer.
- Before Citigroup, Davidson spent some 12 years at Morgan Stanley where he was a managing director in that bank's global operations and services unit, and worked at CME Clearing.

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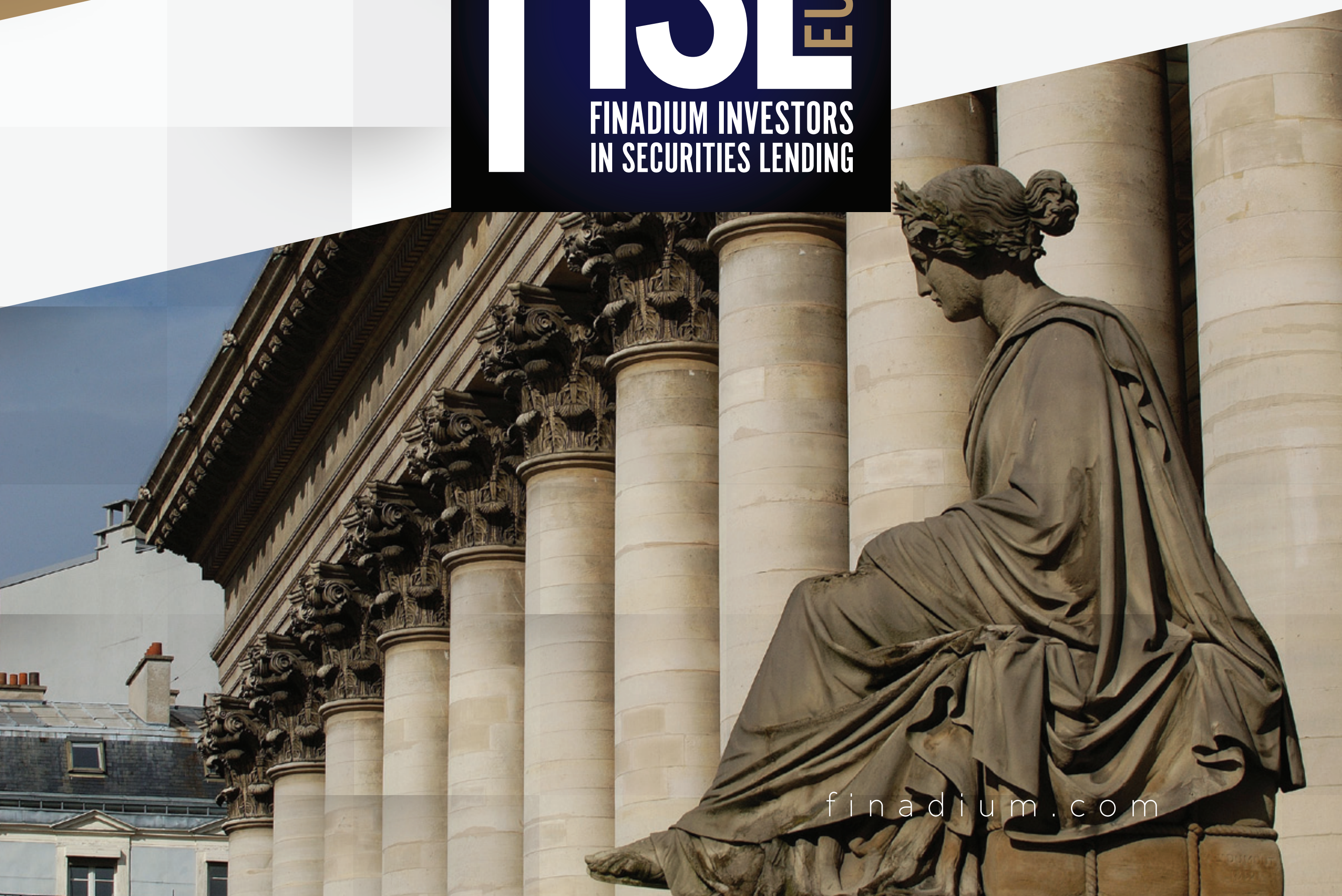

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