The Financial Technologist

ISSUE 1 ·· 2021

Harrington Starr
Your Success. Our Business

THE MOST INFLUENTIAL FINANCIAL TECHNOLOGY COMPANIES OF 2021

HARRINGTON STARR
Your Success. Our Business

The Financial Technologist | Issue 1 | 2021

Contents

04 **Introduction by Toby Babb, CEO of The Harrington Starr Group**

06 **MEET THE JUDGES**
Rupert Bull The Disruption House
Guy Weaver Praetrua Ventures
Colin Slight The Realization Group

15 **THE LIST IN FULL**

FEATURES

18 **The Challenges that organisations face when innovating**
Simon Sear Studio 44

20 **Reacting with acceleration and adaptation to a remote workforce**
Tom Cole Abacus Group

23 **Transforming the Capital Marketing Space**
Roy Saadon AccessFintech

24 **Allvue Systems' Top trends for GPS in 2021**
Yury Shterk Allvue Systems

26 **The changing Investment Management Industry**
Geoff Langham Alpima

29 **Making finance accessible for the LGBT+ Community**
Billie Simmons Daylight

30 **The challenges for tech Innovation in Post-Trade**
Alastair Rutherford Ascendant Strategy

32 **Market Recovery- How Firms are addressing the new reality**
Arjun Jayaram Baton Systems

34 **The growth of Assets in 2021 and the need for central clearing solutions**
Tore Klevenberg Baymarkets

35 **Four compliance trends that will define the Financial Services Industry in 2021**
Erkin Adylov Behavox

38 **Data is becoming more complex - Are you keeping up?**
Mark Montgomery big xyt

40 **Managing Cost and Sustainability for HPC workloads in financial markets**
Rob Elder Bulk

43 **Foreign Exchange- The Perfect Storm**
Keith Hill Caplin Systems

44 **The Cassini Vision**
Liam Huxley Cassini Systems

46 **How Microservices can improve performance now**
Peter Lawry Chronicle Software

49 **Navigating Distributed Compliance in Today's Institutional Landscape**
Leo Papadopolous Cloud9 Technologies

50 **Understanding why Financial Wellbeing starts with Open Banking**
Freddy Kelly Credit Kudos

52 **Duco's predictions for data in 2021**
Christian Nentwich Duco

53 **How to tackle the complexity of digital relationships**
Charlie Henderson Feedstock

54 **FintechOS on why FinTech should be personal**
Teodor Blidarus FintechOS

56 **How FlexTrade is building the future of trading technology**
Andy Mahoney and Valeria Dejong FlexTrade

58 **The importance of resilience in global payments**
The Fnality Team

59 **How to make your firm future ready**
Michael Mueller Form3

60 **Analogue to digital with Exchange 4.0**
Hirander Misra GMEX Group and SECDEX

62 **The importance of embracing platform thinking**
Milena Kannen IG

63 **Utilising FinTech to promote financial inclusion**
Andrew Rabbit Incuto

65 **Understanding the accelerating demand for trade plant analytics**
Clive Posselt Instrumentix

67 **Why global transformation begins with the digital**
Matthew Cheung ipushpull

68 **How 2020 rekindled our drive for innovation**
Anvar Karimson Kepler Cheuvreux

70 **A single solution for providing end-to-end TPP Checking**
Brendan Jones Konsentus

72 **LedgerEdge predicts the future of corporate bond trading**
Ian Chicken LedgerEdge

73 **Has FinTech been revolutionized or is the revolution still to come?**
David Mercer LMAX Group

75 **Exploring the evolution towards the true strategic partnership**
Keith O'Brien LPA

77 **4 AML Predictions and Trends that will shape FinTech in 2021**
Guðmundur Kristjánsson Lucinity

79 **Harnessing the power of data**
David Cooney MahiFX

80 **Exploring the symbiotic relationship between compliance and tech**
Mark Ellis MAP FinTech

82 **Minna Technologies role in creating the perfect storm in FinTech**
Joakim Sjoblom Minna Technologies

84 **The role of perspective and potential in maximizing tech**
Avtar Singh Sehra Nivaura

86 **Staying competitive during a period of hypergrowth**
Stefan Merz PPRO

88 **Optimising for performance**
Leigh Walters TRG Screen

90 **Be part of the economic recovery engine**
Zitah McMillan Predictive Black

92 **Providing solutions that grow and adapt**
Stephane Tyc Quincy Data and McKay Brothers

93 **A new era of technology enabled innovation for capital markets**
Mike Powell Rapid Addition

96 **Challenges of the new compliance normal**
Oliver Bradford Shield FC

98 **Why showing your workings is essential for trusted AI andKYC**
Hugo Chamberlain SmartKYC

100 **Achieving Growth in an Exceptional Year**
Matt Smith SteelEye

101 **The Cloud vs Co-Lo: How the Tortoise can Beat the Hare**
Steve Toland TransFICC

102 **Crafting transparent investment**
Georgia Stewart, Tumelo Tumelo

104 **Revolutionising due diligence**
Cindy van Niekirk Umazi

106 **Driving revenue growth for brokers**
Ahmed Heikal Vela

107 **How to leverage UMR compliance to achieve genuine transformation**
Wassal Dammak Vermeg

109 **Financial wellbeing and Open Banking payments**
Stefano Vaccino Yapily

110 **Survival lies inthe demands of the consumer**
Philip Belamant Zilch

113 **About Harrington Starr**

115 **Contact us**

HARRINGTON STARR
Your Success. Our Business

**TOBY BABB, CEO,
THE HARRINGTON STARR GROUP**

Welcome to the Financial Technologist!

Harrington Starr's financial technology news, commentary, insight and features.

After a turbulent 2020, we end Q1 of 2021 with the Fintech Market in a fascinating position. The sector has remained robust throughout and as we (hopefully) reach the end of the pandemic a brave and blossoming new horizon approaches.

Looking back at the covers of last year's magazines, we saw the Fintech Phoenix emerge in the Summer of last year, as the confidence returned slowly to the market after the paralysis of Spring. Our winter issue focussed on the green shoots of recovery. This issue is centred around bloom as we predict a strong recovery powered by significant growth and innovation in the sector.

Whilst it may be over-optimistic, too soon to tell, or simply wrong, my feeling is the next "roaring 20s" isn't too far away, powered by a strong financial sector that has had the petrol of digital innovation thrown on the proverbial bonfire. With the Bank of England describing the economy as "a coiled spring", Governments in both the UK and the USA with heavy points to prove and a real, vested interest in economic stimulus, institutional money waiting to be invested, alongside an overwhelming sense of positive pent up aggression, the winds are blowing in an exciting direction.

The robust performance of the financial technology space throughout 2020 and 2021 has been astonishing. In hosting the Fintech Focus TV YouTube show and Podcast, I have had the great honour of speaking to a series of truly exceptional companies three times a week for over a year. Almost without exception, we have been told stories of first resilience and then stunning growth. I have lost count of the number of companies who have grown by 100, 200 and once even 300%. Headcounts have been doubled, revenue goals smashed and new products released at scale.

Alongside this we have seen funds raised regularly with numerous high profile Series A and B raises announced. Great companies like Access Fintech, SteelEye, Voxsmart and Solidatus (all listed later in the magazine) have welcomed investment that will help them drive to even greater levels in 2021. Many more are being structured at the moment and it is inspiring to see the investment continue to grow in the space. My prediction is that this will only continue to thrive across the rest of the year.

Features of 2021 in the sector have been investment and fast growth, as previously mentioned, a near doubling of hiring requirements from the same period last year and rapid innovation. Digital transformation has continued after the necessary BCP action of last year.

Tech innovation has been driven by a much delayed and thoroughly welcomed widespread adoption of the cloud. Collaboration and the rise and rise of APIs has allowed tailored and bespoke tech solutions. We have seen a drive towards automation, simplification and collaboration driven by a demand for increased efficiency and productivity. There is an overwhelming demand in financial markets (with a rising cost of sale) to simply get more from less.
Cost reduction, friction reduction, a new way of working, increasing digital customer expectation, improved efficiency. These are the hot topics and demands that will have been made from boardrooms across the world in just about every financial services company. The companies that have truly embraced those demands have thrived.

With great volatility comes great opportunity. I recently interviewed Tobias Sproehnle of Moorgate Benchmarks. Tobias and the team were determined to "use the crisis wisely" and to approach the pandemic with a straight mind, high spirits and to emerge stronger. As they approach a Series A, one can certainly see the benefits of their approach. Turning the negative into a positive has been the hallmark of great companies in financial technology this year.

This issue of the magazine is always one I love. It shines the light on innovative companies who are set to maximise their performance in the year ahead. Now in our fourth year of the Most Influential Fintech listing, this to me is without question the most impressive of all. The companies listed have shown great resilience, huge compassion, intelligence, adaptability, innovation, courage and skill. It is an enormous pleasure to be able to showcase so many of them and, in our biggest ever issue, bring you insight and content from so many of their great thought leaders.

I do hope you take as much inspiration and enjoyment as I have from reading through the pages that follow. There is so much to learn from these exceptional firms and it is a true pleasure to be able to provide this platform. Enjoy the magazine.

Toby

NOW MEET THE JUDGES

HARRINGTON STARR
Your Success. Our Business

MEET THE JUDGES

David Williams
Partner, Financial Services Technology Consulting, EY

Kate Bohn
Innovation & Strategy – Incubator & Accelerator Lead, Lloyds Banking Group

Colin Slight
Joint MD and Co-Founder, The Realization Group

Steve Grob
Founder, Vision 57

Ben Matthews
Partner, Baringa Partners

Carrie Osman
CEO & Founder, Cruxy & Company

Guy Webster
Director, Praetura Ventures

Rupert Bull
CEO, The Disruption House

Raymond Kahn
Managing Principal, Archon Advisors LLC

Nadia Edwards-Dashti
Chief Customer Officer, Harrington Starr

Toby Babb
CEO, Harrington Starr

Now in its 4th year, we are thrilled to have worked with an incredible team of judges to bring to you the Most Influential Companies in Financial Technology in 2021.

This year looks set to be an incredible year for Global Fintech with the macro economic situation creating huge opportunities for innovation and disruption. That is why this issue brings you the biggest list to date. Quite simply there has never been a more rapid pace of change in the financial technology markets and an army of exceptional companies have risen to the challenge.

I am always fascinated about finding the common threads that tie these businesses together. What allows some companies to thrive whilst others stumble? This year some have played defence waiting for the storm to pass, others have played offence and capitalised on the opportunities that emerged. What will prove to be the correct strategy?

The golden threads that I have identified when talking to these incredible companies have been common:

- **A laser sharp focus on solving problems that need to be solved**
- **A relentless desire to simplify and remove friction from complex process**
- **A desire to collaborate and add real value to customers**
- **Agility and adaptability to pivot and provide solutions to new problems and opportunities as they emerge**
- **A desire to listen to the customer and provide an exceptional service**
- **Best in class technology driving products that create stakeholder value**
- **Solutions that create notable cost reduction**
- **Outstanding and highly talented teams with exceptional talent attraction and employee value propositions**
- **Best in class and experienced leadership teams who have been able to set and navigate the course**

All of these are common sense but, as is always the case, rarely common practice making this list a truly special crop. These traits listed above appear time and time again in the conversations we are having and the secret formula will be very clear to see in the pages that follow.

We see key areas and trends emerge. Cloud, cyber, low-code, interoperability, and of course data, data and more data. Regulatory technology, surveillance technology and anything that helps drive remote performance have come to the fore.

These companies have undoubtedly been lucky in the markets that they find themselves in. The pandemic has not been so economically kind to all industries. That said, if you are in the right place at the right time, one still has to ensure that opportunities are grasped. The entrepreneurial wisdom, flair and ability shown in the pages that follow have been a source of great inspiration to me in the last 12 months.

I pass my huge congratulations on to all those listed in this year's amazing issue and cannot wait to see further press releases come throughout the year ahead heralding still more of their many incredible achievements.

Toby Babb
CEO, The Harrington Starr Group

MEET THE JUDGES

Rupert Bull

CEO, The Disruption House

At The Disruption House (TDH), we expect ESG to play an ever larger part in the day to day life of FinTechs in the next 12 months.

ESG has until now acted as a way for businesses to shape the narrative based on how they want to project themselves publicly and commercially. Its popular adoption and integration into the mission statements and annual reports of multi-national corporations, the policy objectives of governments and NGOs, pressure groups and global think-tanks, testifies to its permanence as a concept. On top of this the UN's Principals for Responsible Investment (PRI) has secured commitments from 3,000 asset managers responsible for over $100tr of funds to adopt its ESG reporting pledge.

If ESG is to be truly useful for the next generation, we must capitalise on its popularity today. 2021 will see progress to move up another gear as ESG alongside its partner 'Sustainability', matures from viral catch-all for 'doing good consciously', into a meaningful and consistent set of deliverables shaped by two forces.

■ Firstly, **regulation** such as the EU Green Deal, the Sustainable Finance Disclosure Regulation coming in March 2021 alongside the Non-Financial Reporting Directive, and the FCA's own proposals to enhance climate related disclosures for corporates.

■ Secondly, **compatibility** through formalising the multitude of disclosure requirements into a simpler set of modular standards based on scale, establishing a recognised protocol overseen by an independent authority with existing responsibility for corporate codes of conduct and accounting standards. The IFRS is currently working on such a proposal with the hope of unveiling a Sustainability Standards Board at the next UN climate change conference of COP26 in November 2021. The collective knowledge of SASB, GRI, TCFD, UN SDG and the CDSB amongst others will provide the tools, technical support and experience to help demystify adoption, accreditation and delivery for all participants.

FinTechs are at the heart of the ESG movement but given that 98% of a bank's environmental impact is in its supply-chain, according to recent PRI research, they will come under ever greater scrutiny. Recent research highlighting that Bitcoin has the same carbon footprint as New Zealand highlights some of the drivers for greater analysis of the ESG impact of FinTech.

The FinTech industry is a cradle of exceptionally motivated, creative and flexible talent, well positioned to influence the power and direction of ESG from within. The right ESG messaging will boost access to talent, capital and customers, and make firms winners in the long-term by formulating an early strategy for themselves.

To capitalise on ESG as an opportunity, FinTechs will need to monitor and measure their own ESG footprint as part of their clients' supply-chains. By demonstrating their own ESG self-awareness, digital start-ups can accelerate their engagement with clients and help them to meet the requirements of the next stage of the ESG evolution.

Our belief in the importance of ESG is why we have designed the TDH ESG Pathway - to help FinTechs demonstrate their commitment to sustainable outcomes.

THE DISRUPTION HOUSE
ENABLING INNOVATION

"If ESG is to be truly useful for the next generation, we must capitalise on its popularity today."

Guy Weaver

Director, Praetura Ventures

Guy Weaver is Director at Praetura Ventures, the venture capital firm which invests in early-stage high-growth businesses, including Sorted, Peak, Feedstock and Futr.

praetura VENTURES

The secret life of FinTech and the people behind it

There is no doubt the FinTech industry is booming – the numbers speak for themselves.

In 2020, UK FinTech firms landed $4.48bn of investment. This represents 32 per cent of all venture capital investment into the technology sector, according to Tech Nation's latest ecosystem update, and this injection of capital shows no sign of slowing down.

But, with the increasing prominence of FinTech businesses comes added competition for the funding that will fuel growth. In 2021, having the right people at the helm of your business will be just as key to securing investment as the strength of your business proposition.

In seed- and early-stage businesses, fundamentally we invest in the founders and the people running the business. These are the individuals that directly influence the direction of a company's growth strategy, and when I look at a business that is seeking investment, I want to get to know the founder as much as possible. I want to know what drives them, what their ambitions are, that they have good industry contacts and are surrounded by the right people who can help their business to scale. Good industry acumen always goes a long way.

But what makes a good founder a great founder? Being able to explain your business' proposition in a way that everyone can easily understand. FinTech is known for innovative but complex technologies, so a simple articulation of the problem and the solution is often easier said than done.

However, the ability to effectively articulate what your business does is crucial. You can only grow and scale a business if you can sell your product, and there's not much chance of that happening if your customers and addressable market don't understand it properly.

Identifying innovation

There has been a huge amount of success across the sector in recent years, especially in open banking. This means there's plenty of choice for businesses and consumers when it comes to choosing the right solution for them.

However, an unfortunate consequence of the growth in open banking is that consumers and corporates are using an increased number of providers each providing different functionality. A growing challenge is management of the different solutions people use. This is why aggregation will be a key area to watch over the next 12 months. In the consumer space, I really like what Cleo are doing, and in the corporate space, I think Accel's backing of Primo was a particularly smart move.

Looking further ahead, the possibilities for FinTech and its applications are endless. The reason FinTech absorbs such a large proportion of tech investment as a whole is because its innovations, in some shape or another, underpin developments across all subsectors of the technology industry.

Payroll management may not sound like a glamorous FinTech innovation, but it has the potential to permanently alter the nature of businesses across all sectors and industries.

PayPal, one of the world's biggest FinTechs, has recently moved to offer employees their salary as soon as they have earned it. Although this seems innocuous, this is a major shift away from how businesses handle their finances and significantly disrupts cash flow.

While not necessarily attractive to businesses, this does provide them with one outstanding advantage: the power to draw and retain the industry's best talent. As I've touched upon, talent is a major driver of business success, and having systems in place to overhaul the way employees are renumerated is a very handy leg-up on competitors.

Over the next 10 years, FinTech innovations such as this won't just be the domain of the tech sector. All industries are going to rely on them to be successful. For the next best FinTech to capitalise on this opportunity, it needs the right person to spot it and drive the business towards it.

HARRINGTON STARR
Your Success. Our Business

Colin Slight

Joint MD and Co-Founder, The Realization Group

Selling technology and software into the financial markets sector is a challenging proposition. Sales cycles can be lengthy, running from months to years in some cases. The technology is complex. Decision-makers can be spread across the globe. The regulatory environment is constantly changing. And changes in key personnel and organizational structures occur regularly, particularly when acquisitions and mergers take place.

In such a dynamic environment, what are the best marketing and sales practices that firms can adopt in order to increase their chances of success?
This article is the first instalment of our seven-part "selling to the enterprise" series, in which we discuss with industry leaders how selling high-value solutions to a small, finite group of potential customers requires a fundamentally different sales, marketing and lead nurturing approach to selling lower value solutions to a larger pool of customers.

Featuring **Colin Slight** of The Realization Group, **Matthew Cheung** of ipushpull, **Debbie Brown** of Broadridge Financial Solutions, **Carl Rogers** of Finceler8, **Alastair Rutherford** of Ascendant Strategy and **James Hounslow** of Harrington Starr, this article will discuss the need for persistent market communication.

Change with the times
Since the global pandemic, the sales and marketing landscape has changed considerably across every B2B sector. With trade shows and conferences no longer viable under lockdown, and with face-to-face contact severely limited, it has become more important than ever for firms to get the right message out to the right target audience by utilising appropriate social and digital channels. For firms selling software and technology into the constantly evolving financial markets sector, this is particularly crucial.

Rather than just raising brand awareness, marketing now needs to be more tailored to customers' problems. A vendor needs to be seen an authority and an educator, someone who understands what their customers' issues and challenges are, and who can present – through white papers, articles, blogs, podcasts and increasingly video - how these challenges can be addressed. This requires a closer integration of marketing and sales than may have been the case in the past.

The Realization Group

Never Go Dark
"You should always have something to say," says **Colin Slight**, Co-Founder and Managing Director of The Realization Group, the specialist financial services and fintech marketing agency. "Never go dark, because that introduces doubt and uncertainty in the market as to what's going on with your firm. Are you still alive? Are you still active? Are you still keeping yourself relevant?"

"You have to put yourself out there with interesting, relevant content, so people come to you to learn about certain areas of technology, or the market, or your products," agrees **Matthew Cheung**, CEO of ipushpull, a technology company that specialises in live data sharing and workflow automation. "There needs to be enough of that messaging so you have constant brand awareness, which can then work hand-in-hand with smaller, targeted campaigns."

Be Consistent
Consistency of messaging, both internal and external, is key, says **Debbie Brown**, Global VP Marketing Asset Management at Broadridge Financial Solutions, a financial services technology company. "If various people within your organization are pushing out blogs on social media, you have to ensure you have consistency of internal messaging before taking it out to the market," she says. "Then make sure that you're continually out on social media with a drumbeat around a particular subject. Then back that up with regular email newsletters, blogs, webinars, etc. Particularly in a complex sales cycle with high value sales."

> "Rather than just raising brand awareness, marketing now needs to be more tailored to customers' problems. A vendor needs to be seen an authority and an educator, someone who understands what their customers' issues and challenges are, and who can present."

Running online events such as webinars can be a great source of relevant and interesting content, says Cheung. "From a single one-hour event, if the content is good and you get the right questions and right discussions, that same content can be re-purposed for another six-twelve months," he says. "When you do things digitally, that content can persist forever, and you can reshape it in lots of different ways. So from one online event you can create blogs, reports and social campaigns in the run up to the event, with follow up articles, posts and social media again afterwards."

Focus on the Right Audience
When distributing content, it's important to ensure appropriate channels are used so it reaches the right people, says **Carl Rogers**, Director at Finceler8, a London-based fintech accelerator. "Banks, asset managers, hedge funds and brokers, all have their own particular peculiarities and requirements, so you need to focus on a specific group. It starts and ends with the customer: who are you targeting, and what's the best mechanism of reaching them? With brokers for example, we've always done a lot of face-to-face work because that's the nature of the beast. They like that personal interaction. But obviously, given the current climate, that's a lot more difficult now."

Rogers points out that there are different cultures within job functions. "Analysts, for example, consume large amounts of information and quite like reading, whereas if you're trying to approach front office traders or brokers with the same level of detail, it just doesn't work. You've got to adapt your message and delivery mechanism accordingly, because they have different attention spans"

Rogers' firm uses LinkedIn extensively, but the platform does have its limitations, he says. "One of the most senior people I know doesn't use LinkedIn because he gets hit up all the time by people wanting something. He's more of a target on LinkedIn rather than getting much out of it, so he has just withdrawn himself completely. And I know some of his senior colleagues have done the same."

Despite its limitations, LinkedIn remains the digital and social channel of choice in the B2B sector, says **James Hounslow**, Managing Director at Harrington Starr, a global specialist in fintech recruitment. "But you need to connect to the right people", he says. "And it's not just the marketing team that needs to connect to those people, it's the salespeople too."

Be Credible
You have to give people a reason to want to connect with you, says Hounslow. "I'm constantly getting connection requests from people I don't know, who I've never met, with no message attached, so why would I want to connect with them? They're giving me nothing. I also get requests from people saying, 'We can do this, we can do that, so you and I should connect', and I'm thinking again, 'You're just cold selling to me here. Give me a reason to want to connect with you. Tell me something useful.'"

The more good content you can put out there, the more somebody will want to talk to you, says Hounslow. "You need to utilise every part of the business to come up with the content, and be consistently putting the message out to your marketplace. Consistency is key."

Alastair Rutherford, Managing Director of Ascendant Strategy, a consultancy firm specialising in post-trade infrastructure transformation, also sounds a warning note. "The reality is that most senior leadership roles simply do not have the time to invest in this stuff, and the last thing they want is a sales pitch" he says. "So you've got to have a credible and engaging pitch that isn't just pure sales. There's nothing worse than having someone who doesn't understand your business, just prattling on about their technology or services. But if someone comes across with a bit more empathy based on some knowledge and market colour, that starts to become interesting."

Lockdown has in some ways made things easier in that regard, adds Rutherford. "Things have changed with people working from home. If I've got half an hour, I might read or watch something. Whereas if I'm in the office and I've got half an hour, there's a queue of people just waiting for me to not look busy so they can suck up my free time."

Look out for the rest of this series at https://www.therealizationgroup.com/insights/blog/#, where our next article will focus on the importance of building communities of interest.

Harrington Starr
Your Success. Our Business

THE MOST INFLUENTIAL FINANCIAL TECHNOLOGY COMPANIES OF 2021

300 companies set to dominate the headlines in the year ahead

HARRINGTON STARR
Your Success. Our Business

THE LIST IN FULL

10X Banking	B2C2	Capitolis	Coinfloor
11FS	BankBI	Caplin	Collibra
Abacus Group	Bankifi	Capula Investment Man'ment	Commcise
Abelee	Baton Systems	Cashflows	Compliance Sol'ns Strategies
Access Fintech	Baymarkets	Cashplus	ComplyAdvantage
AccountScore	Beacon	Cassini	ComplySci
AEVI	BearingPoint	CBOE	Confluence
Allvue	Behavox	Celer	Copper Inc
Alpima	Beyond Identity	CFRA	Corefiling
Alyne	BH-DG	Checkout.com	Coremont
Amphora	BigPay	Chronicle	Cosaic
Anonos	Big XYT	Cidran Capital	Credas
AQMetrics	Blockfi	Citadel	Credit Kudos
Aquis Exchange	Blockworks	Citydata AI	CubeLogic
Arachnys	Bloomberg	Clarna	Currency Cloud
Arca	BMLL	ClauseMatch	Currensea
Arkk Solutions	Bolero	Clearmacro	Cutover
Ascendent Strategy	BriTech	Cleo	CyberTonica
Au10tix	BTON	Cloud Attribution	Dacxi
AutoRek	Bud	Cloud9	Data Site
Avaloq	Calabrio	CloverDX	Databricks
AXA IM	Calastone	CLS Services	Daylight
AXETrading	Callsign	CLSA	Delta Capita
Ayasdi	Canaree	CMC Markets	DEXT
Azimo	Capital on Tap	Codat	DFIN Solutions

HARRINGTON STARR
Your Success. Our Business

THE LIST IN FULL

Diamond Standard	Finastra	Hyperexponential	LPA
Divido	Finbourne	IG Group	Lucinity
Disperse	FintechOS	Igloo Trading	Luxsoft
Doconomy	Fire.com	IHS Markit	MahiFX
Droit	Flextrade	Inbotiqa	Maia
Duco	Fnality	Incuto	Mambu
Egress	Folio Technologies	ingenico	MAP Fintech
Eigen Technologies	Form3	Instinet	Marex Spectron
Elavon	Fronted	Instrumentix	Marshall Wace
ElementaryB	Fundapps	Ion	Maystreet
Enfusion	GBG	ipushpull	Meniga
Equilend	Genesis Global Technology	Iress	Metrobank
Essentia Analytics	Glide	Itiviti	Mettle
Ethics Grade	Glue42	Kaizen Reporting	Milestone
Euronext	GMEX	Kepler Cheuvreux	Minna Technologies
Eventus	Gocardless	Konsentus	Mitek Systems
Exane	GoHenry	Leading Point	Modulr
Exate	GoldenSource	Ledgeredge	Mojo Mortgage
Exiger	Greenkey	Lendsmart	Moneyhub
ezbob	Gresham Tech	Life Moments	Moorgate Benchmarks
Fairly	Habito	Liontrust Asset Management	Movius
FeatureSpace	Hedgeguard	Littlepay	NanoFoundation
Feedstock	HooYu	Livemore Capital	Napier
Fenergo	HPD Software	LMAX	Nasdaq
Finantix	Humn	London Stock Exchange Group	Navex Global

HARRINGTON STARR
Your Success. Our Business

THE LIST IN FULL

nCino	Quantexa	StarCompliance	Tumelo
Nebeus	Quantifi Solutions	Starling Bank	Ultumus
Neotas	Quantum Group	SteelEye	Umazi
Nivaura	Quincy/Mckay	StoneX	Valantic
Nivo	Quotevine	Style Analytics	Vanguard IM
Northrow	Rapid Addition	SumUp	Varengold
Nude	Rapid Cash	Symphony	Vela
Numerix (TFG)	Reformis	TAINA Technologies	Velox
Ocrolus	Rhino	Taskize	Vermeg
Onfido	Ripjar	Thought Machine	Volante
OpenFin	Rival Trading Systems	Tickr	Volume
OpenPayd	Roqqett	Tink	Vortexa
Ozone	RPMI Railpen	Tokensoft	Voxsmart
Paysafe	Salary Finance	Tookitaki	W2 Global Data
Ping Identity	Sapience Analytics	Toppan Merrill	Wagestream
Plaid	ShieldFC	Torstone	Wealthify
PPRO	Sigtech	TRAction Fintech	Wirex
Predictive Black	Smart Pension	Tradeweb	Xceptor
Prequin	SmartKYC	TradingScreen	Xpansion FTS
Primary Bid	smartTrade	TransFICC	XTX
Primer	Snowflake	TransitNet	Yapily
Privitar	Softomotive	Trayport	Yobota
Productfy	Solidatus	TreasuryXpress	Yolt
Protiviti	Sonovate	TRG Screen	YOTI
Q2 Banking	Sovryn	TrueLayer	Zilch

IS YOUR ORGANISATION'S APPROACH TO INNOVATION FAILING?

Simon Sear, Founder and CEO, Studio44

Do you feel that your organisation takes too long to deliver new solutions and innovation is slow because of outdated ways of working and a sluggish culture? Have you implemented Agile and Design Thinking, but not seen a transformation in your culture or new value being created?

I run a growth and innovation consultancy and I can, hand on my heart, guarantee that I can help you deliver new value from innovation, but only if you truly want to go on a transformative journey. Are you willing to hire the right people, create the right culture and focus on outcomes and not the process of getting there?

Setting up an innovation lab, hiring a head of innovation and implementing Agile aren't going to do it and here's why: firstly, and most importantly, organisations are full of people that don't really like change (that's not necessarily a bad thing, but it is a thing!) It starts with owners and shareholders of established businesses who want regular, predictable returns. Steady as she goes is the order of the day. In the same way that they want a million pounds looked after by a wealth manager; they want their original investment back plus 'reasonable' growth.

In order to do so, they seek to have a management team that runs an efficient, controlled organisation that doesn't take too many risks. Hence the culture is necessarily risk averse and focused on optimising what's already there and not exploring new products, services, markets or ways of working. Most often, people who work in big organisations don't want to come on a journey of exploration, chaos and uncertainty. If they did, they'd start their own business or work for a high growth company. To them, safety, reliability and consistency are far more important and that creates a risk averse culture that values the status quo, not change. They admire Elon Musk and Jeff Bezos, but they don't want their stressful lives, well, maybe their money!

The second big challenge is that organisations focus on the process and not the outcome. Here's an example. I recently spent some time with senior leaders at a global company that is spending tens of millions of dollars on innovation labs. They've partnered with one of the big tech consultancies and built 2 large innovation labs with Agile product teams (200 people+). The business model works like this: the board has mandated that business units (BUs) have to come up with a certain number of innovative ideas to feed the hopper. The innovation lab runs a shark tank/dragons den type pitch ceremony to select ideas and, for successful bids, matches the investment from the business unit, 50:50, to take ideas through development and to launch. The lab brings in a few people on secondment from the BU to be part of the product team developing the idea, who go back to the business when a product is released to spread the Agile love.

It's a good model on paper and easy to measure at each stage of the innovation cycle. It's something that McKinsey, BCG, Accenture and all the top tier consultancies advocate. Execs and senior leaders around the world have taken this prescription and have similar innovation labs, models and KPIs.

Here's the rub. I asked the leader of the labs how many ideas they had taken through to launch. The answer was pretty shocking, after 18 months, and despite the hundreds of ideas, and millions of dollars, only one had made it to scaleup.

Off the record, the head of the labs told me the root cause. The BU leaders didn't see the value to them. They actually saw it as a group-level tax, a cost of doing business. They were far more interested in making more revenue, improving profitability or cutting costs within their own BUs. Feeding ideas into the innovation lab was on their annual scorecard, so they had to make sure ideas flowed through, but they had little motivation to make it work properly. They just had to hit their KPIs for ideas generated and developed.

> "Firstly, and most importantly, organisations are full of people that don't really like change (that's not necessarily a bad thing, but it is a thing!)"

Boards and senior managers are far more successful in realising growth through innovation when they set stretch goals on revenue, profitability and cost and give middle managers and BU leaders clear objectives to take risks and generate step-out value in the medium to long term. Measuring them on how many ideas they have in the hopper or in development is the wrong way to drive the desired outcome. The trouble is, it's easy to measure and tick off KPIs on a scorecard, but it's the wrong approach. Ironically, shareholders don't care about the KPIs, they care about outcomes.

If you don't believe me, then look at Amazon, Apple and Google and their market valuation. They focus on growth and attract people who want to go on innovation journeys, and they advocate continual experimentation but, more importantly, the leaders accept that they will have failures along the way.

If you're a leader in an organisation that really wants to deliver significant new value, my advice is to focus your energy on hiring a few smart rebels, coalesce them around a mission to achieve a big outcome, like 20% growth in revenue, and be prepared to give them the space to quickly make decisions and to sometimes fail. Do that, and the right people, culture and new value will automatically follow. But ask yourself this; do you truly want to go on that kind of journey or, honestly, do you prefer a little more certainty and stability?

REACTING WITH ACCELERATION AND ADAPTATION

Tom Cole, Managing Director (UK & Europe), Abacus Group

Since Abacus Group was founded in 2008, we've seen so much change in the financial industry that we serve but none more so than the last year. Financial firms, especially hedge funds, were slow to adopt cloud technology over a decade ago. But, now with the COVID-19 pandemic upending the way we all work, and with the health and safety of star traders of utmost concern, financial firms were some of the first to institute firm-wide work from home policies, even before many local governments enforced stay at home orders at the onset of the pandemic.

For most of our users, the shift to working remote was seamless since our Abacus Cloud Platform has always included remote access capabilities. Our client support helpdesk tickets skyrocketed at the onset of the pandemic primarily because most users had never had to work remotely before, so they weren't as familiar with remote access options. But once everyone got settled into the new norm and realized how seamless working remotely could be with cloud technology at their fingertips, they've been confident in the business continuity, ease of use and security our Abacus solutions provide them.

A year on, the majority of our clients are still working from home in most regions of the world, and some even have no plan to return to offices anytime soon. We've also seen quite a few clients adopt a hybrid model with employees working on a rotation of a few days in the office and a few days at home.

What's the biggest change we've made to support our clients during this unprecedented time?
When our employees simultaneously pivoted to working remotely a year ago at the same time as most of our clients, we used a new business intelligence solution to enhance our remote support model, giving our management team visibility into key performance indicators in real-time dashboards. This allowed us to be able to react quicker and seamlessly to changes in ticket flow, all while adapting to a remote workforce. We were forced to also look at our business in a different light and found areas of efficiency gains and optimizations that we might have otherwise overlooked before this new way of working. We've streamlined processes and hiring, while also exploring new ideas that we might not have prioritized investing in pre-pandemic.

"When our employees simultaneously pivoted to working remotely a year ago at the same time as most of our clients, we used a new business intelligence solution to enhance our remote support model, giving our management team visibility into key performance indicators in real-time dashboards"

From a technology standpoint, we focused this past year on accelerating bringing to market solutions that support the new work from home paradigm. This has included fully integrating communication tools like Microsoft Teams and Cisco Jabber into our signature abacusFlex IT-as-a-Service solution. We also launched new features that provide clients with security capabilities needed with a new dispersed workforce, such as Palo Alto GlobalProtect Always On VPN and a Remote Access Tracking dashboard accessible to our clients within their **abacus**Portal that provides a firm's management with visibility into their users and the services they're leveraging.

What key trends do we see being the biggest opportunity for financial services technology in 2021?
Solutions that focus on both usability and security will be the most in-demand. We're seeing a growing sector of technology that focuses on being able to protect end users when they're not in the office. This need was accelerated by the pandemic and we're seeing firms quickly adopt to a more mobile strategy to support their workforce. We're also seeing a surge in security products to protect end users. Balancing these two demands – a seamless user experience combined with remote access enterprise-level cybersecurity layers – is now the standard expectation.

Being able to seamlessly and quickly onboard new employees remotely is more important than ever now and getting them connected to their firm's technology network and setup to work securely from home is paramount. We pivoted and streamlined our process for onboarding new users early on in the pandemic and we see this as an area that will continue to be vital in this coming year with so many firms continuing to work from home.

Abacus gained new clients at an unprecedented rate in the UK and Europe markets over the past year, despite the strictest lockdowns, due to our unsurpassed reputation at being able to efficiently onboard remote users with the highest quality of service.

We are honoured to be recognized by the Financial Technologist Magazine as one of the Most Influential Firms in Financial Technology for 2021 and look forward to continuing to evolve and adapt to the ever-changing business needs of investment firms.

Tom Cole is Managing Director – UK & Europe at Abacus Group, based out of London. He's responsible for managing all of Abacus' UK and Europe operations and teams. In this role, Tom is focused on strategy, client service, technology and business development in the UK and Europe markets. Prior to Abacus, Tom was CTO at COMAC Capital, a multibillion global macro hedge fund. He led COMAC's technology strategy, cybersecurity practices and group business continuity planning. Prior to that he held various technologist roles within Balyasny Asset Management, Glencore and Publicis Groupe. Tom was awarded distinction for MSc studies from the University of Liverpool.

TRANSFORMING THE CAPITAL MARKET SPACE

Roy Saadon, CEO and Co-Founder, AccessFintech

AccessFintech (AFT) was founded in 2016 by Roy Saadon and Steve Fazio, two experienced financial market entrepreneurs, to solve the challenges of sharing data and collaboration across the financial ecosystem.

Capital markets players are not willing to share their trading book data on a network basis and do not have a shared format in which to share that data. As a result, between 3 and 6 percent of all capital markets trades fail. AFT's solutions address this significant problem, which gives rise to the thousands of people in middle and back offices chasing trade updates (over phone and email), banks having to reserve precious capital on their balance sheets against incomplete trades, and facing higher risk from open positions sitting on their books for days.

AccessFintech

AccessFintech's technology platform allows capital market participants to share data about their trades in whichever format best suits them, from Excel spreadsheets to two-way APIs. AccessFintech extracts this data, cleans it and imports into the cloud so all entities, such as banks and buy-side players, can work with each other better. Their goal is to be the de-facto industry collaboration software.

AFT is tapping into a trend, set to accelerate this coming year, of a much greater focus on data transparency and collaboration as a result of pandemic driven market volatility. In 2020 AFT supported the market by providing immediate platform access to multiple organisations (with the AFT client pool) to allow them to execute a weekend fails resolution drive. For example, eight organisations were onboarded in a 48-hour period. AFT were then asked to be on standby on two further occasions where such extraordinary measures were being considered but then not required (e.g. during the US Presidential election). As more of these events emerge, AFT is well placed to offer a unique data and workflow tool for the financial markets to instantly resolve trading issues.

The powerful network effects will be constantly amplified as more organizations became part of the ecosystem and in turn this is set to allow AccessFintech to accelerate product-driven growth.

It has developed a new CSDR solution and is the only service provider to have created a single firm end to end solution for this important regulatory change, built on top of a live and successful settlements offering, which has minimised fail rates and reduced email traffic by up to 60%. The upcoming regulation will become a central focus for firms in the latter half of 2021.

Another new launch has been the Cash Payment Affirmation service. This is a market changing offering, designed in partnership with Goldman Sachs and Blackrock, which has seen organisations achieve STP rates of up to 99.5% and releases significant capital for reinvestment by portfolio managers.

On Loans AFT has developed a solution for the longstanding manual effort and inefficiency in the bank loan space. The company has brought together a Working Group of participants from all stages of the lifecycle from agents, to clients, to auditors to develop a comprehensive service that tackles five distinct challenges.

The true value of AFT is transforming the way capital markets operations are conducted by providing the venue where collaboration and data-sharing occurs. In the world of remote work, the value of cooperating and connecting capital market participants will continue to increase.

TOP TRENDS FOR GPS: WHAT TO WATCH IN 2021

Yury Shterk,
Chief Product Officer,
Allvue Systems

ALLVUE

Allvue Systems maintained close contact with its GP and LP clients across the private debt, private equity, real estate, and infrastructure segments throughout 2020 to understand their challenges and objectives throughout a turbulent year which was rocked by the COVID-19 pandemic and market dislocation. Drawing on an understanding of their priorities – and our insights about broader market developments – we present five key trends that look set to define the evolution and growth of the alternative asset space in 2021.

1. Private debt has sailed through recent challenges and will continue to grow rapidly
Private debt is one of the fastest growing alternative asset classes and is expected to continue to outpace many other segments. A recent IQ-EQ and IFI Global survey of investors and managers with assets under management totaling $388 billon indicated that 95% believe the private debt market will continue to grow over the next three years.

The driver for much of this growth is the ever-broadening range of investors participating in the asset class. The market has simply become too large and too attractive to ignore. This is creating momentum among pension funds, which see limited opportunities in traditional asset classes such as fixed income given record low rates and yields. These investors are eager to access the superior returns and greater diversification available from private debt. Moreover, many funds have tentatively explored the private debt market in recent years and are now increasing allocations as they become more comfortable with the market's dynamics.

2. Growth and the COVID-19 crisis are prompting technological soul-searching
As alternative asset markets continue to grow, GPs' technological needs are increasing. In the past, private markets were relatively straightforward. For most players, a single spreadsheet could suffice because the scale of assets and their complexity was limited (with loans to a handful of companies, for instance) while many managers only operated a single fund. But as more GPs have begun to invest in a broader portfolio of alternative asset classes, they face more complexity in terms of managing data and systems. While it is feasible, though inefficient, to manage loans of a similar type to a few companies using a spreadsheet, this approach is not scalable.

Consequently, technology is becoming more critical and the alternative asset market is searching for a tech upgrade to address its challenges. In particular, the migration of managers into adjacent private markets is spurring demand for technologies that span asset classes to deliver instant visibility of exposures in a specific geography or sector across the firm, regardless of asset class.

> "The trends we have identified here will undoubtedly evolve and new ones will emerge during 2021."

3. Turning data into information is becoming instrumental to future success
Alternative asset managers are drowning in data. They receive it from multiple internal sources – detailing interest payments, for instance – as well as external sources including investees, investors, partners, regulators, rating agencies, FX providers, execution venues and news and search providers.

Apart from the costs associated with data management, transparent data is becoming a differentiator for GPs to demonstrate performance and risk management, as investors increase allocations to private debt. Clean, orderly data can also provide more timely information, uncover insights that foster better investment decisions, help to boost IRR, and manage risk. As a result, GPs are increasingly looking for a holistic system that allows them to input data from multiple different sources to a single location where a standard toolkit can be applied so that data can be easily consumed.

4. Back office integration is accelerating as GPs seek to reduce friction
The growth in the breadth and depth of alternative asset markets means GPs need to streamline operations and improve efficiency. There is an increasing need for continuous access to multi-currency and multi-asset general ledger information, which acts as a single source of truth, not least to meet growing regulatory and investor reporting requirements (including for detailed financial statement reporting and cash management).

To address these challenges, some GPs have deployed standalone systems from multiple vendors for various tasks as their needs have changed. But as the industry matures and diversifies, managing disparate solutions is time consuming and complicated. Instead, GPs need to create a frictionless back office that can manage the increased complexity of general ledger and investment accounting activity in an integrated way. For most GPs, the integration of back-office activities using technology is not about cutting headcount, although it can reduce expenses significantly. While back office integration does potentially facilitate the outsourcing of some mundane activities to low-cost service providers, its ability to free up people for value-added activity is more important for GPs.

5. The cloud is now part of everyday business life
The COVID-19 crisis and the sudden move to working from home in April 2020 (which has subsequently continued in almost all geographies) have been a salutary reminder of the value of the cloud: everyone who is familiar with using Zoom on the cloud or Microsoft Teams understands the need for a secure infrastructure that can be accessed remotely. However, GPs' experience of the cloud during the pandemic merely confirms that the cloud has gained mainstream acceptance in recent years. For the relatively few firms that have yet to migrate at least some services to the cloud, it is no longer a question of if, but when.

While resiliency is certainly an important characteristic of the cloud, the main driver of migration remains cost. By removing the need to implement and maintain infrastructure, including costs associated with network engineers and hardware experts, the cloud is an extremely attractive proposition when it comes to reducing internal overhead. It also reduces complexity and inconvenience as solution providers deliver administration and support.

• • •

Conclusion
The alternative investment space is set to capitalize on its positive experiences and learn from its missteps. Perhaps the most important takeaway from the COVID-19 crisis and subsequent market dislocation is the need for greater visibility and flexibility. The trends we have identified here will undoubtedly evolve and new ones will emerge during 2021.

ALL CHANGE IN INVESTMENT MANAGEMENT

By Geoff Langham
COO, Alpima

We talk with Geoff Langham, COO at ALPIMA, about the changing Investment Management industry and how technology resolves many of the challenges faced by Asset and Wealth Management firms.

1. What is driving change in Investment Management?
Strong forces are reshaping Asset and Wealth Management, which are forcing providers to re-think their businesses, and to shift from a product model to a service model.

These forces include:
A. Digital Like many industries, customers are demanding more digital engagement, accessing real time information - where and when they want it
B. Customisation A growing appetite for customisation across the value chain
C. Powerful macro forces Where lower rates are expected to last for longer, meaning lower returns
D. Margin compression A seemingly relentless squeezing of margins
E. Regulatory forces Which are driving increased transparency
F. More consolidation As firms compete for scale

Hindered by legacy systems, fragmented processes and high fixed costs, many incumbents are struggling to respond. This poses a substantial business risk – and for some this is existential.

This being said, thanks to technology, the industry is rapidly evolving for the better. The future of investing is exciting – transparent, personalised, and delivered as a service.

2. How can technology resolve these issues?
Smart technology really is the answer. In a world where many teams in the industry are still using 20 or 30-year old systems and spreadsheets to create new products and serve their customers, technology has progressed to a point where investment managers and their customers are now able to build and optimise personalised portfolios in seconds.

The first step is to capture data from multiple clients and data providers via API – across a universe of securities, funds and indices. Once the data has been captured, managing and storing that data is key – we think that applying object-oriented design ensures ultimate analytical flexibility. From that point real-time analytics are possible by applying machine learning, artificial intelligence and time-tested modelling, then focussing on the UX, by making analytical tools easy to use and offering powerful visualisation tools.

This modern and flexible technology is available right now, meaning that investment managers are able to improve the way they design products, build portfolios, run money and serve customers.

"ALPIMA has world-class institutional clients actively using the platform across their organisations, the majority of which are based in Europe, with a small number in the US and Asia."

3. What does ALPIMA do?
We created ALPIMA because for many years we saw a persistent gap in the market in front office technology. We launched the platform in 2017 after 2.5 years of R&D.

ALPIMA offers a SaaS platform for investment *management and product design.*

Our clients can create optimised portfolios, and analyse them in great detail across the past, present and future, bringing what is essentially a concept – a portfolio, a strategy – to life and understand it like never before - we call this Investment Intelligence™. This results in a much quicker product creation cycle across Research, Production and Sales. It improves decision making and helps to improve client engagement. Visualisation is a powerful thing.

ALPIMA allows our clients to offer customisation at scale – something which up until now, has been crucially lacking in investment management. To do this, we treat each portfolio as a digital object that can be observed, modified, tested and optimised before it is implemented, very much like a digital version of an aircraft or a building before it is built. We call this Object-Oriented Investing™. If you know what you want to do and data, such as ESG, is available, it can be done with ALPIMA.

4. What results can be achieved?
There are many benefits to using our modern technology platform, but perhaps the key is that customers are provided with a cutting-edge and highly customised service. We expect that this improved customer service will ultimately drive growth in the investment management industry.

Other benefits include:
A. Clients are able to design, build, test, optimise and implement personalised, dynamic portfolios in seconds (not days, weeks or months)
B. Increased transparency, where instant visualisation of the drivers of risk and performance enable more informed decision making
C. Customisation at scale within a configurable set of rules
D. Linking client portfolios to Strategic and Tactical Asset Allocation (SAA and TAA)
E. Acceleration in product design – by a factor of 10-100x
F. Connecting multiple users across different functions on one platform delivered as a white labelled service
G. Enhanced information and control of the platform, using our admin app, ALPIMA Meta which allows authorised users to administer the platform, data feeds, and monitor usage, revealing insightful business information
H. It is adaptive so the client can build a durable competitive edge

5. What is next for ALPIMA?
ALPIMA has world-class institutional clients actively using the platform across their organisations, the majority of which are based in Europe, with a small number in the US and Asia. Last year was very successful as the business continued to scale, adding a new branch in Zurich and growing company headcount by 55% (despite the obvious challenges presented by Covid).

Looking forward, our roadmap is to grow geographically and add new types of clients.

Geographically, we aim to deepen our presence in EMEA, grow North America and go global after that. We started working with a large client in the US last year and we plan to launch more widely in North America in the second half of this year. We are also expanding our client range to include Banks, Pension Funds and Asset Owners. Last but not least, we look forward to bringing more highly motivated talent to the firm.

FINANCE FOR THE LGBT+ COMMUNITY

Billie Simmons
Co-Founder, Daylight

Daylight is the first and only digital banking platform in the US designed for and by the LGBT+ community. Daylight prepares members for the future faster by helping them to navigate the finance system, generate smarter habits and connect with a community working together to build the life they deserve without compromise.

LGBT+ people aren't preparing for the future fast enough. 50% of LGBT+ older people are not expecting to have enough money to live off in retirement, which is a staggering 40% higher than non-LGBT+ people. We have over $1 trillion in spending power in the US, but over half of us struggle to maintain regular savings.

There are also additional costs to being LGBT+: we pay more banking fees, have higher student debt and there are fixed costs such as the cost of conceiving children ($55,000 on average per child) and gender transitions (up to $100,000) that most non-LGBT+ people simply don't have.

Our external company culture is informed by the things we see as missing from traditional banking services: **membership** is about belonging to a community of like-minded individuals to support and celebrate each other along the way, **balance** is about developing healthy financial habits and a better emotional relationship to your money and **empathy** is about providing a service to our customers that deeply understands their needs and recognizes them as individuals.

Our internal company culture is informed by behaviours in the LGBT+ community that we are inspired by; we are tenacious, attentive, clever and celebratory. We like to say we're a team of queer millennials solving our own problems. We've all experienced this pain point in differing ways and have built a diverse team of fintech experts holding a number of intersections in the LGBT+ community and beyond.

Diversity, equity and inclusion is so important to us because we believe that you cannot build a product for a community without having that community represented in the team building it. Even if our business wasn't about uplifting and supporting the LGBT+ community, we know that diverse teams are more successful at solving complex problems and generating successful business outcomes. So, it's a principle-based *and* a pragmatic decision for us to build a diverse team that represents the full breadth of the LGBT+ community. Part of the reason we believe incumbents are failing the LGBT+ community is because they are treating us as a monolith, but we're an initialism for a reason.

It's also not enough to simply hire diversely; we must support, remunerate and promote equally too. If your associates are diverse but your management team isn't, you're doing something wrong. This can sometimes be tricky, and I often see the 'pipeline' argument that it's hard to find executive-level talent that's diverse. But here's my belief: straight white men are promoted, believed and trusted way beyond their capabilities, which causes them disproportionately to succeed and climb the ladder. If you treated us in the same way you did those men, you would end up with a highly successful, diverse team across all levels.

2021: TECH INNOVATION IN POST-TRADE

Alastair Rutherford, Managing Director, Ascendent Strategy

ASCENDANT STRATEGY

There is a perception amongst some that the (admittedly unglamorous) world of capital markets post-trade is resistant to fresh thinking and new, innovative technology. Nothing could be further from the truth. It's desperately wanted and needed.

To understand the challenge, it's necessary to know a little bit about the landscape. Whilst most of what goes on in post-trade *should* be quite like a production line, with some pockets more akin to cottage industries (more on this later), the reality is that the production line depends not only on participating investment banks, brokerages, fund managers, custodians and so on, but also on the various market infrastructure components such as clearing houses and CSDs. So, it's more of an ecosystem, with the production line spread over many organisations, and to further complicate this, each organisation most likely has its own way of processing, its own data models and its own set of applications. There is also significant regulatory control and oversight of all this activity. So, this 'distributed production line' is really quite inefficient and relies on transactions and life-cycle events to propagate through it, slowing completion times and tying up capital. And that is when it's working well – when processing glitches occur, the resolution processes are complicated and generally need human experts to intervene.

> "Now back to the cottage industries. There are certain post-trade functions (you know who you are) that are really are quite complex"

So, the challenge to upgrading the factory is really a collaboration and cost issue – we are talking literally hundreds of large organisations and thousands of smaller ones a) agreeing on design changes, b) agreeing on implementation plans and c) being able to resource and pay for the change effort involved. And d) actually being able to execute in a concerted fashion. It's not about the technology nor a resistance to new stuff, it's just a very hard thing to make happen.

Now back to the cottage industries. There are certain post-trade functions (you know who you are) that are really are quite complex, depending on a mix of product attributes, country-specific laws and tax regimes, local market nuances, and the output from the (unreliable) factory. These areas are heavily manual, requiring diverse expertise. The costs of getting these things wrong can be immense.

The challenge here is different to the factory upgrade, but similar to fixing the exceptions when factory processing breaks. Typically, these processes require expertise simply to know where to look for data (generally it's all over both the organisational and IT architecture), and what to do with it once you've got it. Then to be able to hold a credible conversation with a typically angry or disinterested client or trader. Quite a special skill mix.

So, does this complexity create adversity to change? On the contrary, there is lots going on, but from our perspective, progress is more likely to come from groups that understand the above, and tailor their disruption to make adoption easy. So, what are the concepts that we think will make progress in 2021 for post-trade? And which organisations are leading the charge?

> "So, does this complexity create adversity to change? On the contrary, there is lots going on, but from our perspective, progress is more likely to come from groups that understand the above, and tailor their disruption to make adoption easy."

For the **factory upgrades**, the key concepts are a need to accept the long-term nature of the upgrade (no garage start-ups here!), the collaboration challenge and regulatory situation. To gain acceptance, the overall change effort required to achieve benefit must be minimised and in well-defined areas.

We think that a key thing to watch in 2021 is progress on *Fnality's USC*, which should see an initial implementation of its DLT-based solution providing a more efficient means of international cross border payments. This could be the starting point for real transformation, as it enables real world cash to be connected to DLT settlement processing. *HQLAx* are also making similar moves in the collateral space, leveraging DLT to mobilise securities intraday between triparty agents and custodians.

ASX's CHESS replacement is another one to watch, to see if 2021 enables progress to be made against it's already rescheduled 2023 go-live

Turning to the **human-heavy complex and exception processes**, we see the key concepts that will bring some relief are data sharing/aggregation tools that help these human experts. Here, technology helps to compensate for the underlying issues (ie the things that the factory can't cope with, or where the factory goes wrong). We think that relatively simple solutions (for example, *ipushpull*'s cloud-based spreadsheet that can eliminate the email-attached-spreadsheet-going-wrong nightmare, and more) as well as more industrial offerings such as those from *Access Fintech*, will gain significant traction in 2021. Tools that support interoperability across applications - such as *OpenFin* - will start to become common in post trade areas too as in-house teams and vendors open up their applications. *Finastra's FusionFabric.cloud* is an example of a vendor doing this.

A more interesting play is the concept of an "organisational API". This allows the workflow integration of an expert-to-expert conversation across companies - which currently works fine until one end goes on holiday/leaves/and it's potentially days of delay to re-establish the connection. This kind of thing could be a gamechanger in these complex scenarios. One example of this is *Taskize*'s solution in the settlements area.

So, innovation is alive and kicking in post-trade. You just need to know where to look, and how to make it work.

MARKET RECOVERY – HOW FIRMS ARE ADDRESSING THE NEW REALITY

Arjun Jayaram, CEO and Founder, Baton Systems

Baton
Payments accelerated

In March and April 2020, at the start of the global lockdown period, the market experienced significant spikes in activity, with trading volumes at all-time highs especially in FX, driven by extreme volatility, increased collateral movements and margin calls and squeezes on intraday liquidity. We also saw a significant drop in interest rates worldwide, adding further pressure on banks to put their assets to work and increase return on investment. However, sometimes a short-term shock can act as a catalyst for change, and that is what we at Baton Systems are observing in financial markets.

While COVID-19's disruption accelerated and heightened the pressure on capital markets participants to respond to the on-going market structure issues, it was only a matter of time before global financial markets would re-evaluate the existing systems and processes. Almost a year since the world jolted to a halt, the industry is coming together to recover, rebuild, and reinvent a brighter and more efficient market for all.

How financial markets are responding

From the outset of the pandemic, the industry recognized the issues in cash settlements (particularly FX) and collateral exacerbated by the macroeconomic issues, with many financial institutions quickening their deployment of new measures aimed at mitigating risks and intraday liquidity pressures caused by the disruption. Even before the pandemic, FX settlements had seen a renewed focus from banks on reducing risk and increasing liquidity. A BIS report at the end of 2019 alerted the industry to the growing problems of FX settlement risk caused by an increase in volumes, currencies and jurisdictions in which assets are settled, and the total amount of settlements.

A key part of this increased risk was due to the fall in the proportion of trades with PvP protection to 40% in 2019, which has been further compounded by the growth of emerging market currencies that are not eligible for CLS settlement. While digital assets and central bank digital currencies hold promise, the problem is current and needs a solution. To achieve safe settlement today, participants need to settle real assets from real accounts faster and cheaper in a PvP/DvP/DvD manner. Consequently, major global banks have invested a lot of additional time and resources in technology and process improvements to help address the growing concern around settlement risk, as well as liquidity constraints and operational inefficiencies.

We've also seen banks becoming a lot more open to the idea of leveraging cost-effective cloud technologies and Software-as-a-Service (SaaS) based technology offerings, with many expanding their cloud usage beyond storage to core components of post-trade systems.

This is where fintech firms are providing significant value to financial institutions. By moving parts of the plumbing, record keeping and shared workflows to the cloud and focusing on a bank's unique offering around risk, credit, liquidity and regulatory items, fintechs are helping to lower the total cost of ownership of post-trade systems and processes.

Additionally, providers who use modern technologies such as distributed ledger technology (DLT) can deliver real-time movement of assets and true visibility into the full lifecycle of the trade. When combined with holistic and real-time visualization of account balances, these systems can help the settlements and payments process catch up with the new execution platforms.

How the industry needs to evolve in 2021 and beyond

Although fintech providers offer a means to help eliminate settlement and liquidity risks, there's a need for the entire industry to work together to make the market more efficient, robust and reliant to ensure it can handle periods of extreme market stress in the future.

A major steppingstone for the industry would be to extend the settlement window at central banks, and for clearing and securities to 24 hours. Not only would this help reduce the number of non-PvP settlements; it would also provide banks with access to more liquidity when settling currency pairs which span different time zones.

This leads to my second recommendation, which is to open up the membership criteria for financial institutions at central banks. Currently, membership is very restrictive, with many financial institutions ineligible to use certain central banks as a settlement venue due to regulatory and policy issues. While regulation is necessary to protect the financial markets, the industry should still consider innovative processes to make markets more efficient. If central banks in G7 markets fail to open up their membership, they risk the focus shifting to other jurisdictions, which could further intensify the risks we are already seeing.

Also, with transactions increasing year-on-year, the industry needs to be able to move in real time. Having real-time visibility into balances (e.g. cash, collateral) and the ability to manage risk enables banks to mobilize and settle their assets on demand. This faster and more transparent throughput of assets will help create new financial products, while boosting revenues and reducing costs for all participants. This is where cloud-based technologies will be crucial for banks to address settlement risk in a more cost-effective and efficient way.

So where are we now?

The good news for market participants is that the infrastructure for faster settlements and post-trade processes is already here, and the inertia is not due to lack of capability. At Baton, we are able to settle FX transactions in less than three minutes. Historically, many assumed that large market participants benefit from the slowness of settlements, as they would have the capacity and funds to settle larger transactions. However, any temporary delays to the settlement process create uncertainty and liquidity pressures, making it difficult to manage funds and meet obligations effectively.

Moving assets faster is good for markets. We don't have to look far into the past to see how the cell phone revolution in 2004-2005 changed the world for the better. Similarly, in financial markets, once 24-hour settlements are adopted, central banks open their membership, and cloud technologies and SaaS-based technology become core components of banking systems, we will see new dynamics in markets that are more efficient for all.

THE GROWTH OF DIGITAL ASSETS IN 2021

AND THE NEED FOR CENTRAL CLEARING SOLUTIONS

Tore Klevenberg
CEO, Baymarkets

Digital assets are becoming part of the financial markets landscape

Moving to digital marketplaces is the next logical step in the evolution of trading. Over the years, markets have moved from being paper-based and focused on floor trading to online exchanges and electronic trading platforms, so how are digital marketplaces any different?

Digital assets and their marketplaces offer a wealth of untapped potential, but their adoption is taking longer than some expected. New market entrants have reservations. Historically the absence of robust regulation has resulted in a lack of trust and confidence in digital marketplaces, limiting institutional investor adoption.

However, the tide is turning. More mature technology has built investor confidence, resulting in higher numbers of successful use cases and a growth in demand for access to the markets. Greater demand for access also means greater demand for high performing, fully transparent, regulated systems that have sophisticated risk controls and an integrated clearing system that is seamlessly integrated with an authoritative registry. The challenge of building trust in the products and infrastructure is gradually being addressed by a growing ecosystem of players offering sophisticated solutions. Firms looking to enter into newer and growing crypto and digital markets are now much better placed to be supported in those activities.

Part of the Digital Revolution

Digital asset tokenisation and distributed ledger technologies (DLT) will not completely reform the fundamentals of securities trading, regardless of the reservations of new entrants to the market. It will be important for stakeholders to access a CCP to provide risk mitigation, and credit control, regardless of market, as even in a tokenised world credit risk and liquidity still need to be managed post-trade.

We have recently joined forces with Exberry and Digital Asset to connect our well-established clearing system, Clara, to their digital exchange infrastructure, offering a complete exchange ecosystem. Our trusted central counterparty solution is equipped with real-time risk management capabilities as well as netted settlement functionality that enable efficient, safe and cleared markets. This unique end-to-end trading platform is designed to reassure entrants that digital asset marketplaces can be fully compliant, infuse confidence in these new asset classes as well as encourage participation in these emerging markets. This is a very exciting time for us at Baymarkets, as market participation grows, and we join in new partnerships to support those businesses taking the next steps into digital.

FOUR COMPLIANCE TRENDS THAT WILL DEFINE THE FINANCIAL SERVICES INDUSTRY IN 2021

Erkin Adylov
Founder and CEO,Behavox

Behavox CEO unpacks compliance trends that financial firms would be wise to focus on amidst the ongoing challenge of flexible working arrangements in 2021. If they fail to adjust compliance protocols accordingly, these firms could face massive regulatory fines.

2020 was a year like no other. COVID-19 forced financial firms to transition to a distributed workforce with employees working from home indefinitely. Compliance teams have perhaps been most heavily affected by this seismic change in the professional landscape, quickly adapting and employing new technologies to ensure their firms remain compliant while offices lay empty and employees work remotely.

One distinct positive that can be gleaned from this experience is that long-dormant plans for enhancing compliance capabilities have suddenly accelerated across the financial services industry. Senior management teams have been awakened by the threats posed by a distributed workforce and are fast-tracking new technology, processes and policies to ensure their firms are operating within regulations. What's more, they're even starting to understand the potential for utilizing internal data to enhance their compliance programs from being a reactive measure to a fully-fledged preventative solution.

The purpose and benefits of compliance are changing. In 2021, financial firms can expect four trends to define this rapidly evolving industry.

HARRINGTON STARR
Your Success. Our Business

The Extension of Communication Surveillance

Surveillance must extend from just emails, to numerous data streams, across text, video conferencing and phone calls.
Think of your average day at work. How do you communicate with your colleagues, especially in remote environments? You send emails, you join Zoom calls, you message on Bloomberg chat, you may have a phone call every now and then. How many desktop and mobile apps do financial firms use to communicate and collaborate with colleagues and clients?

Communication happens constantly. It occurs across an increasing number of applications and devices. Effectively covering all applications was a challenge for compliance teams prior to the pandemic. With remote workforces blending work and personal time at home, the challenges are magnified significantly. Compliance teams clearly have their work cut out for them. The prevailing paradigm shows no signs of shifting either.

Legacy solutions and approaches often monitor one or few channels for misconduct. But, if you're only monitoring email, for example, you're not getting the full picture. Not even close. With communication happening across an ever-increasing number of applications, compliance teams must apply solutions that cover all internal communication channels. After all, bad actors are not naive. They are unlikely to use a common communication channel to conduct insider dealings, collude with other firms, or spoof trades.

The most effective compliance solutions leave no stone unturned. In 2021, financial firms cannot afford to leave gaping communication blind spots in their compliance programs.

> "Communication happens constantly. It occurs across an increasing number of applications and devices. Effectively covering all applications was a challenge for compliance teams prior to the pandemic."

Compliance Technology Moving to the Cloud

Cloud technology will become more prevalent, due to increased work-from-home conditions.
Traditionally, financial firms would insist on any compliance technology being installed on-premise. This approach requires a lengthy initial implementation process, with ongoing investment in infrastructure and operational support alongside annual maintenance costs. In return, the firm has full control over the security of the solution.

As we enter 2021, that trade-off is starting to make less sense. Sure, security is a hugely important factor to consider, but cloud technology isn't a new thing. There are mature compliance solutions available with robust security controls that will satisfy even the most scrupulous of CIOs.

Compliance teams will embrace cloud technology at increased rates – and subsequently cut costs – in 2021 due to the rise of remote working creating a greater need for agility.

Even if we see a return to the office in 2021, it's almost certain that some form of flexible working is here to stay, even in the world of finance where being in the office was once thought of as imperative. Cloud-based solutions are much more appropriate for a distributed workforce due to the ease of access and the lack of internal maintenance.

They also allow firms to operate with greater agility, scaling up or down dependent on the needs of the business. Increasing storage, for example, can often be a logistical headache when collecting vast amounts of data. However, with a cloud-based solution, it's the vendor who looks after infrastructure and can provide additional resources efficiently.

Finally, passing the cost of infrastructure over to a vendor means that cloud-based solutions are often cheaper than their on-premise equivalents. With companies focused on reducing costs like never before, 2021 is the time to undergo a digital transformation, taking advantage of the savings offered by moving business systems to the cloud.

> "Firms should be applauded for how swiftly new processes were put in place to ensure employees were able to work from home whilst still adhering to regulations."

Machine Learning Informing Human Learning

Machine learning technology to inform 'human learning', with firms utilizing true positives to triangulate issues and identify compliance hotspots.
Compliance training is set to revolutionize in 2021. Currently, a compliance team will assess the latest regulations, incorporate them into their program and offer training to ensure employees understand the rules and how to abide by them. That's fine for keeping the company abreast of the latest regulatory developments but it doesn't do much to address the actual compliance deficiencies within an organization.

Instead, forward-thinking compliance officers are starting to put data at the heart of their training programs. By analysing alerts from compliance surveillance tools, they are able to triangulate their training based on the actual infringements that occur at their firm. For example, if they notice a spike in true positives related to collusion, the compliance officer can create training that's tailored to that specific subject. Financial institutions that utilize such methods have reported significant reductions in true positives related to areas of misconduct that were identified.

Following such training, firms even report cases of reverse-escalations, with employees pre-emptively self-reporting their own behaviour before they are caught by their compliance team. Using technology to assist with training is now vital as finance professionals are working from home and no longer embedded within the compliance culture.

The Development of Specific WFH Policies

Regulators have warned financial firms to have specific work from home policies and procedures in place.
When lockdowns first came into effect at the beginning of the year, the financial services industry was turned on its head. Transitioning a workforce from the office to the living room was a huge undertaking for companies that previously relied on workplace security by restricting offsite access. Firms should be applauded for how swiftly new processes were put in place to ensure employees were able to work from home whilst still adhering to regulations.

While in 2021 it is likely that there will be a return to the office in some form, it will certainly be gradual with many employees opting for flexible working arrangements. Firms must adjust their compliance processes accordingly, ensuring that they operate seamlessly regardless of where their employees are working.

Julia Hoggett, director of market oversight at the Financial Conduct Authority (FCA), says that while in the early stages of the pandemic it was not possible to implement universal levels of recording and surveillance, firms should have now overcome these challenges.

"Our expectation is that going forward, office and working from home arrangements should be equivalent – this is not a market for information that we wish to see be arbitraged," Hoggett said.

Regulators want firms to demonstrate that they have taken steps to minimize the risks associated with a distributed workforce by updating policies accordingly.

With that in mind, there are four key areas that firms should evaluate:

- **Assess your compliance practices, policies and procedures to ensure they address regulatory obligations for employees working from home.**
- **Provide suitable training related to security and applications containing sensitive information.**
- **Assess systems for vulnerabilities thoroughly and ensure content from all key communication channels is being ingested for analysis.**
- **Increase the level of engagement with supervised persons that are working remotely.**

HARRINGTON STARR
Your Success. Our Business

DATA IS BECOMING MORE COMPLEX – ARE YOU KEEPING UP?

Mark Montgomery
Strategy & Business Development, big xyt

Many FinTech conversations are punctuated with AI and machine learning references, and whilst this 'delegation to the robots' has an important part to play in discovering hidden messages, themes and trends, it can only be effective with a valid starting point.

The 'garbage in - garbage out' premise is valid more now than ever. In order to have reliable results in any piece of analysis the foundations must be solid. In fact, well harvested granular datasets can provide the platform to perform a myriad of analytics tasks. If the data is normalised in a consistent way the opportunities for automation of much of this analysis are greatly increased. Improving any process relies on an effective feedback loop.

This has been a recognised approach for trading desks for many years. Certain things have changed; volumes of data; fragmentation of markets; consolidation in various parts of the industry. All of this leads to additional complexity, complexity which isn't dealt with by some of the legacy approaches to execution analysis. TCA systems designed 5-10 years ago were effectively benchmarking trading against the relevant benchmarks. In 2021, the main benchmarks have not changed, of course there are multiple variations on the themes and sophisticated use of trading indicators, but for mainstream benchmarking, most still look at the Arrival Price, an average traded price within a time window and participation, to demonstrate execution quality.

> "Where the needle has shifted is the requirement for more sophisticated asset managers to start looking at the market the way the sell-side has been for the past ten years."

Where the needle has shifted is the requirement for more sophisticated asset managers to start looking at the market the way the sell-side has been for the past ten years. The data now allows clients to see which brokers traded best in given circumstances, which venues had the highest quality fills, and if there was any price reversion for a given strategy, broker or venue. As well as measuring the impact of trading activity and how strategies differ with different levels of aggression, the data can also help us to see what happens when a client doesn't trade, or with the benefit of hindsight, should have traded. The more data, the more reliable the results.

All of this feedback helps traders to fine tune strategies and to have an empirical methodology to evaluate the brokers providing their algos. Not just identifying the best in given circumstances, but to see how that pecking order changes over time and allows the reintroduction of underperforming brokers who claim to have made improvements to their strategies. The data therefore empowers another essential conversation; that between the trader and the fund manager. Was the strategy correct, was a limit price necessary, was the timing too rushed or overly patient? Do patterns emerge for specific fund managers that indicate that alpha is being eroded by them not giving the desk more discretion?

Close consultation between the analytics firm and the client can help drive these discussions. But what if the client wants to invest more time into generating their own view of the results without a "standard format" used by their peers? Of course, no two pension funds, or wealth managers, or insurance companies are directly comparable, so peer comparison has limited value except for the bragging rights of the sales force. In other words, if relative performance is a high priority, then existing well proven approaches may suffice.

> "But perhaps most important in this ever more competitive landscape is independence. How do you prove to your end client that there is no conflict with the provider of the service, that there is no bias potentially influencing the way the results are presented?"

However, if the intent is to improve absolute returns for end clients, then an investment of time and energy is required. We see what is possible for those who decide to make that investment and the collaboration this allows between the trader, fund manager and fund salesperson allows for far greater control, and therefore more positive outcomes.

A granular understanding of the data source is key. A thorough and consistent approach to the harvest, storage, normalisation, maintenance and accessibility of that data is also critical. A well-designed API can deliver all of this with the flexibility to pull results directly, or via files, reports or dynamic visualisation.

But perhaps most important in this ever more competitive landscape is independence. How do you prove to your end client that there is no conflict with the provider of the service, that there is no bias potentially influencing the way the results are presented? How transparent is the methodology? If a part of the execution process is changing or perhaps being outsourced, who is measuring the effectiveness of that activity? Is it independent and flexible, or somewhere along the line is someone marking their own homework?

HARRINGTON STARR
Your Success. Our Business

Rob Elder
VP Data Centres, Bulk

MANAGING COST AND SUSTAINABILITY FOR HPC WORKLOADS IN FINANCIAL MARKETS

In December 2020, a leading group of thirty asset managers, representing over $9 trillion of assets under management, announced the Net Zero Asset Managers Initiative, a commitment to support the goal of net-zero greenhouse gas emissions by 2050 or sooner.

This reflects the emphasis that financial markets now place on sustainability and lower carbon emissions. And it's not just asset managers who are taking action; a growing number of global banks are also setting targets to reduce their net carbon emissions – JP Morgan, Morgan Stanley, Barclays and HSBC have all recently announced similar commitments.

However, one challenge they all face is that the finance sector is a very compute-intensive industry. High performance computing (HPC) now supports an increasing variety of workloads. This requires a lot of power, and the demand is only growing. Much of the demand for HPC is driven by firms' needs to process ever-expanding data volumes, both structured and unstructured. Additional factors include a range of new and changing regulatory requirements, the constant need to manage risk effectively, and the increased adoption of AI and machine-learning tools across a wide range of applications and use cases. Each of these workloads has its own unique requirements around technology infrastructure. So how can firms ensure they are deploying the appropriate infrastructure to manage those workloads in a way that is not only sustainable from a carbon-neutral perspective but is also cost-effective?

Different workloads, different requirements

Due to take hold in January 2022, one particularly onerous regulation for global banks is the Fundamental Review of the Trading Book (FRTB), a comprehensive suite of capital rules requiring banks to run more stringent models for market risk calculation. The computational workloads and volumes of data necessary to meet these regulatory requirements are vastly more complex and resource-intensive than previous models, hence the growing need for HPC in this area. Additional banking regulations around risk and capital adequacies, such as BCBS 239 (a global directive), CCAR in the US, and the European Banking Authority's stress tests, also place a heavy data processing burden on banks. HPC is also increasingly adopted by the buy-side. Quantitative hedge funds, in particular, need to process and analyse more and more data from a variety of sources to seek new sources of alpha. Although much of this is structured time-series data (historical tick data from global markets, for example), there is a growing trend of firms analysing unstructured data, such as news, sentiment indicators from social media, and various other forms of 'alternative' data — including things like credit card transactions, web traffic, and geospatial data — to discover trading and investment opportunities.

"ALPIMA has world-class institutional clients actively using the platform across their organisations, the majority of which are based in Europe, with a small number in the US and Asia"

Additionally, the growth of passive investing and robo-advisors, which use AI and machine learning to provide automated, algorithm-driven investment services with little to no human supervision, is driving a significant demand for HPC to manage the data- and compute-intensive workloads.

All of these workloads are unique in their own way, but one common denominator is that, for the most part, they are not latency-sensitive. Unlike trading and execution algorithms, which generally need to run on servers collocated or hosted in proximity to exchanges' matching engines, HPC workloads such as these do not need to sit in expensive data centers in the vicinity of London, New York, Chicago, Frankfurt or Tokyo, where the cost of power — in both monetary and environmental terms — is high.

Sustainable, Low-Cost Power

While some of the above processes could be migrated to the cloud, in practice, the public cloud is inappropriate for handling many of these tasks due to security and privacy concerns and high running costs for the heaviest workloads.

For this reason, firms are now looking at alternative ways to host their HPC infrastructure. And a desirable option is the Nordic region, where there is an abundant capacity of low-cost, green power and excellent connectivity with other global locations (market centers where trading servers are sited).

At Bulk Infrastructure Group, our Norway Data Center Campus N01 is the world's largest data center powered by 100% green energy. This means that we are the ideal data center partner for power intensive HPC data processing needs. We offer environmentally friendly solutions powered by fully renewable energy with low levels of CO2 emissions. The abundance of hydropower in the Nordic region also means that we can save firms millions of dollars through low and stable power prices. Cost savings of up to 60 percent can be achieved compared to an equivalent installation in London, for example.

For firms wishing to migrate their HPC workloads to this low-cost, sustainable environment, we smooth the path by working with a network of established partners to help plan and execute projects to meet aggressive timelines, from providing support and advice on complying with tax rules to supporting the logistics of receiving and managing equipment, acting as an importer of record.

In conclusion, as financial markets firms increasingly look for new ways to manage the cost and sustainability for their HPC workloads, they should consider the benefits of working with an infrastructure partner that can satisfy their power-intensive data processing needs with high availability, cost efficiency, responsiveness and low CO2 emissions.

FX – THE PERFECT STORM

Keith Hill, Advisory Board Member, Caplin Systems

Banks, faced with changing regulations, greater pricing transparency and a client base that knows it has a choice, are having to invent new ways to add value to the client experience and, at the same time, deliver healthy returns.

It's a tough business and one which has to keep one eye on strict cost control and the other on the competition, which is increasingly diverse. FinTechs and 'digital only' banks are gaining market share, unencumbered by legacy systems and targeting a clientele that has demonstrated its willingness to use new tools.

FX banks of all sizes are sailing into a perfect storm.

Using Technology to Differentiate

Trying to compete on price alone is a fool's game, and a loss making one at that. Two of the key ingredients in a winning recipe are the strength of the client relationship, and the richness of the client experience, both of which justify a client's decision to select a particular bank.

Increasingly, technology lies at the heart of the solution. But how does a bank use technology to encourage clients to self-serve and give them the tools to do what they need to do, where and when they need to?

And it's not just on the client facing side where technology gives results. Enabling bank sales staff to become more efficient, better informed, less error prone and more able to anticipate their clients' needs, is just as important.

One Size Does Not Fit All

Here at Caplin, we've had over 20 years of experience in helping banks deploy innovative technology solutions.

Our data streaming technology lies at the heart of some of the largest bank's FX stacks. Yet we recognise the need of smaller banks to stay nimble and client focused, outsourcing to a Managed Services cloud deployed setup where appropriate whilst at the same time delighting clients with clean, intuitive GUIs and smooth workflow processes.

The Rise of Remote Working

The business world is increasingly becoming mobile. The restrictions placed on us during the pandemic have proven that we don't need to be always in the office to be productive.

We place great importance on UX and HTML5 to create stunning real-time web and mobile trading experiences to enable clients to trade and monitor positions on-the-go.

Our Future Focus

Since we brought streaming financial data to browsers 20 years ago, we've been pushing the edge of possibility.

The challenges are different now - we need servers to scale automatically in the cloud, we need low latency transmission of yet more complex messages.

In our front ends we're searching for the optimal point on the usability/flexibility/maintainability frontier and we're building on ideas from low code and micro frontends to find it.

Our Product and Program teams, pre-sales engineers and industry experts need to continuously talk to clients, share expertise and come up with new solutions to long-standing business problems.

It is this blend of technical excellence, industry experience and curiosity that gives Caplin such a vibrant workplace environment - small company ethos with big company ambitions.

CAPLIN

HARRINGTON STARR
Your Success. Our Business

THE CASSINI VISION

**Liam Huxley,
CEO & Founder,
Cassini Systems**

Cassini was founded to address a need arising out of the confluence of regulations that have changed how asset managers trade derivatives, and the cost of doing so. When we started the design of Cassini, it was clear that collateral utilization, and carry costs would become a lot more significant to the broader buy side than had traditionally been the case. Dodd Frank & EMIR, MIFID 2, and UMR regulations meant that firms had to both post and call collateral on trades that historically had required low or no collateral, and also be transparent about post trade costs including carry costs. As always with regulation, these have had unintended side effects of creating risk of insufficient collateral with the liquidity and cost impacts that creates.

Regulations, Volatility, and Cost Pressures

Asset managers now have to put in place business processes to address three concerns:

CASSINI systems
CALCULATE. ANALYSE. REDUCE

1. Regulatory compliance with Clearing mandates and UMR

2. Collateral risk and trading impact in volatile markets

3. Carry cost for derivative trades

Addressing these challenges involves creating a consistent and holistic view of margin, collateral and funding across the organization and trade lifecycle.

Firms trading any derivatives, now have to consider their Initial Margin, variation margin, cash buffers, eligible collateral, and funding costs. Tying all these elements back into a true cost of trade to ensure Best Execution is a challenge for any firm.

The Target Operating Model

Every firm has to ensure they have the operational controls and technology to ensure that they can avoid the risk of having insufficient eligible collateral to support trading, and can also truly identify carry cost as part of total cost of trading.

We believe that the target operating model should mean collateral risk is monitored and controlled on an equal level with market risk and credit risk. This requires an architecture where post trade data such as margin calculations and funding cost is surfaced and integrated into the front office and full trade life cycle.

Innovating Solutions to New Problems

Achieving this goal is hard for many firms because of the legacy structure where Front, Middle and Back office groups operate as functional and technical silos. This was the innovation of Cassini, to create a platform that can integrate the data from all groups into a consistent set of data, analytics, and optimization tools.

2020 – Challenges and Successes

Like every other firm, 2020 forced a recalibration of how we do business but also it showed where our true strengths are. In 2020 we doubled clients, revenue, and team size, so despite the challenges, we came out of it stronger than ever. I believe that we succeeded because our amazing team embody the three Ts, Trust, Transparency, and Teamwork and that has allowed us to adapt and thrive.

For many clients 2020 meant regulatory changes and collateral stresses, and we were able to help them reduce margin and free up collateral through attribution and alternative trade analytics. The volatility in the market shone a light on the need for firms to manage collateral risk with higher priority and to have tools in place to understand margin movements and collateral liquidity.

Big plans for 2021

We can all look forward with much more positivity to 2021 with the ability to soon meet up, work and socialize together. No matter how automated we get, Finance is a people business and being able to meet, get to know each other, brainstorm, collaborate, build trust is vitally important to success.

For our clients 2021 is focused is on UMR regulations in September, ensuring they manage thresholds and reduce collateral impact, and implementing better margin and collateral control systems across their business lines and trade lifecycle.

For Cassini we are focused on three core areas:

1. UMR, AANA, and SIMM solutions - Delivering the solutions the industry needs for UMR Phase 5 & 6

> "We never stop developing and evolving our solutions to meet the needs of the buy side across the capital markets world. 2021 will be another big year and we look forward to meeting you all at an event somewhere!"

2. Rolling out Cassini Core, our new SaaS based platform for more standardized use cases

3. Collateral Optimisation and Liquidity Management – Extending our tools that maximize the use of inventory, across all asset classes

UMR Phase 5

Despite the delay in UMR rollout to September this year, many firms are not yet fully setup and prepared for the impact this will have, so will need to lean on their technology and outsource partners that have the subject expertise to get them compliant and also make their business cost efficient. We will be playing a large part helping these firms get across the line in good shape and with low stress!

Cassini Core

Cassini is a broad platform that provides a lot of flexibility and power for firms to answer their specific questions across all business units. However, some firms with less bespoke requirements, and smaller technology footprints prefer a more out of the box solution, so we are launching Cassini Core to meet that need. Standard packages for asset managers, Hedge Funds, and UMR firms, with quick switch on and rich reporting will provide risk controls, and cost savings and low friction.

Collateral Liquidity and Optimisation

The fundamental goal of these initiatives is to reduce or remove collateral friction on trading activities. Ensuring that collateral inventory can be used optimally so that valuable assets are retained for alpha generating activities is key. Having tools to see collateral hot spots, stress test collateral requirements, and forecast unwind risk provides confidence that collateral will never obstruct trading or force unwinds in stressed markets.

Cassini is the leader in this area and is rolling out new reporting tools in 2021 that provide more transparency and control on collateral liquidity across the firm.

Constant Evolution

We never stop developing and evolving our solutions to meet the needs of the buy side across the capital markets world. 2021 will be another big year and we look forward to meeting you all at an event somewhere!

HOW MICROSERVICES CAN IMPROVE PERFORMANCE NOW AND FUTURE-PROOF YOUR TRADING SYSTEM FOR CLOUD MIGRATION

Peter Lawrey, CEO, Chronicle Software

In this article I am going to discuss microservices – what they are, what benefits they can provide, and how they can not only provide immediate improvements in trading system performance, but also help future-proof trading systems when it comes to technology evolution and adaptation (such as cloud migrations).

Microservices are an architectural paradigm that combine many different concepts and best practices, including domain-driven design, continuous delivery, platform and infrastructure automation, scalable systems, polyglot programming and persistence[1]. They represent a practical implementation of Robert C Martin's single-responsibility principle, which essentially states that things that change for the same reason should be grouped together, while things that change for different reasons should be separated. Applied in practice, applications can be split out into a set of distinct and separate microservices that can be combined and reused as required, but can also be developed, deployed and maintained independently.

In short, microservices enable you to break up your problem into smaller, more manageable components. This in turn can enable better functionalisation and regional distribution of application development and support teams. Microservices also enable a better spread of knowledge across your organisation – if you can break a problem down into discrete, simplified units, it becomes easier to understand and to manage. They're also easier to maintain and make systems easier to maintain, as individual components can be upgraded or replaced separately, without affecting the functioning of the application as a whole. If a certain microservice requires upgrades for performance or other non-functional enhancements, this can be applied without impacting the rest of the application or its overall functionality.

This is also great when it comes to future-proofing your trading system; individual microservices can be upgraded to leverage new and emerging technologies, without having to change the entire system. An example is cloud migrations. These are typically multi-year programmes that can be quite costly and potentially disruptive. Due to project plans and dependencies, this may also mean that core trading system upgrades are deprioritised until the migration is complete, which can impact performance and competitiveness against other market participants. We've worked with some of our banking clients to help them implement a two-stage process for managing cloud migrations of essential trading systems. The first step is to break down their monolithic trading systems into microservices. These can then be migrated incrementally to the cloud, with minimal disruption.

There is a downside to using microservices, and that comes in the form of added latency. Microservice-based architectures require an additional layer of infrastructure to bring together all the components, and for trading systems this can end up adding as much as 2000 microseconds between microservices through messaging latency. Chronicle's Platform and its microservice-based architecture utilise a very low-latency persistent messaging framework between microservices, that adds orders of magnitude less latency.

1. This definition was taken from Jetinder Singh's very useful article on the "The What, Why and How of a Microservices Architecture: 8 Keys to Help You Get Started Today"

> "Using microservice-based architectures, as we've seen, has a whole host of benefits."

Using microservice-based architectures, as we've seen, has a whole host of benefits. It enables better teamworking, on a more distributed basis – a trend which has been emerging over the past decade but has been rapidly accelerated in the course of the Covid-19 pandemic. Ultimately, it allows organisations to better have better control over their technology strategy and infrastructure.

Chronicle has implemented microservice-based architectures in a number of financial institutions, both sell-side and buy-side, including tier-1 banks, asset managers and hedge funds, and ranging from off-the-shelf to more customised solutions depending on the client's unique requirement:

- **Chronicle EFX is a multi-asset trading solution used globally by many major Banks and Hedge Funds. Chronicle EFX is based on the Chronicles Microservices framework and utilises Chronicle Queue to provide ultra-low-latency inter-process communications, delivering a simple, elegant solution for all your trading needs.**
- **Chronicle FIX is a performance optimised, full-featured, asset class agnostic FIX Engine, the engine can be deployed standalone or in conjunction with other microservices, including Chronicle's MarketGateway and MarketGateKeeper. Using this as a starting point, Chronicle has developed tailored solutions for individual firms, providing low-latency pricing, auto hedging, order management and market connectivity.**
- **A leading Tier 1 FX trading operation was using an FX pricing and trading solution that was limiting the business opportunity in both trading strategy and execution. Chronicle worked with the client to deliver a bespoke Java-based FX Pricing, Trading and Auto Hedger. This was built and deployed within six months, utilising standard components including Chronicle Queue and Chronicle Map, in conjunction with a team of experienced consultants.**

If you'd like to talk to us about how Chronicle and our products can help your firm realise its true potential, please contact Andrew.twigg@chronicle.software

((Cloud9

Leo Papadopolous, Chief Innovation Officer & Co-Founder, Cloud9 Technologies

NAVIGATING DISTRIBUTED COMPLIANCE IN TODAY'S INSTITUTIONAL LANDSCAPE

The last year has been a whirlwind for everyone. And while regulators such as the CFTC have offered temporary relief and extensions to certain voice trading and record-keeping rules in the increasingly virtual environment, distributed compliance parameters still remain a pivotal element of the institutional landscape.

A distributed workforce is not a new concept in any industry, including capital markets. However, a lot of firms continue to struggle with how to address the challenges they've faced in the process, particularly in a shifting market ecosystem. While every company needs to employ remote working capabilities, there's no question that it is difficult to manage and can create potential compliance challenges.

Shifting to the Cloud
With financial institutions acclimating to a longer-term remote strategy and some even beginning to employ permanent work-from-home policies, there has been not only an increased appetite for the cloud – but an increased need. The cloud has become particularly important in enhancing flexibility and redundancy.

For the first time, firms are more open and comfortable allowing their data – including voice and communication data and disaster recovery solutions – to reside in the cloud. With users that traditionally work both on and off the trading floor distributed across numerous locations, the cloud has become the easiest place to store and retrieve data.

While compliance vendors have typically offered on-premise solutions, cloud-based support is still in its nascent stages. This has opened the door for compliance providers to offer new and more sophisticated products. Conversely, customers need to be asking whether or not compliance vendors can provide both on-prem and cloud-based support.

Open and Interoperable
At Cloud9, one of our goals has been to establish a community of specialists that collectively addresses the integration, efficiency and mobility challenges that firms have faced in the virtualization of our industry. The key is ensuring that vendors are interoperable to enable efficient workflows and avoid performance issues for customers.

The same goes for voice trading APIs, which are becoming increasingly more sophisticated to align with the need for greater flexibility in the institutional trading community. Each company will format their data within APIs a bit differently. As a result, if you're a compliance vendor for instance, you need to be able to normalize data before it can be used.

Industry-wide Data Standard
This raises the question of whether or not an industry-wide standard for data is necessary. For now, it's not imperative but as data sets become larger and more complex, this may be something that we see the industry transition to, especially as teams become more dispersed and compliance oversight becomes more challenging.

For more information on Cloud9's voice trading and cloud solutions, please contact us at sales@c9tec.com

FINANCIAL WELLBEING STARTS WITH OPEN BANKING

Freddy Kelly, Founder, Credit Kudos

MISSION

Credit Kudos was a personal venture for me. I spent two years working in the United States, and then returned to the UK. Frustratingly, my limited credit history – the result of my having worked abroad – meant that I could only access financial products with high interest rates and restrictions.

Determined to change this, I founded Credit Kudos, on a mission to make responsible, affordable credit a reality and create a positive change in the sector.

Six years on, we've now partnered with over 90 financial services providers in sectors such as unsecured lending, car finance, and mortgages to do just this. Our rich insights help lenders and financial providers get a more up-to-date and comprehensive view of a customer's current financial situation so they can make better and faster credit decisions. Using Open Banking technology the applicant will consent to safely sharing their financial information (much like they would a bank statement) with their chosen lender or financial provider, using Credit Kudos. Credit Kudos analyses that information and enriches the data in order to provide lenders with a detailed view of the applicant's financial situation, assisting a quicker and more accurate credit decision.

Combining Open Banking and credit outcome data helps us build insights that provide an accurate and detailed view of someone's affordability and creditworthiness. Using these data, we are able to open up lending to those previously underserved by traditional credit assessments, like me when I returned from the States, whether that is self-employed individuals with changeable income to young people with limited borrowing history.

It's a win-win. Lenders are able to accept borrowers they might previously have turned down, based on these additional insights. These borrowers are in turn more likely to get access to more affordable credit. Plus, borrowers benefit from a hassle-free application process and get a response in near real-time.

> "It's a win-win. Lenders are able to accept borrowers they might previously have turned down, based on these additional insights. These borrowers are in turn more likely to get access to more affordable credit. Plus, borrowers benefit from a hassle-free application process and get a response in near real-time."

INCLUSION

Inclusion is at the core of what we do. By using Open Banking consumers are able to demonstrate their true current financial situation with their chosen provider within the loan application process. Building insights on top of this data helps lenders increase acceptances for underserved segments, with richer insights giving lenders the ability to make informed decisions on those previously left out. In doing so, we are unlocking better credit options for disadvantaged and previously excluded groups, while helping lenders to significantly transform their businesses. It shouldn't be the case that borrowers are forced into higher-priced credit options and end up having to pay a 'poverty premium' simply because they rent, or their income fluctuates each month. We're helping lenders accept around 20% more of those with a thin credit file who would previously have been declined.

One example of our work in this space is our partnership with Serve & Protect Credit Union (SPCU), a not-for-profit credit union that helps frontline workers to access more affordable finance. Many members have a poor or limited credit history (i.e. 'thin files'), having lived in barracks for significant periods and often having low financial literacy.

The insights we provide have enabled the SPCU to make better lending decisions by taking informed risks on those thin file applicants and ensuring that they are lending to those who can afford it. It also means that members are not left having to turn to higher cost credit options.

In March 2020, SPCU and Credit Kudos also jointly won the Affordable Credit Challenge, run by Nesta Challenges in partnership with HM Treasury, for their reward loan solution which uses Open Banking to monitor a borrower's repayment behaviour and reduces the interest rate a member pays as they develop healthy financial habits over time.

This partnership is a leading example of how Open Banking data can be used to improve the financial resilience of individuals who are often overlooked by traditional financial services, and something that is growing in importance during the pandemic.

THE FUTURE OF OPEN BANKING

The use of Open Banking has grown significantly in the past year, with over three million users as of February 2021. The shift to digital adoption has been spurred on by the pandemic and the broader impact on people's finances leading people to seek more support. At the same time lenders have realised the need for more accurate, current data to assess affordability to ensure they are lending responsibly. In fact, since March 2020 alone we've started working with 50+ new partners as lenders have focused on improving their insights.

As adoption continues among lenders, and a growing number of individuals and businesses seek greater control over their financial data, it will be interesting to see further application of Open Banking into other industries, such as insurance, to improve and promote financial wellbeing more generally.

WHAT TO EXPECT FOR DATA IN 2021

Christian Nentwich
CEO, Duco

In 2021 we have to talk about data. Just like we had to in 2020. And we will have to keep talking for a while as the growth of data is forecast at 61% per annum until 2025, with most of it in enterprises - and Financial Services has lots of it.

2020 was a pivotal year for technology in Financial Services as long-standing "blockers" around technological change were swept away by the pandemic. In 2021, we predict this will continue.

To the Cloud!

Top of the list for firms in 2021 is continuing and accelerating pushes of everything into the cloud: IaaS, PaaS, SaaS, all of it.

There are very few complete holdouts among banks at this stage - and those are mostly concentrated in mainland Europe - as the cost and agility advantages are starting to squeeze those left behind on on-premise infrastructure. Duco expects plenty of data centre and mainframe replacement projects in 2021.

As the move to the cloud continues for many more years, non-cloud native applications ("lipstick on a server") will have to be replaced, creating a continuous opportunity for new vendors to grab market share.

Power to the People

In anything touching data or processes, programming, scripting and weird configuration syntax is out. And "no code" is in.

This trend is overhyped, and there is so much snake oil floating around that you despair for our carbon free future. But, at its best, it works extremely well, empowering employees who actually understand the data to change businesses themselves with very little training.

It also creates communities: watch out for more and more "Duco certified", "Unqork certified" or "Blueprism certified" folks around the market in 2021.

Digital Transformation aka Normal Transformation

We expect transformation programmes to continue, however with a few twists.

First of all, many banks are eliminating "digital" titles and bringing them into the fold under the usual business lines. Digital is just "normal".

Secondly, we expect that major IT and operational change programmes will continue but with a very high focus on return on investment. The industry is still partly working from home, so signing off on crazy spend that takes years to achieve anything can't go on.

COOs and CIOs want technology they can immediately switch on, with guaranteed hard savings or revenue potential.

Bigger Platforms, Doing More

We hear time and time again that banks expect the new platforms they bet on to do more. They do not want as many vendors to deal with, and they do not want point solutions that sustain the complexity that has plagued the industry.

We expect increases in M&A activity in 2021 as vendors consolidate key components. In the data space, everyone is racing to build as much of a next-gen "data fabric" as possible.

We also think that unless the tech is truly groundbreaking, in 2021 life will be hard for new startups trying to deal with the biggest firms.

In Conclusion

Data technology is going to continue to evolve for many years to come, shaped by continuing challenges and megatrends. We expect steps forward in 2021, accelerated by a renewed push for the cloud.

> "As the move to the cloud continues, non-cloud native apps will have to be replaced, creating a continuous opportunity for new vendors to grab market share."

NAVIGATING THE COMPLEXITY OF DIGITAL RELATIONSHIPS

Charlie Henderson
Co-Founder and CEO, Feedstock

Today's client relationship environments feel very different to what they did a year ago and are completely unrecognisable to what they were like 3-5 years ago. The shift from in-person relationships to digital ones has resulted in several significant changes. Today, there are more clients, more client touch points and a reduced

FeedStock™

understanding as to what, and who, clients are actually interested in. The scale of the digital shift has resulted in a need for digital relationship assistance to help navigate the complexity of digital relationships today.

Before FeedStock, businesses were relying on manual input systems to try and track the movements of relationships. However, their perpetual reliance on manual inputs rendered them unfit for purpose and were a net drain on time. We have seen multiple other segments take more data driven approaches, that are able to adapt to the dynamic realities of human relationships. We are at base camp today in relation to what can be achieved with data. FeedStock captures ~2.5 billion data points across its client base, and has been working for a couple of years to structure this data into actionable insights to keep pace with the growth of digital client relationships.

FeedStock has worked with cross-industry businesses and sales teams to deliver vital client relationship assistance, using our complex client intelligence platform. We automatically classify, understand and score all client interactions, relationships and engagements across all the channels you use to communicate; using AI to make sense of the noise.

We measure client relationship quality, interest levels and service levels across your companies, clients, contacts, colleagues and content 100% automatically. We tell you who to contact, at which client, about what and when. We alert you when clients are engaged so you can sell more and also notify you when engagement is dropping off, so you can save the account. I started my career as a equities broker and saw relationships shift to digital and knew that being able to truly understand digital client relationships in this new digital environment would result in a competitive edge. I wanted an automated, real-time view of my own clients, their interests and relationship levels and to also interact with my team so that I could understand how things were going and where relationships were strong or weak without having to have frequent internal sales discussions or to rely on patchy, subjective, incomplete manual data that was a drain and a pain.

FeedStock Synapse was the result. We are powering digital client relationships by giving clients visibility about who is interest in what, and we are doing it all automatically, freeing sales professionals from the burden of manual CRM inputs and giving them the gift of automated client intelligence to transform how you interact with your clients. Forever. #datavision.

"We automatically classify, understand and score all client interactions, relationships and engagements across all the channels you use to communicate; using AI to make sense of the noise."

MAKING FINTECH PERSONAL

Teodor Blidarus, CEO and Co-Founder, FintechOS

FintechOS is on a mission to transform how people engage with the everyday services they need. Using innovative tools and a deep understanding of the customer journey, our mission is to bring effortless, personalized experiences to everyone.

We empower organizations to become truly customer-centric, helping them to adopt a data-driven approach, and consolidate critical data from multiple sources like databases or IoT devices. This connectivity accelerates processing, automation, and above all, delivery of a streamlined experience. Better still, it slashes costs. Our tech integrates customer data at every level of the customer journey - from the product catalog to the app. These capabilities free our clients to tailor products, workflows, and interactions to a segment of one.

FintechOS Lighthouse, our customer-centric platform for banking enables the delivery of smarter, profitable products and personalized experiences. Pre-built functionality and low-code empower organizations to create value quickly. Move away from legacy systems, or keep them in place - it's all possible.

FintechOS Northstar, our customer-centric platform for insurance lets insurers deliver clever products, at a faster rate. Our platform makes continuous innovation and fast go-to-market a reality. At the same time, it reduces cost via end-to-end digital customer journeys and increased efficiencies.

More than 40 institutions run on FintechOS, including Eerste Bank, Societe Generale, Scotia bank, Hyperion Insurance Group, Vienna Insurance Group and many more. Our reach spans 20 markets and four continents.

"Our tech integrates customer data at every level of the customer journey - from the product catalog to the app. These capabilities free our clients to tailor products, workflows, and interactions to a segment of one."

We manage a total of $85bn in assets and have offices in London, Amsterdam, Bucharest, Copenhagen and Vienna.

Financial institutions will never achieve digital transformation. And that's the point.
Just a few months back, Commerzbank announced it would invest €1.7 billion in the bank's IT services and infrastructure over the next three years.

On the face of it, this seems a sensible if not laudable approach—after all, most banks are at some stage of digitization. But according to Teo Blidarus, Founder and CEO at FintechOS, approaching digitization as a standalone process with a start, middle and end is fundamentally flawed, and is the reason why $900 billion of the $1.3 trillion banks spent on digital transformation in 2018 went to waste.

There are three key reasons that digital transformation projects fail:

1. Lack of alignment between top-level management and teams deploying the new capabilities

2. Failure to automate end-to-end customer journeys (such as customer onboarding, account opening) resulting in fragmented solutions

3. Inability to sustain continuous development within the bank

The crucial word here is "continuous". Digital transformation isn't a tick box exercise. It isn't something that stands alone. It is a state. To accelerate digital transformation, financial enterprises need a platform that connects, consolidates and analyses data from internal and external sources.

FintechOS brings your data together and gives you the ability to act on it. Create more personalized experiences, decrease processing time, automate back-office functions. Reduce costs and grow your business.

Imagine how your products and services would change if you could rely on personalized data for each customer. Market to a segment of 1 with advanced analytics, artificial intelligence, and robotic process automation.

FLEXTRADE 2021 – BUILDING THE FUTURE OF TRADING TECHNOLOGY

Andy Mahoney, Managing Director, FlexTrade

Valeria Dejong, Marketing Manager, FlexTrade

2021 has kicked off in style for FlexTrade, with TF International selecting FlexOMS, our sell-side order management system, and Lyxor Asset Management, one of France's largest asset managers, deploying FlexNOW, our cloud-based execution management system.

For the last 25 years, our core mission has remained the same: to solve the most complex challenges in the front office, by delivering ultra-high performance multi-asset trading technology, with a strong focus on innovation and deep client partnerships.

Having pioneered an open, pro-active approach to integration with complimentary best of breed third-party technology, we have been at the forefront of the recent financial services desktop interoperability revolution, and found ourselves well positioned for the ever-increasing supply, and demand of data.

Our versatile technology stack ensures the friction of data exchange is minimised, giving us more time to focus on ensuring the user has the most optimal experience possible, paving their way to best execution, and making every button click count.

Trends and opportunities in 2021

Putting the user at heart of technology

It is a sign of the relentless advancement in consumer technology, that traders now demand a better user experience, more efficient workflows, and seamless data sharing from their front office technology. The world of legacy, out-dated, closed technology solutions incumbent on a trader's desktop is rapidly changing, driving a financial services desktop interoperability revolution.

Our API-first approach avoids the need for multiple different applications, on multiple desktops, and focusses instead on creating a single, seamless technology interaction.

The first phase of revolution is context switching, where users of FlexTRADER can easily invoke functionality or actions within their OMS, or any other system on their desktop, from one place. This allows clients to use the best technology at every stage, rather than being forced into in a closed ecosystem and the associated rekeying risk that comes with it, as users manually shuffle data between systems.

> "Our versatile technology stack ensures the friction of data exchange is minimised."

The second phase is creating a "master" application, designed in partnership with the traders themselves, which draws upon all the best of breed systems operating across different technology stacks, delivered in a single presentation layer.
This shifts the focus of financial technology software providers towards APIs and makes the whole landscape more competitive. Without legacy vendor lock-in, vendor competition increases, and ultimately the user benefits.

Recently, FlexTrade collaborated with Turquoise Plato Uncross, a buy-side multilateral trading facility (MTF) in the London Stock Exchange Group, bringing its data onto the FlexTRADER application through the Openfin bus based on FDC3. Since the data transfer was over a normalised bus, we spent all our time focussed on what behaviour change we wanted to influence in the user, rather than discussing custom protocols.

While the desktop interoperability movement is still at the early stages of revolution, there is no doubt it will transform the trading desk over time.

Big data just keeps getting bigger

The supply and demand for alternative data has heated up across financial services, as clients search for new signals and sources of alpha the COVID economy.

> "It is a sign of the relentless advancement in consumer technology, that traders now demand a better user experience, more efficient workflows, and seamless data sharing from their front office technology."

A key aspect of integration any data point is to ensure it's put in context, and time appropriate. How is the data relevant to other traditional market data on your trade blotter? Terabytes of data vs. small and very time critical? There is no one-size-fits-all method to ingest this the variety of data sources available.

It is crucial to ensure that alternative data is delivered in a timely, digestible, manner to where the trading decision is made. Data needs to be understood by the traders in the context of their strategies. Our APIs and open architecture ensure integration of data is frictionless, so traders can apply unusual data sets and detect patterns that produce actionable insights.

The hunt for actionable liquidity

To assist our institutional clients with block trading, recently we announced the direct availability of Liquidnet's Targeted Invitations in our multi-asset trading blotter for equities. The functionality provides our clients with targeted natural liquidity from other Liquidnet buy-side members and selected brokers, directly into the parent order blotter. Traders can access the liquidity through one- or zero-clicks, with the appropriate routing strategy being defined in the targeted invitation itself, maintaining full control and further improving efficiency.

While highly targeted, actionable liquidity, with zero information leakage, has been available for some time in FlexTRADER, this really takes it to the next level. Targeted Invitations contain machine-readable instructions on what strategy the trader should employ, which is key to workflow optimization.

Why FlexTrade?

We have a diverse, dynamic, and ambitious global team of over 500, almost all technologists, with a strong focus on collaboration. We solve the most complex challenges in the front office and are global leaders in providing next generation multi-asset trading systems, ensuring .

We are extremely excited to be recognized by The Financial Technologist as one of the most influential names in FinTech.

INSIGHT: RESILIENCE IN FNALITY GLOBAL PAYMENTS

By the Fnality team

Resilience is the ability to recover from disruptive events; it is a core characteristic of any successful organisation, ecosystem or society. Due to its systemic importance, regulators have put the resilience of the financial sector under particular scrutiny.

A key objective of the Fnality Global Payments (FnGP) initiative is to deliver unprecedented levels of payments infrastructure availability and operational resilience. To achieve this, we harness distributed ledger technology (DLT), with its roots in the 'trustless' environment of cryptocurrencies, in the design and development of Fnality Payment Systems (FnPSs). Settlement is conducted and finalised on a peer-to-peer basis, making the settlement model much simpler and safer by removing the need for intermediaries, and with it associated operational complexity and risk exposures. DLT is a new technological paradigm, but the spectrum of risks to which it is exposed is the same as the risks faced by any centralised system in operation today. What is novel is the method for solving and mitigating these risks.

We go one step further by also adopting an organisational design that replicates many of the resilience features of DLT and adds a learning and adapting capability. By building organisational resilience and not only operational resilience, FnGP reconciles two goals that often conflict in traditionally run organisations: achieving safety and soundness while maximising efficiency and cost effectiveness.

It has been noted by standards and regulatory bodies that having a culture that recognises the importance of security is vital, and that many organisations are finding that a traditional hierarchical structure is no longer fit for this purpose. While for many the solution is to automate processes - which can be efficient but brittle and difficult to re-design - Fnality's solution is to distribute decision making from the top of the organisation to the areas receiving relevant information in real-time, and thus to steer those decisions with collective purpose. Fnality's organisational design entails empowered, decentralised, cross-functional, fully autonomous teams that are aligned through consumer-led value streams in the context of Fnality's overall vision and strategy. They are therefore highly able to solve problems in an efficient, effective and resilient manner.

This is what sets FnPSs apart; this is what will drive the future of global finance.

To find out more about FnPSs please visit www.fnality.org.

HOW TO MAKE YOUR FIRM FUTURE READY

Michael Mueller
CEO, Form3

Global payments has seen more change in a year than was expected over the next decade. The big shift to digital payments has accelerated the need for financial institutions to be more agile and scale quickly based on market dynamics.

But many are seeing that their existing payments infrastructure is constraining the ability to adapt quickly to market, scheme and regulatory changes.

Given with the rapid pace of change, financial institutions need to adopt technology infrastructure that delivers the level of flexibility and speed needed to keep up as well as ensuring they are always future ready.

There is already evidence of accelerated adoption of cloud technology, open banking and partnerships in 2021.

Banks are working collaboratively with Fintechs more now than ever before, realising that there are alternatives to the heavy cost and complexity burden of managing core back-office payments infrastructure in-house.

Working in partnership with specialist technology providers like Form3 means the entire payments infrastructure can be outsourced, enabling banks to achieve lower operational costs, greater resilience and reliability, faster product delivery cycles, dynamic scalability and data led decisions.

"The big shift to digital payments has accelerated the need for financial institutions to be more agile and scale quickly based on market dynamics"

HARRINGTON STARR
Your Success. Our Business

ANALOGUE TO DIGITAL WITH EXCHANGE 4.0

Hirander Misra
Chairman & CEO of GMEX Group and SECDEX

Exchanges today mirror the Internet networks of yesterday; they are siloed therefore lacking interconnection and are focused on a subset of assets. This fragmentation has been exacerbated, with the advent of the new digital asset markets. What can be the glue creating interconnectedness as the first truly hybrid full exchange and post trade ecosystem, bridging the gap between traditional and digital assets? How can this enable Exchange 4.0 for all types of products and services between players across the Fintech enabled capital markets value chain? Let's explore how the fourth industrial revolution (sometimes called 4IR) can now lead to Exchange 4.0.

Growing pains for Digital Assets

There is an exponential growth in the digital assets market, with considerable institutional interest from the likes of Microstrategy, Mass Mutual, Ruffer, Fidelity, Tesla, etc.:

- Fidelity (06/15/20) – surveyed nearly 800 institutions in the US and Europe, and found that a third of big institutions own crypto assets.

- Deloitte Blockchain Survey (2020) – surveyed a sample of 1,488 senior executives across 14 countries and found 83% of the survey respondents believed digital assets would serve as an alternative or outright replacement for fiat currency in 5-10 years.

Digital assets will be a leapfrog from the current environment and will bring in a global interplay. Yet there are some serious constraints which need be addressed for the market to scale. The issue to date has been the inability to deploy capital and move assets seamlessly with lack of interoperability between legacy platforms. This is a historic problem for exchanges which has persisted since their inception as floor-based marketplaces and continued as they moved to electronic trading. Participants in financial markets run their own services, including custody in silos and moving assets between these participants is cumbersome, slow and expensive resulting in inefficiencies. The new so called digital exchanges, custodians and banks have merely replicated this analogue model therefore also presenting huge inefficiencies for asset portability. There is even more fragmentation in the current environment with multiple blockchains, centralized and decentralized digital asset exchanges, with no proper links between traditional and digital market infrastructure. As institutional players increasingly come into the market there is a need to make this interconnection more efficient.

Exchanges and Digital Assets

Traditional exchanges will need to digitally transform themselves and seek both technological and knowledge enhancing partnerships. Aside from the technology itself, to enter into digital assets, they require regulatory, operational and business level guidance to be able to integrate the external digital processes into their non-digital activities. The key question will be how they will avoid replicating old silo-based models to truly embrace the digital revolution.

> "The old world and the new world will have to coexist in the foreseeable future, with the gap needing to be bridged between blockchains and legacy networks."

There is a global need for capital markets trading in stable regulated environments, which can be future proofed, whilst bridging the gap between traditional and digital assets. Solutions that solve this not just with technology, but also at a transactional business flow level whilst addressing the cross border regulatory requirements, are the ones which will then lead to fundamental change in the capital markets space. There is therefore a need for interconnected exchanges across assets and jurisdictions (in the same way we have seen interconnected telecommunications networks), underpinned by regulatory frameworks and supported by automated securitized contracts across the exchange network from issuance and trading to clearing and settlement.

4IR and Exchange 4.0

Just as the world is experiencing a fourth industrial revolution (4IR), exchanges are beginning their own new phase. The 4IR concept is the driving force behind the Internet of Things (IOT), where AI, automation and web technology combine to create "smart" versions of everything from cars to refrigerators. A similar idea is taking hold in the world of exchange trading, as data driven smart contracts, tokenization and distributed ledger technology (DLT) make it possible to facilitate true asset portability while linking far-flung liquidity centers. This will help form much more powerful ecosystems leading to Exchange 4.0.

The old world and the new world will have to coexist in the foreseeable future, with the gap needing to be bridged between blockchains and legacy networks. The need to make these interconnections more efficient is being driven by large established institutional players who are increasingly coming into the digital assets market to capture new revenues. Solutions which meet the cross border regulatory requirements, through technology and at a business level, are the ones which will lead to fundamental changes in capital markets. Digital hub-based models, which can connect many upstream and downstream participants together with other services, will be the ones seeing real traction as they will bridge the gap between existing traditional and blockchain enabled digital market infrastructure.

Centralized Finance and Decentralized Finance (DeFi) have been to date pretty much in parallel silos, however this will start to change as we see a greater intersection between the two. As a result, an increasing number of capital markets participants will move from running their services in silos (which makes the moving of assets between participants cumbersome, slow and expensive) to a blockchain enabled integrated model, with a seamless link from digital to traditional financial infrastructure.

Exchange 4.0 is not just about Exchanges

Exchange 4.0 is not just about the exchanges themselves interconnecting. It can be seen as a cloud based, blockchain enabled construct to interconnect multiple industry participants - digital asset exchanges/trading venues, banks, brokers, asset managers, asset service providers, custodians, other post trade providers and FinTech service vendors - to facilitate greater asset portability with more efficient trading, clearing and settlement. The exchange becomes a bidirectional network effect of products and services between all these participants for mutual benefit, thus eradicating the age-old exchange silos.

Exchange 4.0 therefore represents a huge opportunity globally to realise the intended collaborative effects of blockchain, in a way that integrates both traditional and digital finance as part of a cohesive global digitally interconnected ecosystem.

INNOVATION THROUGH RESILIENCE: WHY IG IS EMBRACING PLATFORM THINKING

Milena Kannen, Emerging Technology Lead at IG

If there was one lesson to be learnt from 2020, it was to expect the unexpected. With Covid-19 wreaking havoc across the globe, IG, too, has had a year that redefined unprecedented several times over. The "Covid crash" of global markets in February was just the start. From the subsequent weeks of volatility that tossed investors about like a dinghy in a typhoon, to the stampede back into the starved markets on "Pfizer day", demand on our systems has never been higher.

The harsh light of the pandemic certainly identified the chinks in our armour. But knowledge is power, and this timely stress test has done us a huge favour by clearly revealing the key technology trends we must master to deliver sustainably against our ambitious growth strategy. One thing has become clear - in an industry like trading where the unexpected must be expected but cannot be predicted, a linear approach can only deliver so much scale. If exponential growth is the target, we must shift our thinking towards platform play.

Today's leading trading platforms are feature-rich and customisable but still largely monolithic. Looking beyond the immediate competition and assessing the strategic responses of similar organisations we see increasing demand for a more integrated offering.

Enabled by APIs and data standardisation, our vision is to bring clients, partners and third-party developers into an IG ecosystem to deliver open innovation and support strategic development. Internally, APIs enhance our efficiency and reactivity by bringing together tools and functions into reusable modular components. An "API first" approach guides our efforts to design microservices that can be consumed through an array of applications, and externalised where demand exists.

Online trading businesses create revenue from volatility. IG has taken advantage of recent market conditions, but these will not continue forever. Alongside efforts to control our cost base, ensure efficiency and reduce our dependency on external factors, we're continuing to explore opportunities for diversifying our product portfolio. Our investment offering is already popular with financially literate, self-directed investors, and our goal is to expand to deliver more of their needs on a single platform.

Understanding this savvy and in-demand audience is key – and we're listening closely to find out what they really want in this space. As we continue to explore opportunities to diversity our product portfolio, we are peering behind doors that organisations in our industry have not opened before. The emerging direct-to-consumer (D2C) wealth management sector, for example, is competitive, especially in the UK where the Open Banking framework has enabled a diverse ecosystem of digital-first start-ups and spurred incumbents to become fast followers. Players hoping to weather the coming downturn will need to invest smartly and position carefully to keep pace with the quality of service these consumers demand – and a platform thinking approach could allow us to leverage our existing technology stack and strong financial position to compete effectively in this space if we make that choice.

Our core value at IG is to champion the client. For the ambitious self-directed investors in pursuit of financial freedom that we cater to, this means maximum choice and flexibility, underpinned by support and information offered in a light touch and unintrusive manner. Whatever products we offer in the future, a holistic platform thinking approach, enabled by standardised APIs, will position us for growth by speeding up delivery and supercharging our ability to react to our clients' evolving needs.

FINTECH FOR FINANCIAL INCLUSION

Andrew Rabbit, CEO and Co-Founder, Incuto

Despite the challenges of last year, and the continued lockdown in 2021, Covid-19 has undoubtably sparked rapid innovation and transformation in the credit union and community banking sector. Alongside the obvious efficiency and automation benefits of this drive, and the opportunity to improve credit union services, we believe technology will address the problems with financial exclusion and education which exist in the UK today.

According to recent data from The Resolution Foundation, almost two million people have not worked for more than six months as a result of Covid-19. Similarly, it found that over 750,000 families are currently in arrears with their housing payments, an increase of around 450,000 compared to pre-pandemic levels with renters hit the hardest.

Individuals and families on lower incomes often find themselves subject to a poverty premium, for example, having to use extremely high-cost rent-to-own models to purchase household items, or being forced to use expensive, cost-per-transaction, pre-paid card providers.

Limited access to banking services and loans, perhaps due to poorer credit scores, is also indicative of this group. These individuals often find themselves side-lined by mainstream banks, and so resort to expensive pay day lenders typically charging between 800-1200% APR when they need to borrow money.

Access to affordable, responsible finance is at the heart of eradicating this status quo. Namely, giving the financially excluded better access to bank accounts, debit cards and lower interest loans so they are paying similar costs as the majority of borrowers and not facing long-term, crippling debt. incuto's technology and partnerships empower credit unions to offer a viable alternative to high-interest, pay-day loans and bank charges.

Community-based banking and lending

Credit unions and community-based banks and building societies are well placed to support individuals and families in a post-Covid world, but they must innovate and transform the service they offer to Members.

For example, credit unions have traditionally offered their Members limited branch networks (some have no more than two branches servicing a given geographical area), plus they struggle with legacy technology and paper-based systems which make their service extremely inaccessible, especially compared to high-street banks and pay day lenders. It seems unthinkable in our digital world that you would have to physically go into a branch to either withdraw or pay in money, but this is still the case with some credit unions across the UK.

Any technology solution for credit unions must be all encompassing. After all, it's not just enabling people to manage their money or apply for loans online in a faster and more efficient way. incuto's technology offers credit unions and community-based banks paper-free, automated applications; automated communication to increase engagement; 24/7 access including pre-authorised amounts and rates, pre-filled applications and e-signatures; automated ID verification, AML, affordability and credit scoring and underwriting; plus a self-service web portal for Members to view and manage their accounts.

Fintech for credit unions is about giving Members financial freedom and access to services, plus the ability to pay in money at a wider network of outlets and the same level of interaction and engagement that they would receive from a high-street or online bank.

> "Fintech for social good is levelling the playing field for individuals who may have struggled to access financial services"

Fintech for social good

The link between Fintech and promoting social good isn't always obvious, but innovation in this space has a key role to play in financial education and inclusion for millions of lower-income individuals, families and households across the UK. We tend to think about financial technology only in the context of challenger banks or improved services for the average banking customer – but what about the 1.5 million people in the UK who do not have a bank account. Enter new technology which is already helping the 'unbanked'. Fintech for social good is levelling the playing field for individuals who may have struggled to access financial services, something that many of us take for granted.

Clearly, many credit unions, community banks and community development financial institution (CDFI) have taken steps over recent years to digitise what they offer, regardless of the pandemic.

Those with larger membership bases have worked to offer Members a better online experience, with 24/7 access to their accounts, the ability to complete transactions online, access to a banking app and online loan applications. Equally, many of the credit unions we work with have taken up services such as improved digital communications and marketing, access to cash via the Post Office Banking Framework, Open Banking and Faster Payments, all of which enhance their existing Members' experience and make them a more attractive proposition to a wider audience.

Of course, for smaller credit unions or those relying on in-person interactions to complete transactions, there was an urgent need to implement digital services very quickly at the start of the first UK lockdown. Members needed access to their accounts without the health risks of coming into a branch. Although many offices did remain open for Members who needed to visit, the speedy uptake of mobile and online services including online withdrawals, loan applications and e-signatures was necessary to ensuring these credit unions could continue their obligation to Members.

Becoming more competitive through innovation

The solution is now available. Open up the services credit unions can offer and give access to a wider audience through technology. Better branch access via partnerships with other branch networks, plus a debit card, bank account and sort code (rather than simply a Membership number) would allow the financially excluded to access additional services at the same price as the wider population and better online access and automation.

It's been fantastic to see credit unions – big and small – pivoting their approach and services in order to continue supporting their Members during an extremely difficult period. While it is arguable that many of these changes would have played out in time anyway, the need to adapt and work remotely which Covid-19 created presented an opportunity to improve credit union services across the board and open up access even further in the year ahead.

THE ACCELERATING DEMAND FOR TRADE PLANT ANALYTICS

metrics

**Clive Posselt
Commercial Director,
Instrumentix**

Over the last 12 months the business of capital markets trading has become even more closely entwined with technology than ever before. During record-breaking market volatility and volumes, firms have also faced the novel challenge of having most of their global staff working from home, that challenge continues in 2021 and has accelerated digital transformation. With this backdrop we have seen accelerating demand for increasingly sophisticated monitoring and analysis of trading plant performance from liquidity venues, banks, brokers, and proprietary trading firms alike.

For the sell side, having the correct insights into the performance of their trading systems and client experience, allows them to make optimizations to their stack that can make a critical difference to financial performance. As the buy side has become more data driven and systematic in their approach to how and where they execute their flow, the use of advanced data sets and algo customization has continued to increase. This means that fractions of basis points in overall execution performance can mean the difference for a sell side firm being ranked as a top broker or being cut off entirely.

We have seen organizations responsible for electronic trading execution, not only seeking more high quality execution metrics, but they also want more context into exactly why specific outcomes have occurred. Understanding the relationship between execution plant performance and execution outcomes is evolving into another arms race around execution alpha. The insights born from that understanding can drive the changes needed to both deliver against clients expectations and optimise P&L and the firms with superior execution analytics, intelligence and understanding will be the winners.

While firms focus on more accurate data and sophisticated insights to improve trading outcomes, they are also faced with the ever increasing challenges of data lineage and the need to be able to augment, manipulate and transform data that can be captured from the wire. Fundamental to being able to achieve this is the ability to manage the multiple protocol changes that naturally occur as orders traverse a typical trading infrastructure. This is where the ability for a trade plant monitoring and analytics platform to be easily integrated with other systems and effectively act as middleware is critical. Clients are demanding true multi-hop performance analysis that allows them to really understand tick-to-order and tick-to-trade timeframes not possible with legacy solutions. To deliver against this it must be possible to compute complex and integrated calculations in real-time as the norm.

Increasingly demand for trade plant analytics is not just coming from infrastructure and network teams as has historically been the case. As the race for a competitive edge has accelerated, easy integration with other systems ensures that the data and analysis produced can be leveraged by multiple user groups and stakeholders across an organisation, whilst ensuring that the output they interact with either via a user interface or API is tailored to their specific needs. For example, the network team will want to receive both different metrics and also differently formatted insights to that demanded by the trading technology team or by the trading desk themselves. Due to our unique framework any external data source can be rapidly integrated with xMetrics to create both user defined fields and functions not inherent in the raw data and additionally to be analysed alongside the massive amounts of data that xMetrics produces to display a truly holistic view of an entire global trading plant.

We have also seen expectations around alerting frameworks evolve rapidly, with SLA based alerting being superseded by adaptive multi factor alerting that relates real-time changes in behaviour vs historic and multiple inter-related performance metrics. These alerting frameworks also need to be integrated with clients messaging platforms of choice.

Another question that capital markets firms have been increasingly wrestling with is the best way to manage resourcing constraints. All firms have extremely knowledgeable experts within their execution and technology businesses, but across the board these key team members are time poor. Deploying and maintaining a real-time trade plant monitoring and analytics platform can be complex and time consuming and in order for clients to make the most of the goldmine of data and insights available, we are increasingly being asked to provide our platform as a managed service. This is something that we would not have expected when deploying in large global organisations only a few years ago, but over the last 12-18 months it has become the norm.

2020 was challenging for the whole market, but a very busy one for Instrumentix and this has accelerated as we have gone in to 2021. The world has definitely shrunk and technology firms have had to rapidly digitise their marketing and sales processes which has meant that in many b2b environments it has been easier for buyers to get information and run evaluations of new products. Even without the ability to interact with clients in person we have seen strong growth in our core markets and also formed new partnerships that have allowed us to onboard our first clients in Latin America for example.

We see data at speed and scale being the continued key to success for trading businesses, but it is only useful if traders can trust the source and that is why data taken from the wire is so critically valued. Finally, the advanced contextual analytics needed to interpret existing, new and unstructured data sources to optimally manage trading businesses has rapidly become as critical as finding the data itself.

TRANSFORMATION IS DIGITAL

Matthew Cheung
CEO, ipushpull

Financial services have accelerated digital transformation as Covid-19 has forced staff to work from home while maintaining the same level of service to their clients and dealing with volatile markets. Staff have needed to access data from their homes and share information with remote colleagues and clients. However, data sharing in capital markets has historically been a manually intensive process, involving emails, file sharing and copying and pasting between documents.

Ipushpull allows firms to remove these inefficiencies and reduce the potential of errors by providing Data-as-a-Service (DaaS) to automate the movement of information, both internally and externally, and improve the service to clients. The technology was originally built for an electronic trading company to facilitate sending data to mobiles. Matthew Cheung, chief executive of ipushpull, realised there was a gap in the market for a product that allowed a group of people to easily share live data and the firm launched in 2017.

The fintech ‘pulls’ the required information from a database, a platform or even a spreadsheet and ‘pushes’ it to recipients in applications they already use, such as Excel or a chat platform without them having to change their workflows.

Capital markets firms have traditionally built their own technology but using a managed service allows them to focus on their core competencies and be more responsive and agile. Making data interoperable enables live collaboration and this creates a faster path to innovation, giving firms a more agile decision-making process as they will have the right data at the right moment and in the right format. The shift to a more data-driven culture also lowers risk and costs and leads to increased revenues.

Ipushpull uses cloud technologyso firms can ‘plug-and-play’ and easily share data in any application. There is full compliance with capital markets regulations as DaaS has built-in the required security controls and audit trails.

Another reason for using DaaS is the explosion of both structured and unstructured data in capital markets which requires specific expertise to identify, collect, cleanse, store, maintain and distribute. Each stage presents a challenge, for example, storing large amounts of data can cost hundreds of thousands of dollars per month in each region. As a result, ipushpull accelerates the speed to market as the firm has the experience and expertise to meet each of these challenges.

Ipushpull can also meet customer preferences on whether they want to receive data that is live, streaming or on-demand.

For example, NatWest Markets has used ipushpull to distribute tens of thousands of daily axes to clients more efficiently than through phone calls or emails. Automating the process means the axes are always up-to-date, actionable, relevant and easy to access by clients. The bank sends a stream of live data to the ipushpull cloud and clients can pull the data in their preferred format, such as excel, a chat on a messaging platform such as Symphony, or a mobile app.

The NatWest salesforce has also also used ipushpull to easily send relevant axes to specific clients, rather than inundating them with lots of data that they need to filter. For example, a client may want auto sector bonds, and the salesperson can filter the axes and send them through the click of a single button. Clients can also trade axes more efficiently as the bank has integrated ipushpull with an execution bot.

The bank has recently adopted PPQ, ipushpull's new pre-trade workflow tool which standardises and automates the bilateral negotiation process between the buy and sell side for complex trades. Standardised syntax within private chats allows trading and sales to communicate detailed pricing and quote information which can be interpreted by chatbots. The data is then automatically displayed in a custom application so the user can drive the pre-trade workflow from a single screen. DaaS allows both the buy side and sell side to streamline their non-standard complex trades through the use of live data sharing, chatbots and the cloud.

Euromoney TRADEDATA partnered with ipushpull to release its first reference data application that can be deployed into Symphony. Therefore clients can use live data on demand, rather than receiving a large file once a day, which they then had to slice and dice to find the relevant piece of required information.

Ipushpull helps firms to digitally transform through sharing data that unlocks efficiency and automation, allowing staff to focus on tasks that improve the service they provide and add value.

A REKINDLED DRIVE FOR INNOVATION

Anvar Karimson Chief Technology Innovation, Kepler Cheuvreux

Trends for FS Technology for 2021 – what do you see as the key trends, opportunities and issues in the market

2020 was a significant year of change for us all personally, socially, and professionally. As the impact of COVID-19 spread, people had to adapt in many ways, from homeschooling to remote working. It forced companies to rapidly adapt to this entirely new working environment, where remote was the new normal for nearly all of the workforce. Companies that were merely discussing whether it was feasible to have their workforce occasionally work from home had to, almost overnight, shift their entire workforce to 100% remote for an unknown and prolonged period. This shift had huge ramifications on every aspect of a business as it forced the acceleration of many initiatives that may have been in their nascent stages. Everything across all business lines had to adapt and adopt new procedures and approaches, from cloud, telephony, laptops, and remote working solutions to day-to-day operations, appraisals, onboardings, client interactions, and project deliveries. The change not only necessitated business-oriented reviews but also, and significantly, across the technology stack, from software to hardware to infrastructure and connectivity. Business and technology had to work hand to hand; the right technology decisions were vital to ensure businesses could not only keep running but ultimately thrive in the new world. At Kepler Cheuvreux, an independent financial services company operating in 13 major financial centres, we firmly believe that the companies that have emerged on the other side are far more agile. With a successful firm-wide transformation behind them, they are looking at what's next, which brings us to our first prediction for 2021 – a rekindled drive for innovation.

Innovation

Firms will look to leverage the investment that went into enabling remote working to assess and optimise how every part of their business works. The optimisation will have a knock-on effect on the FinTech startup scene, where some startups may find themselves on equal agile footing as the incumbents they are trying to displace. However, it will also enable and empower a new generation of startups to take advantage of this agility and form even deeper partnerships with their clients. Firms who adapt well will do more with less; technology will be the great enabler for those looking to scale quickly and adapt fast in ever-changing marketplaces. At Kepler Cheuvreux, we firmly believe that our global footprint is one of our major strengths. The new normal will enable us to leverage our global expertise further and bring people together across regional boundaries. The new normal is not just something that is affecting us. It affects our clients as well, and a significant area of innovation for us is to examine and redefine how we interact with our clients and how we can better serve them in this new reality.

An example of this is our new research offering, Kepler Cheuvreux Discovery. With our research platform already offering access to our award-winning research and analysts, Kepler Cheuvreux Discovery will support video content and highlights to ensure clients are always on top of new research. Moreover, we are very excited to be launching new interactive morning pitches, where we provide clients with new ideas and allow them to engage with our analysts. We see Kepler Cheuvreux Discovery as a great addition to our offering and as an opportunity to serve our clients in a medium that truly reflects the world in 2021.

Machine Learning and Artificial Intelligence

Machine Learning and Artificial Intelligence (ML/AI) has gained more attention over the last few years and has become one of the most talked-about technologies in FinTech. We believe this year will mark a change in that focus will shift from the technology aspect to the value that ML/AI can provide in solving real business problems. It's certainly something that we are seeing across the technology landscape where firms are spending less time talking about Natural Language Processing (NLP) and Reinforcement Learning and more about intelligent data transformation, liquidity optimisation, and document comprehension. As the technology behind ML/AI becomes more commoditised by the big cloud providers, FinTech technology providers will have to double down on their value proposition and the business benefits their respective platforms can bring. At Kepler Cheuvreux, we are weaving ML/AI into all our business areas. Whether it is to optimise clients' trading results, improve our quantitative research, or provide our analysts with tools that will allow them to dig deeper into companies and sectors, ML/AI is no longer a standalone technology for us. It's a fundamental pillar to everything we do.

Self-Service

Lastly, we see the area of self-service and low-code solutions as a tremendous growth area. With the wave of data lakes and data consolidation in full force, firms will be looking to maximise the return of their investments. By connecting a low-code solution to an organised set of data sources, business users from across all areas will be able to self-service in various ways. Whether drilling into data and generating reports or creating workflows with triggers, transformations, and actions, business users are empowered to automate their workflows and create datasets and events that others can further build on. Correctly implemented, a self-service solution can form a foundation for a firm-wide operating system that can bring together departments across the entire value chain. A low-code platform has interoperability built in from the start, and it frees departments from having to have dedicated technology teams. As and when processes change, the process owners themselves can update and maintain their workflows. Simultaneously, self-service automation is not new, business users have been using Excel to automate calculations and reports for a long time. However, we believe that this represents the next step where those datasets, analyses, and reports can be leveraged and built upon across the entire firm.

Ultimately, as organisations are navigating their way through the new normal, a technology strategy is critical, but alone or in isolation is not enough. Business and technology are more interlinked than ever, and a cohesive strategy will enable firms to do more with less and rapidly respond to ever-changing business needs in the future.

HARRINGTON STARR
Your Success. Our Business

A SINGLE SOLUTION FOR PROVIDING END TO END TPP CHECKING

**Brendan Jones
Chief Commercial Officer, Konsentus**

PSD2 Open Banking came into effect in September 2019 giving Payment Service Users (PSUs) the legal right to share their transactional account data with regulated third party providers (TPPs). The regulation affects over 9,000 Financial Institutions providing transactional payment accounts that can be accessed online.

Since its implementation, Open Banking has grown at a phenomenal rate and clearly there is growing demand for the innovative products and services being offered to the market. Over 700m open banking transactions were reported by OBIE in the UK alone in January 2021 – this is more than double the previous year's figure. There are now also over 450 regulated TPPs (excluding all the credit institutions operating in the capacity of a TPP) offering accountholders new and innovative ways to manage and view their financial information and funds. These range from account aggregation and product comparison tools to personal finance and charitable giving solutions.

There is also the ability for these TPPs to operate across multiple markets. Take for instance the TPP Isabel, regulated by the National Bank of Belgium, who is also offering its accounting solutions to accountholders in the Netherlands and France. Or OkiOki, who is passporting into six other markets.

The ability for TPPs, many of whom may be unknown to these Financial Institutions, to request access to account holder data and funds presents many issues and risks. The two main challenges are knowing if a TPP is who it claims to be and whether it is regulated to provide the services being requested

These are not easy questions to answer. To do so, a Financial Institution would need to have real-time access to the 115+ registers and databases across the UK and EEA, tracking the regulatory status of these organisations. In addition, it would also need to have real-time access to the 70+ QTSPs who can issue the digital identity certificates. These certificates contain the requisite information on a TPP's identity and are used to secure communications between Financial Institutions and TPPs and digitally seal messages ensuring integrity of the concept and proof of origin. Knowing how to interpret and read the data presented in these registers and digital credentials is an additional complex challenge.

Konsentus has developed a solution to tackle this growing fraud concern. Our solution simplifies the process and removes the heavy lifting required to perform the necessary checks on these TPPs.

Our cloud-based technology solution, Konsentus Verify, checks in real time both the identity and regulatory status of third party providers (TPPs) when an access request is made.

Konsentus Verify validates a TPP's identity by checking its eIDAS or alternative digital certificate with the relevant Trust provider. The TPP's current regulated status is then verified against the NCA registers. The collective information is then passed back to the Financial Institution in real-time, via a single API, so the Financial Institution can decide whether to allow the TPP to have account access or to decline the request.

The Konsentus Verify solution removes the need for separate in-house design, build, support, and on-going operational maintenance making it an extremely cost-effective way for Financial Institutions to protect their customers whilst enabling them to take advantage of these innovative products and services.

A scalable solution in a dynamic and fast-moving ecosystem

Given the acceleration of Open Banking and shift towards Open Finance and beyond there is a real need to mitigate any risks of fraud. A recent article by Lexis Nexis stated that:

"a tangible rise in Open Banking fraud attempts in the UK, leading to losses running into millions" is already being seen".

It is therefore paramount for Financial Institutions to ensure they put in place the necessary steps to safeguard their customers' data and funds.

We believe that even with a conservative 5% Open Banking adoption rate across the UK and EEA being reached by the end of 2022 the total number of monthly API calls will reach in excess of 7bn. Thirteen countries will be seeing over 100m API calls per month which equates to over 3m API calls per day. With volumes on such a large scale, automated risk management processes are essential.

Konsentus Verify delivers a highly effective risk management tool that can be implemented quickly and easily by any Financial Institution that needs to ensure it is PSD2 Open Banking compliant.

"We have brought together a single solution providing end to end TPP checking that can be scaled and adapted to any regulated market."

Our simple plug and play solution is quick and easy to implement. From request for sandbox testing, we enable our clients to go into full production operations in a matter of a couple of weeks and have a 99.5% up-time SLA checking of databases within the hour.

What differentiates us from our competitors is:

Best in class solution:
- Checking of both eIDAS and regulatory status
- A turnkey solution removes complexity
- Operationally sustainable and built for scale
- Future proofed to support changes in regulation

Quick and Easy Integration
- A single integration for quick and easy implementation
- A dedicated technical support team available 24/7
- Typical project timelines: 2 – 8 weeks

Cost Effective
- No set up fees or on-going maintenance costs
- No additional internal development budget or resource required

When Financial Institutions are looking to compete in a fast-paced ecosystem and offer their accountholders safe and secure access to new products and services, Konsentus Verify provides the ideal solution.

We have brought together a single solution providing end to end TPP checking that can be scaled and adapted to any regulated market as our partners and customers embark on their Open Banking journey and beyond.

THE FUTURE OF CORPORATE BOND TRADING

Ian Chicken,
COO, LedgerEdge

LedgerEdge is a new trading ecosystem that removes barriers to finding, sharing, and trading corporate bonds. It uses cutting edge technology to enable users to securely find and execute on trading opportunities while limiting data leakage. LedgerEdge incentivizes data and liquidity contribution in ways not previously possible.

The corporate bond market has been slower in adopting technology in comparison to currency or stock markets. As the pandemic hit and companies had to issue more debt to survive, the accumulation of debt has meant that corporate credit markets are more exposed to duration risk than at any other time in history.

The hunt for yield required targets that will provide a suitable risk-adjusted return relative to treasuries. Crucially, more and more of those targets are found in the segment of the market which does not trade frequently today. To the detriment of the end user and the larger marketplace, much of the market still relies on technology from the last century.

Our mission at LedgerEdge is to holistically reimagine how corporate bond trading is done. LedgerEdge is built on a distributed ledger framework, allowing users to engage and transact directly, limiting market impact and keeping full control of data with market participants. Our system is powered by Corda, a distributed ledger technology (DLT) built by R3 from the ground-up for business. LedgerEdge uses secure enclave computing, smart contracts, and incentive-based pricing to fundamentally alter how corporate bond trading is done.

Corda is already being used in a variety of applications across capital markets, whether it's to issue and trade digital assets improve regulatory reporting or effect assured multi-party transactions. We use it to revolutionise how transactions are made in the corporate bond market by enabling counterparties to transact privately and bilaterally, while ensuring members of the network have the same version of the truth.

Most bonds today don't trade 10 days after issuance, and the top 1,000 most liquid bonds account for most of the trading volume on any given day. This liquidity is pooled in the most advanced digital platforms running today. Meanwhile banks are aiming to auto-quote 10,000 different assets. Once you move above 3,000 in variety or 1 million in size then the science of trading becomes more of an art – calling a relationship or sending a Request for Quote (RFQ) to a few counterparts.

By allowing direct but conditional data sharing, Corda helps LedgerEdge solve the structural problem of locating counterparties for illiquid assets, without the data leakage and price impact that occurs using today's methods.

Traditional technologies have not been available to facilitate pre-trade and conditional data sharing in a way that avoids unnecessarily exposing material information to a central hub or to other market participants.

Until now, it has not been possible to create a rules-based distributed computing system to solve this problem in a way that satisfies users' concerns about data leakage, price discovery, data ownership and control, preserves recognized trade flows, meets pre-trade price discovery requirements, and also addresses post-trade data and regulatory reporting. LedgerEdge is the future of corporate bond trading.

A FINTECH REVOLUTION

David Mercer
CEO, LMAX Group

Over the past decade, the UK has been quietly undergoing a fintech revolution.

LMAX Group is the embodiment of that.

When I became interim CEO in 2011 we were losing £1.5 million per month. Bitcoin was less than three years old and Tesla's $3 billion market cap was 2.9 per cent of Toyota, the world's eighth largest company.

Today, Tesla is three times the size of its Japanese automotive rival.

In February, it announced the pioneering move to buy $1.5 billion-worth of bitcoin and said it would accept it as payment for its cars. Wall Street grandees like BlackRock, Bank of New York Mellon and Morgan Stanley are all following suit, each mulling moves into bitcoin.
We have also grown quickly.

LMAX Group has become the leading operator of institutional exchanges for FX and crypto currency trading, with customers in over 100 countries.

LMAX Digital, our latest exchange, built on our proven proprietary technology, is benefitting from the rise of digital currencies. We now have 400 institutions trading across our cryptocurrency platform, with average daily volumes of $2 billion.

In 2020, our total volumes for the Group reached $4.5 trillion, including $117 billion in crypto currencies. What is eye-opening is the growth rate of LMAX Digital. In the first two months of 2021 alone we saw LMAX Digital trading volumes hit $109 billion, amounting to 90% of the last year's total traded volumes.

Tesla is accelerating interest in electric cars... and also bitcoin.

As Ron Khalifa said in his review for Chancellor Rishi Sunak: 'Fintech is not a niche within financial services [it is a] permanent, technological revolution, that is changing the way we do finance.' He's right.

At LMAX Group, we were delighted to contribute our thoughts and ideas to the review. From the 2011 loss, we are now making £30m profit today. We are proof of the ability to scale successful fintechs. We now employ 150 people in 11 offices worldwide, operate 5 exchanges globally, servicing clients in more than 100 countries.

> "As Ron Khalifa said in his review for Chancellor Rishi Sunak: 'Fintech is not a niche within financial services [it is a] permanent, technological revolution, that is changing the way we do finance.'"

Fintech is about change and disruption. It is about being brave and bold.

As LMAX Digital shows, we are an illustration of this. As institutions embrace bitcoin they want to trade not just spot, but bitcoin futures. In March, we became the first cryptocurrency exchange in the world to offer them both spot and futures.

Not just in trading hours, but 24/7. For us, that is exciting.

There is no doubt that there is real transformative potential to be found at the point at which financial services and technology collide. We see it. We are keen to help the UK become a global trail blazer in this area. Because it absolutely can.

Investment into UK fintech stood at $4.1bn in 2020 – more than the next 5 European countries combined – so we start from a position of strength.

The pandemic has accelerated digital adoption globally in a way that marketing or policy never could. There is a unique opportunity to drive UK growth, innovation and in the process an economic recovery for the whole country.

We can achieve this in three ways.

First, by having a policy and regulatory framework that supports and nurtures fintech activity, whilst also encouraging competition which will drive innovation.

Second, by investing in building a fintech friendly skills base. Again, the pandemic has accelerated our embrace of technology specifically in younger generations. This interest can be harnessed and directed productively to create a future fit workforce.

Third, by getting the funding sequencing right, from start up right through to IPO. This means taking a closer look at our listing rules, which Lord Hill is doing. We should think carefully about why dual-class share structures are welcomed in the US, but not the UK. Whether reducing our free float limits would increase the appeal of a stock market listing to entrepreneurs.

> "There is no doubt that there is real transformative potential to be found at the point at which financial services and technology collide. We see it. We are keen to help the UK become a global trail blazer in this area. Because it absolutely can."

As the Chancellor considers the long and arduous job of getting the country back on its feet, he now has the opportunity to show he is on the side of everyone in this country who wants to create jobs and wealth. To recharge the economy with the acceleration of a Tesla Model S.

He can best do this by building a fintech business environment that stirs people with a passion to create a business and see it grow. The start-ups, the go-getters, the risk-takers. Those with belief in their own talents, and boundless energy (of 0-60 in less than 2 seconds).

And the best way the fintech sector can help is by being allowed to grow, free from the burdens of excessive red tape and complex taxation.

Energised by a new visa scheme that encourages access to global talent for fintech start-ups.

Energised by research and development tax credits.

Energised by the entrepreneurial yeast of nationwide fintech clusters.

I am an optimist, and believe our best days are in front of us. We have advanced from the steam engine to the age of science and mass production to the rise of digital technology. Revolutions are catalysts for fundamental change. A struggle between the future and the past. A fintech future is already here, how we embrace it will define our history. How do you want it to be written?

HARRINGTON STARR
Your Success. Our Business

AN EVOLUTION TOWARDS THE TRUE STRATEGIC PARTNERSHIP

Keith O'Brien, Chief Product Officer,LPA

The banking and financial services industry currently faces the dichotomy of improving their value proposition at a time when margin pressures mean limited investment is available for new projects. Legacy technologies can further hamper this. The market needs a model to integrate applications and components to augment an infrastructure to support an increasingly dynamic business model.

We can look to other industries for proof that the strategic vendor relationships model can really work. Shining examples are the automotive and aerospace industries. Both have at their pinnacle, globally known brands. However, behind these are several tiers of critical partners, some of whom produce small components that go to another vendor to incorporate into a sub-assembly that then in turn goes to final manufacture. This has allowed those industries to focus on their core business of selling cars or aircraft allowing a cascade of quality, innovation etc. to a supplier partner network.

A similar evolutionary trajectory can been seen in the banking industry. In this article, we draw some examples from a recent collaboration between LPA and a major global investment bank.

Cooperation, collaboration and trust are key

This particular project started from an existing LPA client seeing how the LPA Capmatix platform could be leveraged for post-trade processes. The bank initiated joint project to combine their market and post-trade process expertise with LPA's development capacity and understanding of financial technology. This emerged organically from the bank's operations team rather than coming from strategy or IT planning.

The objective of the project was not to build a custom solution but rather a fit-for-purpose product, which would be adopted by the wider industry fitting into a bank's architecture as a complementary solution to replace individual modules or as a new asset-agnostic central utility platform replacing existing silos.

The result is an extension of LPA Group's Capmatix product, a one-stop-shop solution with highly configurable modules that is used for digitizing processes. The result works across pre-sales, through trading and on to post-trade processing. Designed to improve 'Straight Through Processing' (STP) in the post-trade area, Capmatix allows users to introduce additional control measures while improving the bank's key performance indicators relating to service level agreements and the level of straight through processing.

This partnership shows that vendors and banks can team up to design, build, implement and subsequently run projects with both internal buy in and the ability to be useful for both parties afterwards. A single project can act as a proof of concept for skeptics and other potential buyers inside an organization, demonstrating how an outside company can coordinate and organize multiple parts of a large company towards a common goal.

Achieving tangible results
Post-trade systems, like many parts of a bank's infrastructure do not directly provide measurable revenue but are mission-critical functions. For post-trade, this means the ability to efficiently and quickly process different asset classes such as derivatives.

Therefore, measuring the impact of the system will not be as simple as measuring the new customers that sign up because of this new functionality. People do not decide where to trade based on their bank's post-trade system provider.

THE POST-PROJECT BENEFITS WERE AS FOLLOWS;
Reduced cost
The bank's existing infrastructure required licensing payments to multiple software providers. This integrated system jointly developed with LPA removed that need, saving the firm a significant amount of money over time.

> "For the bank, this project is a test for broader transformation in other areas."

Improved efficiency
Greater efficiencies and agility enabled employees to focus on client facing activities or other more value-adding duties also reducing operational risk.

Better client service
The new streamlined process has; less risk of error, less manual processes most of which are now automated, and consolidated overlapping IT systems. This meant faster processing and fewer exceptions. Internal and external clients noticed this!

Faster time to market
Creating and deploying a new common, low code infrastructure, the bank is reducing the time to bring products and services to market boosting innovation in new features and products.

Building upon success
For the bank, this project is a test for broader transformation in other areas. It is relatively simple and cost effective to add support for additional functions or asset classes, multiplying the return on investment. It also supports customer service, regulatory compliance and security enhancements. This is a model for organisational agility and change that can fit inside shrunken research and development budgets.

Conclusion: Embracing the new approach
Banks are increasingly realising that strategic, trusted vendors will have their best interests at heart, supporting a more agile, symbiotic future.

This Global Financial Crisis and subsequent waves of regulatory requirements have compressed margins; adaptability is therefore a key factor for survival. Innovation through partnership represents a promising way to continue to meet the oncoming headwinds. Banks need their software technology to work harder. This means going beyond data collection towards using cloud-based artificial intelligence to detect patterns, produce reporting KPIs and dashboards and guide continual improvements that may have been previously undetectable.

In the case of this specific project, the main driver for implementing the new platform was indeed to extend agility and automation to include its post-trade activities. Interestingly, the perspective of the bank was not to tie LPA Group in an exclusive arrangement for the software, but to encourage adoption across the industry.

Foresight guided that a widely adopted solution would be well supported and continue to evolve, and thus outweighed any potential competitive advantage from being the sole platform user. To survive and prosper, banks need to head into their planning cycles with similar agile way to approach product development. Moreover, that means finding an external partner who can bring the ability to combine financial domain expertise with software development skill and apply that to create a long-term beneficial solution.

4 AML PREDICTIONS AND TRENDS THAT WILL SHAPE FINTECH IN 2021

Guðmundur Kristjánsson, Founder and CEO, Lucinity

It's no coincidence that an increase in anti-money laundering (AML) fines over the past year directly correlates with the increasing number of people using digital forms of banking in their everyday lives. In fact, AML fines issued globally during 2020 surged by 26%, with 75% of consumers around the world now employing fintech services for money transfers, payments, and management.

With more people using digital banking, there are more opportunities for money launderers to slip through the regulatory and compliance cracks unnoticed, and the uncertainty and pressures caused by the COVID-19 pandemic is only compounding the issue. Here, we look at four critical trends and predictions that will shape the AML landscape in 2021 and beyond.

1. Risk-based will replace rule-based approach to AML detection
Increasingly, banks and financial institutions are shifting away from antiquated rule-based methods in favour of a contextual, risk-based approach, powered by AI and machine learning tools.

Instead of determining suspicion based on the size of a transaction or a combination of other static variables, a risk-based approach uses AI to combine countless contextual variables in real time, which ultimately forms an incredibly accurate picture of each customer and the risk they potentially pose.

Unburdened by arbitrary rules and requirement, these sophisticated machine learning systems are trained to recognise suspicious patterns, often spotting illicit activities that a human would likely miss. But the magic ultimately happens when you augment AI with human ingenuity and inference skills through a feedback driven relationship.

2. Customer due diligence will become more dynamic
Continuous risk-rating represents a cornerstone for compliance departments in 2021, allowing for real-time risk categorisation of customers, a fundamental aspect

of achieving a truly risk-based approach to AML detection.

In traditional KYC processes, customers typically receive an initial screening when they sign up, but are generally only re-analysed on an annual basis (perhaps even more rarely). This gives money launderers a significant timeframe to transform from legitimate customer into nefarious criminal, and banks are none the wiser.

Encouragingly, technology is evolving rapidly, allowing banks to carry out dynamic due diligence, continuously. These automated systems measure a customer's risk against numerous variables, before categorising them based on that potential risk, all in real time. This makes it extremely tricky for ML criminals to change their behaviour without setting off alarms.

3. AI and machine learning will become increasingly human

Until recently, only a select few – such as data scientists – were able to make sense of the complex data produced by machine learning and AI. But now, as this technology becomes increasingly sophisticated and accessible, more people (across numerous roles, functions, and departments) are able to decipher machine-produced insights.

As machine learning and AI become more mainstream, and translated into actionable insights, we will invariably begin to trust its output. The more we trust its output, the more effort we dedicate to its input. In financial crime terms, this means banks can feed human insights and AML learnings directly into machine learning systems, including the actual human rationale behind a suspicious flag. The more human-led data and insight we impart a machine, the more human and contextual its analysis will become as a result.

This cycle is self-fulfilling – as we continue to see machine learning systems produce more relatable, digestible, and accurate results, our trust in AI will build. In turn, we will pour even more human-led insight to feed its algorithms, and the machine learning model will learn from this rich, contextual data to create even more accurate results.

> "As machine learning and AI become more mainstream, and translated into actionable insights, we will invariably begin to trust its output. The more we trust its output, the more effort we dedicate to its input."

4. Collaboration will expose the full ML journey

Historically, banks have kept their cards close to their chests when it comes to sharing details around money laundering, operating under the provison that revealing information could expose them to public criticism, or even more ML activity.

And, while discussion around increased collaboration in the financial world has been gathering pace over the past few years, the COVID-19 pandemic has thrown it into even sharper context. 2020 serves as proof of what we can achieve if we come together and work towards a common goal, the vaccine being a prime example.

In AML terms, this means collaboration, accountability, and visibility between every single unwitting party in a money laundering journey – from bank to regulator, government to private company, and broker lender to UBO (Ultimate Beneficial Owner).

After all, the criminal purpose of money laundering is to create a tangled, confusing maze of transactions that's essentially impossible to track. Transactions will start in one continent, travel around the globe, before finishing in another, with almost no traceable link to its origin. Only when all affected parties come together to provide a full, unfiltered picture of what the money laundering journey looks like, can we put a stop to its meteoric rise.

MahiFX™

David Cooney, Co-Founder of MahiFX

HARNESSING THE POWER OF DATA

The last couple of decades has seen significant changes to the e-FX market landscape, and many market participants are struggling to make money in the same way they once used to. From technology advancements to developments in data and automation, the industry has transformed in almost every possible way:

- Spreads are tighter
- There has been a surge in aggregation and liquidity providers, meaning it's hard to know which is the correct rate in a crowded space
- More participants recycling pricing means increased latency
- Conditions are more volatile
- Coordinated trading is occurring more frequently, and is designed to do serious damage
- The development of technology has increased to a point where it is no longer fighting the right problems - you may be trading with machines that are programmed to find vulnerabilities and take money from you

As technology continues to rapidly evolve and the industry matures, the nature of trading shifts, making it increasingly difficult for e-FX businesses to make and retain profit. This presents a lot of uncertainty, however one thing we are able to be sure of is that it is crucial to have a clear understanding of exactly why this is happening - and having this knowledge enables us to fix it.

MahiFX, led by Co-founders David and Susan Cooney, is a leading eFX technology firm with a strong background in trading. Our technology is built from real world trading experience, running the pricing and risk management for several of the world's largest banks and brokers. Our product, MFX Compass, is a highly configurable pricing and risk management system, allowing clients to manage their flow in intricate detail, improve yields and lower risk. Clients can:

- Access highly intelligent automated allocation of flow to the correct books: broker damaging flow, manage B book flow efficiently, and create a C book for monetisable flow.
- Utilise highly tuned algorithmic hedgers and exit risk efficiently based on a range of parameters and risk preferences.
- Form their own bespoke pricing models with a vast range of built-in protection.
- Take advantage of advanced predictive signalling technology for both hedging and price formation.
- Practise solutions and test outcomes on our trading simulation technology.

The extensive features that MFX Compass provides bring a number of benefits to our clients, including increased profit by extracting maximum PnL from their portfolio, protecting their business against attacks, latency or market moves, optimal hedging opportunities in the most cost-effective way, a strong competitive edge with access to a plethora of tools that put their business ahead of the game, and more.

At MahiFX, we've always prided ourselves on running a client-focused business, partnering with them and consulting to ensure our technology is able to solve their problems and assist with future goals. Our technology is built with a firm background in trading, however we understand that not everybody shares this experience. Therefore, we work hard to impart our knowledge and really transform their business, going above and beyond to deliver service and products that meet their requirements and achieve success. We truly believe in the power of data and itsuse in decision making - it plays an extremely important role throughout our entire company and we are so grateful to have the opportunity to educate our clients on the importance of its use. Above all else, we believe in having and maintaining a great company culture and a dedicated, hardworking team and this is what we are most proud of. We work with great people and great clients!

THE SYMBIOTIC RELATIONSHIP BETWEEN COMPLIANCE AND TECH

Mark Ellis, Business Development Manager, MAP FinTech

What are the plans and solutions that your business brings that can innovate and add value in the year ahead?
2020 was a challenging and demanding year for the RegTech industry. Regulatory reporting, in particular, was hard hit. The COVID-19 pandemic, CME Group announcing its departure from Asia and Europe as a TR/ARM, the Deutsche Borse's withdrawal from the regulatory reporting market through the sale of Regulatory Reporting Hub (RRH) and Brexit were just a few of the noteworthy events that impacted the regulatory reporting industry.

Working hard and against the clock for months, MAP FinTech has managed to cope with all of these extraordinary challenges, while taking our business to the next level with the deployment of several new and innovative RegTech solutions.

Unique products such as Trade Surveillance (MAR), ASIC Reporting, DAC6 Reporting, SFTR Reporting, AML Transaction Monitoring and Screening, and eKYC have allowed MAP FinTech to expand into other regions, helping a multitude of global clients simplify and resolve their regulatory challenges.

As a follow-up to what was an outstanding year for MAP FinTech, we resolve to continue delivering exceptional, innovative and one-of-a-kind solutions to our clients and partner firms. This includes our best-in-class regulatory reporting technology services and tools that allow those companies working with us to achieve best results.

We have also extended our list of integrations with international TRs, ARMs and National Competent Authorities (NCAs). These include working with UnaVista (LSE) for EMIR Reporting, DTCC Data Repository (Singapore) Pte Ltd (DDRS) for ASIC Reporting, DDRL and DDRIE for SFTR Reporting, and Euronext Paris SA (ARM), as well as multiple NCAs. We plan to broaden these integrations well into 2021, helping our clients continue to meet their regulatory reporting obligations in a timely and efficient way. Being integrated with various TRs and ARMs simplifies a client's transition when a TR or ARM ceases to provide the required services the company originally signed up for.

> "2020 was a challenging and demanding year for the RegTech industry. Regulatory reporting, in particular, was hard hit."

> "One of the biggest trends we expect for 2021 will be the continued development of artificial intelligence (AI) in the RegTech field. Even though at its early stages, AI research is expected to solve many problems."

Moreover, it is very important for us to maintain and improve the quality of our support services, which have proven to stand out above the norm. New client support technologies will be introduced to improve the efficiency and quality of both initial onboarding and day-to-day support, two of the most important processes in RegTech projects.

One of the biggest trends we expect for 2021 will be the continued development of artificial intelligence (AI) in the RegTech field. Even though at its early stages, AI research is expected to solve many problems, especially in the field of big data consolidation and identification for regulatory reporting purposes. In addition, AI will significantly enhance the general monitoring of and adaptation to continuous regulatory changes. At MAP FinTech, we are actively researching AI and how it may help us overcome the limitations that currently exist with the available technologies.

Considering the high levels of regulation in the financial services sector, it makes perfect sense for firms to rely on efficient and cost-effective technologies to manage and fulfil the multiple regulatory compliance functions required to run their businesses and remain compliant. With this trend gaining momentum, it's imperative for firms to embrace RegTech and fully understand how these technologies can impact their business moving forward. It's not enough to simply react to the compliance requirements imposed by new regulations as they are brought into line; firms must prepare ahead of time to tackle the rules that will be rolled out during the next five years and beyond. Consequently, adopting a solid RegTech framework to effectively comply with all financial regulations could also help boost a firm's profitability and overall efficiency.

MAP FinTech is not just a technology company that develops software to help its clients report. At the core of our offerings lies compliance. MAP FinTech provides quality assurance so that reporting obligations are correctly covered in terms of data quality. If the need arises, we can directly support businesses before any NCA without needing external third-party advisory or assistance. Our products have been repeatedly tested and passed several rigorous reviews by EU regulatory authorities, providing full transparency for both clients and EU NCAs. Moreover, we offer financial institutions the unique facility to comply with their reporting obligations before the regulatory authorities, carry out audit trails, and conduct their own reconciliations.

MAP FinTech has managed to successfully and innovatively combine the compliance and technology functions with both of its teams working in close unison. This allows the company to be flexible, efficient and effective in supporting the many new, demanding and dynamic requirements of the global RegTech world. The team's combined expertise underpins the company's success in providing targeted solutions to its clients and addressing their reporting needs across a diverse regulatory landscape. Our flexibility to build and support completely customised solutions is what gives us the edge. Agility is the key. Personal care for each customer, commitment and innovation is the customer service model the company uses and will continue to use the year ahead.

Joakim Sjöblom
CEO, Minna Technologies

ARE WE READY FOR ANOTHER PERFECT STORM?

The 'perfect storm is defined as a situation created by a powerful concurrence of factors. Enter the digitally-enabled consumer who has subscriptions infiltrating all of their purchasing behaviours. Cashflows are volatile due to the uncertainty of COVID and cutting costs of 'low-hanging fruit' is a shortcut to financial wellness. This draped against a landscape of open-banking with the promise to empower banks to give consumers a more holistic snapshot of their finances.

The Subscription Economy, changing the behaviours.
The first element of change has been the global, seismic shift to a subscription economy. With companies offering recurring payment solutions rather than one-time payments to their customers.

Consumers, who were used to having a subscription plan for a phone or energy bill now see subscriptions infiltrating almost every line of their consumption habits. They can subscribe to anything, and everything -- from Netflix to Spotify, razor blades to groceries and even clothes.

Today the average European is spending €334 a month on 11 subscriptions, which is predicted to increase to €510 a month on 17 subscriptions by 2025*.

From a cash flow perspective, it turns out consumers like the flexibility, particularly in light of current market volatility and belt-tightening which COVID has spurred on. Many have found the benefit of not paying up-front costs, and instead prefer the option of spreading their payments out over time. Subscriptions give consumers more control to adjust, cancel, upgrade and downgrade their engagement with products based on their seasonal changing needs, rather than locking in their cash upfront.

For companies, the top-line growth underpinned by recurring subscription revenues have been significant. The subscription model allows them to develop a long-term relationship with the client, and thus create recurring monetisation channels.

Thus, a new expectation has been set; consumers expect the flexibility in their payments and companies are enjoying the recurring revenue streams. However, to support this new transaction lifecycle, banks and payment services must also adjust.

The shift of Banking in an Open Banking Era
Enter the banking systems. The banking landscape is already experiencing a paradigm shift, brought on by regulations such as PSD2 and open banking and exacerbated by the rise of challenger banks and fintech competition. Banks have been forced to disrupt themselves and evolve their own business models while retaining their prize asset - the customer.

> "For companies, the top-line growth underpinned by recurring subscription revenues have been significant. The subscription model allows them to develop a long-term relationship with the client, and thus create recurring monetisation channels."

This means keeping up with digital-first consumer behaviours, including the expectation brought on by the subscription economy; consumers want banks to provide secure, automated solutions to manage all of their financials, including subscriptions. Next gen personal finance demands that banks take action, not just provide insights.

In the existing equation, retail banks run the risk of becoming something akin to infrastructure providers, burdened by the regulatory heavy lifting while digital-first platforms such as GooglePlex, Amazon or Klarna reap the benefits of the retail relationship with the customer.

And yet, banks are the trusted platform, unifying all of the customers transactions. What if your bank could actually manage the 'hassle-factor' of adjusting your subscriptions - identifying the 'lazy spend' that you didn't have sight to, adjust up or down the services you love or no longer use? In other words, what if banks took a 360-view of your subscription life-cycle. They already sit at the centre of your transactions and with open banking providing them sight to more of your transactions, they are perfectly placed to help you manage your subscription portfolio. What if your bank could support the next gen in personal finance through action, not just insights?

Major banks in UK, Sweden, Norway, Denmark and Finland are working with Minna Technologies to provide its subscription management solutions within their own native banking environments. Minna improves the procedure for banks by simplifying the process, as well as providing an in-demand digital product that consumers are starting to expect from their financial institutions - another piece of armour to help ward off the challenger banks.

The Future
As the trend takes shape, we also see the European banking sector gaining momentum, with even more large banks stepping in and offering the ecosystem of subscription management to their customers.

Our goal is to empower banks, enabling them to have a full 360 solutions for their customers. Imagine your bank as a marketplace where you can optimise and action your services- a clear example of the liberating services Open Banking promised us. Illustrated through our strong partnership with a major global payment network as well as through our work directly with providers in the telecom, energy, entertainment and streaming services space.

The perfect storm is here.

> "Major banks in UK, Sweden, Norway, Denmark and Finland are working with Minna Technologies to provide its subscription management solutions within their own native banking environments."

PERSPECTIVE AND POTENTIAL IN TECH

Avtar Singh Sehra
Chief Product Architect, Nivaura

Nivaura. We're about powering capital markets workflows by digitising, automating and optimising our clients workflows.

Nivaura. Our name reflects our purpose: powering & simplifying processes to allow the energy of transactions to flow unfettered through financial channels. Nivaura. *Niv* means *flow* in Sanskrit. *Aura* refers to *energy*.

The idea behind Nivaura came from a dawning realization: Founder Avtar Singh worked in financial markets. He experienced first-hand how the processes supporting bond issuance were cumbersome. Inefficient. Predicated on time-consuming documentation and manual work. Which leads to risk and unnecessary cost.

Why couldn't capital markets be digitised and made faster with less risk at lower cost? Singh, with a background in quantitative computational engineering, envisioned an Amazon-like "one click" solution for creating, editing and transferring the documentation necessary for bond issuance. Repeated tasks could be automated. And the approach could be copied for other areas of capital markets.

With this insight, Singh founded Nivaura in 2016. Nivaura brings industry expertise and a deep understanding of the latest digital and automation technologies to strip away complexities to simplify capital markets. And in the bargain, it is transforming the sector.

Today, our technology is powering workflows in Europe, Asia and soon the USA!

Values, Mission, Culture
Nivaurans are great human beings with our principles at the forefront in every conversation, decision and action.

Whether we're exploring ideas to democratise capital markets or deciding on the best approach to solving the unsolvable, our principles guide us. We set ourselves stretch targets and are always striving to achieve bigger and better results .

From ***Think like a partner, Act like an owner to Play as a team, Win as a team***, our principles are at the heart of our organisation and reinforces our ethos as a people company that happens to do tech.

Why diversity, equity and inclusion is important to you
There is irrefutable evidence that diversity, equity and inclusion drive positive business value, from increasing team innovation value by 20%, to being a key selection factor for future Nivaurians.Deloitte explains the value.

Graphic source here

The case for an inclusive culture
Organisations with inclusive cultures are:

2x as likely to meet or exceed financial targets	**3x** as likely to be high-performing	**6x** more likely to be innovative and agile	**8x** more likely to achieve better business outcomes

"Whether we're exploring ideas to democratise capital markets or deciding on the best approach to solving the unsolvable, our principles guide us. We set ourselves stretch targets and are always striving to achieve bigger and better results ."

For Nivaura, DE&I is about cognitive & experiential diversity that represents our current and future client base. We drive better results through debate, experimentation, sharing knowledge & experiences which can only be improved by creating greater cognitive and experiential diversity amongst us. At the same time, we drive deeper trust and commitment from and to each other as each Nivaurian's unique need, perspective and potential is encouraged and valued.

And yes, we also happen to capture the statistical benefits along the way!

Challenges you face and overcome
1. scaling while maintaining our startup entrepreneurial spirit which is super challenging (and some may argue diametrically opposite) with mature institutional investors

2. Great applicable technology which is too early for the market Nivaura was at the forefront of bleeding edge blockchain technology which was proven to work. However at the time the industry wasn't ready for adoption as it still hadn't digitised or automated, So we pivoted the company to first focus on digitisation, digitalisation and automation.

3. GLML Adoption Having a great idea and product is not enough. Providing an open source code for all to use still requires time and energy to drive industry wide adoption. We are working hard to push GLML adoption across the industry as a whole.

Current & future trends in the marketplace
The year 2020 saw many technology trends accelerated due to the global pandemic. Now that we've seen many organisations adopt digitised processes, this momentum shows no sign of slowing. Three predictions that I think gained momentum in 2020, but will come to fruition in 2021,

1. Adoption of low-code tools
2. Digitalisation of capital markets workflows with Artificial Intelligence

Adoption of low-code tools
The low-code / no-code movement has been gradually gaining momentum behind the scenes for the past couple of years. 2020 was the year we saw it really step into the spotlight, when demand for digital products dramatically accelerated due to COVID-19. Organisations that already utilised low-code platforms found themselves in a far better position to efficiently digitalise and automate service offerings and operations than competitors who had not yet embraced low-code. Indeed, Forrester has predicted that by the end of 2021, 75% of application development will use low-code platforms, up from 44% in 2020.

What we'll see in 2021 is a wave of new entrepreneurs. By this, I mean we'll see founders who are not developers creating their own applications. Low-code platforms make services and applications available, so that any eager entrepreneur can put together services to create an entirely new offering.

There are three main reasons why tech-savvy entrepreneurs will leverage this trend.
1. Firstly, low-code tools are like building blocks, they are easy to put together to create applications. This also means that parts can be added or taken away with the click of a button if necessary. Compared to code, where parts would need to be modified or completely rewritten in the event of proposed changes to the end product, this is far more efficient.

2. Secondly, because of their building block nature it means that entrepreneurs do not have to become specialist programmers to create their own products and apps. This also removes restrictions on developers who are skilled in some coding languages but less so in others.

3. Finally, they also present the opportunity to automate certain tasks that are time consuming and repetitive. Some organisations have already begun to tackle this using machine learning and RPA.

Digitalisation of capital markets workflows

Separately, while many sectors have embraced digitisation, financial services in particular, primary capital markets workflows have remained largely unchanged. They are the final frontier for digital evolution in the financial industry. In 2021, this will change. Many projects are already underway, developing artificial intelligence implementations and use cases for dramatically reducing the time and human capital required for activities such as bond issuance, as well as the risk level associated with human intervention in transactions.

Today, primary capital markets workflows generally remain over complicated, inefficient and human resource intensive. Developing AI tools to tackle this will have huge benefits for the capital markets sector, not only enabling the generation of deeper insights and delivering increased efficiency to a multitude of tasks, but ultimately democratising access to liquidity.

This extends to many other sectors too, including healthcare - where AI will be used to assist with diagnostics and procedures, sales - through AI recommendations and chatbots, and entertainment - gaming uses AI to create human-like challenging opponents that dynamically adjust to the environment and the user skill level.

WHERE THE DUST NEVER SETTLES

Stefan Merz
Chief Strategy & Growth Officer, PPRO

2020 was a year of momentous change for the payments industry. Previously emerging trends saw a massive acceleration as a result of the pandemic. Cash, for instance, waned even further last year amidst rumours that handling cash could spread infection. In March, ATM withdrawals in the UK plummeted by 60%, leading to predictions that cash payments will fall to just 9% of all transactions by 2028.

The pandemic – while undoubtedly awful – has been rocket fuel for digital transformation, providing an opportunity for the payments industry to innovate. Online payments via bank transfer have continued to proliferate, whilst 'buy now pay later' (BNPL) schemes have been named as the fastest growing online payment method for the UK and worldwide.

So, after a year of such rapid transformation, what can we expect to see this year? And how will permanently altered consumer behaviours shape online payment preferences?

Buy now pay later (BNPL) will be the new payment method of choice

It is safe to say local and alternative payment methods – any payment method other than credit or debit cards – have seen huge growth over the last couple of years. These local payment methods (LPMs) continue to play a key role in accelerating cash substitution, particularly in developing countries.

According to Paysafe's LiT research, 56% of global consumers used a new local payment method in the first month of the pandemic.

Interest-free 'buy now pay later' (BNPL) concepts such as Klarna and ClearPay are leading the charge. In fact, Klarna reported a 43% jump in the value of transactions in the first nine months of 2020.

Research from Kaleido predicts that BNPL value will reach over 12% of total global e-commerce spend on physical goods by 2025. What's more, Europe will be responsible for $347 billion of e-commerce spend via BNPL mechanisms by 2025, representing 30% of total e-commerce spend in that year.

Ongoing furlough measures and job losses have seen consumers face unprecedented financial strain this year, resulting in a reliance on 'pay later' schemes over traditional payment methods. With the economy not expected to recover to pre-COVID-19 levels for some time, this is a trend we see continuing into 2021. As such, this is certainly a payment method online merchants need to offer. Now.

Staying competitive in an increasingly digital age will be harder

The 'quickening' effect, as coined by McKinsey, describes a 10-year shift in e-commerce experienced in just 90 days. During the month of June 2020, amidst the height of the strictest lockdowns for many countries, e-commerce sales grew 34% year-on-year – the highest growth rate reported since March 2008. And consumers were not turning to their trusted brands during this critical period. Disruptions in brand loyalty have created a wealth of opportunities for businesses, pushing them to take their operations online and across borders. Facebook even launched its own shopping feature to enable growing businesses to sell to customers.

Across Europe's three largest markets (France, Germany and the UK), up to 80% of shoppers are now making at least half of their purchases online. What's more, research from Visa reveals 74% of UK consumers think they will continue to prefer online shopping even after the lockdown restrictions start to lift.

In 2021, it won't be adequate for merchants to only support card transactions online.

According to PPRO's own research, 44% of UK consumers will abandon their baskets if their payment method is not available at checkout. We expect this demand for payment choice to increase, putting pressure on retailers to expand current offerings.

Seamless payments have to meet stricter security standards

As digital payments head towards a global tipping point, the need for greater regulation and security will only continue to grow. For Europe, PSD2 has been a topic of discussion for some time now. And, despite being delayed to allow adequate preparation time following COVID, the new September 2021 deadline will come around soon enough.

For countries outside of Europe, two-factor authentication is also growing in popularity. In 2019, Australia released the Card-Not-Present (CNP) Fraud Mitigation Framework, requiring Strong Customer Authentication (SCA) when a merchant's fraud rate is above the recommended rate for two consecutive quarters. India requires two-factor authentication for all domestic debit and credit card transactions over Rs 2000.

This year and beyond, payment providers and merchants must collaborate to ensure they're prepared to adapt digital shops to these new requirements, whilst

> "Ongoing furlough measures and job losses have seen consumers face unprecedented financial strain this year, resulting in a reliance on 'pay later' schemes over traditional payment methods. With the economy not expected to recover to pre-COVID-19 levels for some time, this is a trend we see continuing into 2021."

also ensuring the payments process is completely seamless for the customer.

This will be the year for action – ensuring customers are adequately protected in an increasingly cyber world.

Payments should prepare for hypergrowth

Rather than an evolution, the pandemic has been a revolution. It's turbocharged digital payments and changed customer expectations and behaviours overnight.

More and more global customers are now online, looking for products or services that suit their specific needs. Merchants could reach untapped cross-border markets by offering the right mix of goods, user experience (UX), local payment methods and delivery options.

With over 500 significant local payment methods across the globe, each country will have different payment preferences. To be able to scale up and succeed in the new normal, merchants must work with payment service providers to activate as many payment methods as possible at the checkout page.

2020 saw a huge change in relation to consumer payment preferences, but 2021 is all about addressing that change and seizing the opportunities that have emerged. Merchants must get ready now, or else, risk losing out to the competition.

While 2021 will certainly be another challenging year for the economy, the future for local payment methods (and savvy retailers who offer them) will be very bright.

OPTIMISING FOR PERFORMANCE

Leigh Walters
COO, TRG Screen

In a recent interview, I was asked about the ever-growing landscape of data sources and discussed the importance of having visibility over existing data subscriptions. If you have a clear picture of spend and usage across the business, not only can you better manage your market data spend but you will actually optimize it, while ensuring that your usage is compliant with vendor agreements. I was glad to share my thoughts on the topic.

Keeping tabs on costs as the market datascape expands

Stocks, bonds or foreign exchange: which is a financial institution's most important asset? Many would argue it's none of these, with each outranked by the torrents of market data without which no financial services firm can price, buy or sell an instrument, initiate or complete a trade.

The volume and value of this vital digital stream is vast and growing. In 2019, the most recent year for which figures are available, the financial industry spent just less than $32 billion on data and information, a record and up nearly 6 percent on the year before, according to Burton-Taylor International Consulting.

This makes data among the weightiest costs faced by financial firms, analysts say, with the biggest banks spending upwards of $500 million a year apiece on subscriptions to feeds from stock exchanges, specialist data providers and credit-rating agencies, among others.

Add to that so-called "alt" (for alternative) data, embraced by hedge funds in the pandemic, including satellite images of traffic jams in Beijing, retail footfall metrics and social media posts, and the picture becomes yet more complex.

Looking for an edge

"Everyone is looking for that edge," said Leigh Walters, Chief Operating Officer of New York-based enterprise subscription management company TRG Screen, whose customers range from huge global banks to small hedge funds. "The variety of sources grows by the day."

A driver of growth and complexity in the market is the need for automation to fuel algorithmic or high-speed trading and state-of-the art analytics. This, in turn, has pushed data costs higher, drawing complaints from dealer-banks and other financial firms.

With thousands of banking jobs under threat in the pandemic, market data teams are, not for the first time, being told to seek savings.

However, when major financial institutions are paying for subscriptions to hundreds of data feeds from dozens of vendors, industry insiders say it has not always been easy to get an accurate picture of the data spend and where savings can be made.

"You've got to choose very carefully what you switch on or switch off," said TRG Screen's Walters. "It's not just cost cutting," he said, adding it was vital to optimize access to data so that different parts of the users' business had the information they needed to consistently perform.

But is all the data flooding in by the second really needed or is some redundant? Does the multiplicity of feeds lead to overlaps and duplicated data requests? Crucially, is it getting to the people that really need it, and are some who do need it missing out?

Driving blind

"If you don't have that visibility, you're driving blind," Walters said, adding that especially smaller firms may not even realise they have a problem with data costs.

It's not just about costs. Like many other parts of the subscription economy – think Netflix or everyday software on a laptop – market data subscriptions are licensed, with restrictions on who or how many people can use them. Assuring compliance with licence terms is a significant risk that needs to be managed.

Market leader TRG Screen, with a 20-year history of managing complex high-value enterprise subscriptions, is upgrading its existing data spend and usage management products in a new platform called Optimize, which will be released in 2021.

Optimize will manage all aspects of subscriptions, including the unglamorous but crucial processes such as renewals and paying the bills.

Getting the best out of multiple subscriptions has up to now often meant hard-pressed managers hacking through lengthy reports or time spent in front of a spreadsheet.

Actionable insights

No longer. At the pinnacle of the new platform is Optimize Insights, which, using artificial intelligence (AI), delivers to the data manager's desktop the "whole story" of a firm's data landscape and actionable suggestions for savings and usage optimization.

TRG Screen says clients are often surprised by the improved return on investment (ROI) that visibility of spend and usage can bring, with potential savings on subscription costs of 10-30 percent in the first year.

That means a mega-bank currently spending $500 million on data subscriptions could save between $50 million and $150 million while smaller firms spending $50 million could be looking at economies of $5 million to $15 million.

With the market datascape set to grow in size and complexity, optimizing data cost and usage will only become more vital.

For further information visit: https://www.trgscreen.com/optimize-enterprise-subscription-management/market-data-management-financial-markets

HARRINGTON STARR
Your Success. Our Business

BE PART OF THE ECONOMIC RECOVERY ENGINE

Zitah McMillan
CEO and Co-Founder, Predictive Black

2021 follows a year like no other in our shared memory. Whilst 2020 may have seen a large part of the world locked down, that gave rise to the opportunity to create a different landscape for what technology firms can do to support economic recovery.

If we look back briefly to 2008, the financial crisis hit small businesses much harder than large firms, fewer firms were created in the immediate aftermath and about 1.8million small businesses went under between 2008 and 2010. Generally, small businesses are the job creators but in times of economic crisis a large number of those jobs are lost. Small companies are hit hard if there's a delay in the payment supply chain or if a large client goes bust.

The recovery took time, and there's no reason to doubt that it will take time as we head through 2021 even with the amount of support that's been available. Why is this important? As tech firms a lot of us are small businesses, we're part of the economic recovery engine – we can help other firms to thrive and come out of these challenging times stronger and ready to grow.

The landscape has changed significantly in the last 12 months and one of the trends has been a dramatic adoption of new ways of working, however this hasn't necessarily been true of all parts of a business. It's been driven by necessity rather than organic demand.

A lot of finance functions in businesses have been slow to bring in new technology. It's understandable. Under pressure most finance directors will double down on working with what they have and often that's a spreadsheet and some people to enter the data, crunch the numbers and produce rolling forecasts. A new line item on the P&L for finance software won't be high on the list of discretionary spend.

Yet, taking that step away from the risky manual process and investing in cloud based software is exactly what we believe companies need to do to help them get back on the road to recovery. Taking the time to think about shaping the business for the uptick of recovery and bring on the tools necessary to get them there. We believe that software that has the mindset of 'finance as a service' in terms of what it does to support finance teams is what the future holds.

The introduction of new ways to access data via Open Banking standards for example, has given rise to huge amounts of creativity in financial services. Initially a lot of the creativity focused on consumer rather than B2B services, that's changing fast.

There are a lot of fintech firms now developing services specifically for the B2B market, the established large banking institutions often have their own offshoots trying to tap into a market that for a long time they ignored. This helps to prove that there is a market generally. Where we see the clearest benefit for firms is in software that solves a clear problem.

From our months of discussions with finance directors and their teams, what matters most to companies trying to find a way forward is that they know at a glance what their cash position is and that they can plan for any number of scenarios and what ifs. That's what we've developed and in a way that means companies can be up and running fast, in a cost effective way. Our finance as a service software transforms the speed and accuracy of forecasting, it also provides comfort to finance directors concerned about the risk in their processes.

> "Generally, small businesses are the job creators but in times of economic crisis a large number of those jobs are lost."

> "From our months of discussions with finance directors and their teams, what matters most to companies trying to find a way forward is that they know at a glance what their cash position is and that they can plan for any number of scenarios and what ifs."

In particular we believe the area of treasury management and FP&A for medium size firms can significantly benefit from software that mitigates human error risk, reduces manual processing and gives them accurate data any time they need it.

That's what our cash management and forecasting software does. It takes all the hassle out of managing cash and producing forecasts, we have created sector based machine learning forecasts that connect to clients financial data for immediate, up to date and accurate forecasts of cash, costs and revenue. As we're benchmarking clients to peers in their sector, it has been referred to as the end of 'wishful thinking' when it comes to simulating a realistic forecast.

Looking ahead, there will inevitably be a large number of firms for whom the pull up and out of the crisis now will take longer than they would like, this puts their cash flow under even more pressure. A clear, comprehensive and accurate software tool such as ours that enables them to model, simulate and stress test scenarios is invaluable. Having the confidence in their data, the ability to integrate multiple feeds with minimal effort and either replace or complement their existing analytic capabilities is just the start.

We are firm believers in listening to what companies say they need to help them back on the road to recovery, so our product road map is already brimming with 'must have's' for the future.

So whilst 2021 may follow a year like no other, it also has the potential to drive greater innovation and creativity in the area of finance as a service which we are delighted to be a part of.

PROVIDING SOLUTIONS THAT GROW AND ADAPT

Stéphane Tyč
Co-Founder, Quincy Data and McKay Brothers

When my partner Bob Meade and I started McKay Brothers and Quincy Data, we wanted to provide ultra low latency network services and market data that we would have wanted to purchase. That approach has guided us over the last decade. Our services are grounded in engineering and technical excellence. We continually improve our telecom networks and access to market data. We ensure our services are available to all our clients on a level playing field. We work closely with clients to earn the position of a trusted infrastructure provider.

As a result, McKay and Quincy are acknowledged as the leading ultra low latency services provider.

During times of extreme market stress, these characteristics – fundamental to our business - have taken on more importance than ever. Firms trading electronically in volatile financial markets need confidence that their infrastructure will consistently support their activities and enable new opportunities. Even as pandemic-related lockdowns were introduced in major markets around the world, McKay and Quincy continued to innovate and add new services across our global footprint.

Quincy Data

McKay's telecom business meaningfully:

- **Improved the latency on key networks between Illinois and New Jersey as well as between London and Frankfurt.**

- **Expanded new routes in Asia between Tokyo and Shanghai as well as between Tokyo and Busan.**

Quincy Data's market information service launched QHF, working with Raft Technologies:

- **To leverage Raft's expertise with high frequency radio bands and Quincy's market data distribution platform.**

- **And bring to market the lowest latency commercial transatlantic market signals service from Illinois to McKay's European colos.**

Our role as a provider of very precise, highly engineered low latency services, to any firm in the market, places us in a unique position. We strive to work collaboratively with our clients to serve their needs as they manage their own business risks. Clients depend on us, and we are grateful for that trust they place in McKay Brothers.

The experience of serving clients in the very challenging environment of the last year gives us confidence going forward. McKay Brothers will continue to engineer services that provide the fastest and highly reliable infrastructure to all. We will innovate. We will offer our services on a level playing field. And critically, we will continue to work with our clients to address their needs as they grow and adapt in the years ahead.

HARRINGTON STARR
Your Success. Our Business

Mike Powell
CEO, Rapid Addition

I was lucky enough to join Nomura's Japanese equity desk in London as my first job out of university. It was the late 80s, the Nikkei 225 was soon to hit an all-time high of nearly 39,000, and the big 4 Japanese brokerages of Nomura, Yamaichi, Daiwa and Nikko had become international financial powerhouses. However, my timing was less than perfect; within a couple of years the market had lost half its value and the once mighty Japanese security houses have since gone through a torrid time of restructure, merger or closure.

This is just a single snapshot of the constant change and evolution of the City. From a personal perspective, having lived through Big Bang, Black Monday (and Wednesday), the Global Credit Crisis, MiFID, Brexit and much more, one thing I have come to realise is that change is a constant and the City will continuously reinvent itself. It has a rich history of evolution and adaptation, and as household names have disappeared over the years, new ones have emerged. I've often joked that it would be fun to launch a chain of pubs in the City named after famous old firms – 'Meet you for a pint at the Philips & Drew?' or 'Fancy a quick one after work at the Morgan Grenfell?'. But to my earlier point on poor timing, now might not be the smartest time to invest in hospitality.

A NEW ERA OF TECHNOLOGY ENABLED INNOVATION FOR CAPITAL MARKETS

While much of the change has been positive, there is one trend that concerns me: industry consolidation driven by the squeeze on profitability resulting from numerous waves of regulation post the 2008 credit crisis. While I am not disputing the need for market reform nor tighter regulation on some of the more questionable practices of our industry, there have undoubtedly been unintended consequences, ranging from a reduction in bond market liquidity through to an increase in shadow banking activity. The cost of maintaining increased capital reserves and ramping up compliance and risk management has crushed margins on certain business lines, leading to industry consolidation as desks are closed or banks merge to survive. This isn't healthy for the end investor nor the industry. A reduction in players and the emergence of a handful of large-scale firms impacts the broader capital markets ecosystem, including the long tail of consultancies, law firms, technology companies, data vendors and other organisations that make up our

HARRINGTON STARR
Your Success. Our Business

wider industry. And while not everyone may care too much about lawyers, industry consolidation leads to a reduction in competition, a shrinking talent pool and ultimately less innovation. At a time when the world is looking to emerge from the pandemic and kickstart the global economy, this is far from ideal.

However, as I look forward, I am very optimistic about the future for capital markets, and I see significant opportunity for those who are able to grab it.

From an economic standpoint, one could argue that the need for effective financial markets has never been greater. With trillions of dollars being pumped into the global economy through quantitative easing and stimulus packages, efficient deployment of the capital and vibrant secondary markets will be critical to recovery. Even when QE tapering kicks in, we will undoubtedly see governments follow through with investment in major infrastructure projects (some of which, such as 5G roll-out, will have longer term benefits for financial services) and carbon reduction initiatives. Admittedly, many sectors have suffered from the economic fallout of Covid-19, but there have also been significant winners. Changes to consumer behaviour have driven technological innovation faster than we thought possible. Fuelled by pent-up demand and increased disposable income, created through enforced saving during the pandemic, economic activity has the potential to rebound strongly. All of this will drive near-term performance in capital markets.

"Changes to consumer behaviour have driven technological innovation faster than we thought possible. Fuelled by pent-up demand and increased disposable income, created through enforced saving during the pandemic, economic activity has the potential to rebound strongly. All of this will drive near-term performance in capital markets."

But perhaps the more interesting and sustainable opportunity is that presented by the acceleration in adoption of new technologies. Technologies that have been around for a while but are rapidly maturing and gaining traction. Capital markets firms have faced a decade of regulatory reform that has monopolised budgets, building up technology debt in core activities, so wholesale adoption has been slow. But cost cutting of existing operating models has gone as deep as it can, and inflexible legacy technology is holding firms back as the world changes around them. The stars now seem to be aligning, driven by both necessity and opportunity, for technology to enable a new era of productivity.

These are three key areas that I see making a difference over the next 12 months and beyond:

1. Cloud and Data
Surely cloud is old news? I don't think so. Widespread adoption has been painfully slow in capital markets (maybe less so in other areas of finance) but has accelerated over the last few years. Cloud is important for two key reasons. Firstly, it will allow the industry to unlock the true value of data. Firms such as RoZetta Technologies are helping organisations with a combination of data science, cloud and deep domain expertise to turn petabytes of disparate data into actionable insight. Secondly, cloud allows firms to become nimbler and more innovative by cutting time to market and the cost of implementing new initiatives. There are still issues to address, such as streaming multicast, but progress is rapid and cloud will play a hugely enabling role going forward.

2. AI and Machine Learning
While often overhyped, AI, and in particular machine learning, are steadily making an impact in capital markets. Predominantly, this has been targeted at alpha generation and alpha extraction, with quantitative hedge funds leading the way. But we're increasingly seeing an expansion in use cases, such as Overbond's AI analytics for bond pricing and trading workflow automation in fixed income. Data quality and accessibility are prerequisites for machine learning and training AIs, hence the importance of cloud, and we are rapidly seeing science projects turn into genuine P&L gain.

3. DLT
Distributed ledger technology and asset digitisation are going to play a huge role in the future of capital markets. Behind the headlines of cryptocurrency price inflation and Bitcoin millionaires, there is a quiet revolution happening. The financial system is littered with inefficient processes and unnecessary risk in the time it takes to settle trades and transfer value. We are seeing organisations slowly chipping away at legacy processes, proving how distributed ledger technology can drive massive efficiencies. This can often be in unheralded arenas, for instance Lygon's efforts to fully digitise financial assets such as guarantees with a consortium of Australian banks. But with institutional asset managers increasingly investing in cryptocurrencies in the near term, the wider opportunity for asset digitalisation is immense.

Beyond such capabilities, there is one common issue that is critical for capital markets' innovation, and that is the need for a more open approach from technology vendors. I am increasingly seeing firms held back from executing on their business strategy by incumbent vendors whose technology is either too legacy to be interoperable, or whose management is too unwilling to take the risk of opening up their business model. There is a growing desire for firms to move towards a 'composable enterprise', seamlessly connecting best of breed components to keep pace with change or become an industry leader, creating tailored solutions to meet their specific needs. Market dynamics demand continuous innovation, which means flexible, adaptable, open technology and a shift away from reliance on a single vendor to deliver the entire workflow, waiting for their product roadmap to catch up with yesterday's problems.

"Market dynamics demand continuous innovation, which means flexible, adaptable, open technology and a shift away from reliance on a single vendor to deliver the entire workflow, waiting for their product roadmap to catch up with yesterday's problems."

At Rapid Addition we see a reimagining of the front office, empowered by the three technologies I mentioned, but complemented by a new wave of enabling enterprise technology firms who can help the capital markets industry quickly evolve. We believe that the open API and interoperable approach of firms such as ourselves, Velox and others will allow capital markets organisations to adapt faster, while reducing the risk of change; continuously innovate, rather than dragging along legacy tech to keep up; and deliver modular, value-enhancing steps that build on existing investment and avoid large scale 'rip and replace' projects. This will empower businesses to move faster, position technology as a strategy enabler rather than an inhibitor and create efficiencies for both their own organisations and their clients. We are starting to see this happen and I am truly excited about the next cycle of our constantly evolving industry.

CHALLENGES OF THE NEW COMPLIANCE NORMAL

Oliver Bradford
Director, Shield FC

The Financial Sector has seen a large percentage of employees joining the work from home trend, as businesses look to continue trading and stay profitable despite the COVID-19 challenges. Whilst online communications make working remotely considerably easier, maintaining the strictest levels of regulatory compliance has been a considerable challenge for many firms. There are numerous potential challenges to Compliance right now which require the right automated RegTech solution to solve them:

New Communications Channels

For many businesses video, messaging, and file sharing applications such and Zoom, Microsoft Teams, and social media platforms have become essential to collaborate with colleagues and customers. Some firms have found that their normal regulatory compliance monitoring systems may cover in-house based eComms very well, but the unstructured nature of these third-party platforms – particularly when they are operated outside the watchful gaze of the Compliance Officer in the workplace.

Mobile monitoring

The issue of tracking compliance is even more problematic when it comes end-to-end encrypted messages on a mobile device, such as the highly popular platform WhatsApp. Earlier this year, the Financial Conduct Authority warned firms to be careful about the 'significant compliance risk' of encrypted or unmonitored communication apps, such as WhatsApp, when it comes to work-related information.

Often previously banned in financial sector workplaces, WhatsApp has become a helpful (if not essential) tool for many traders and bankers looking to stay easily connected to their clients and colleagues, and therefore needs to be a safe component of the compliance mix.

ROI on lower budgets

Times are tough for many firms, so budgets are having to be stretched to cope and compliance, once considered "immune" to budget limitation, is no different. Automated RegTech systems need to add value to the business, not only proactively detecting potential problems, but also giving the organisation insights into customer behaviour and trends, helping to inform sales and support strategies and retain customers, and reducing the surveillance team's alert quantity whilst still finding cases worthy of investigation.

Rise in hidden Insider Dealing

Unfortunately, home working potentially makes Insider Dealing more tempting and easier. Automated Compliance tools must replace the human officer's gaze, detecting potential issues immediately and ensuring steps are taken to avoid fines and assorted reputational damage.

The U.S. Securities and Exchange Commission (SEC) brought more than 700 actions in the 2020 fiscal year, with a significant percentage of those filed after March, as the pandemic and subsequent restrictions started to take effect. The SEC openly increased its investigations to tackle the likes of insider trading and market manipulation matters.

> "It is essential that any compliance regime accommodates and accurately surveils cloud-based data (including that stored on third-party servers) in just the same way as communications shared on the business's own storage systems. It is all too easy to leave compliance teams with communications data that is stored in a hosted provider's cloud, but left unmonitored (such as Zoom, BlueJeans, or Microsoft Teams)."

Additionally, the UK's Financial Conduct Authority (FCA) has also made it clear that market abuse will not be tolerated, even during the pandemic restrictions, and has encouraged financial firms to ensure their surveillance is suitable for dealing with home working. In October 2020 Julia Hoggett, Director, Market Oversight Division at Financial Conduct Authority told the City Financial Global event, "We expect firms to have updated their policies, refreshed their training and put in place rigorous oversight reflecting the new environment – particularly regarding the risk of use of privately owned devices. These policies should be demonstrable to us and to your audit teams."

Cloud adoption at an all-time high

Already a persuasive trend, Cloud adoption has skyrocketed in the rush to ensure remote working resources are available and flexible for evolving circumstances. As with other home working systems, this potentially leaves compliance challenges for underprepared firms.

It is essential that any compliance regime accommodates and accurately surveils cloud-based data (including that stored on third-party servers) in just the same way as communications shared on the business's own storage systems. It is all too easy to leave compliance teams with communications data that is stored in a hosted provider's cloud, but left unmonitored (such as Zoom, BlueJeans, or Microsoft Teams). Firms need to ask themselves; how do I add this to my communications surveillance to ensure it is effectively monitored?

In many cases there also needs to be a consideration of cost versus security/suitability. Data storage costs can be high, particularly for eComms which generate a high volume of files. Therefore, it may be tempting to store eComms and transaction data using the cheapest or easiest solutions, which may well make adequate surveillance a considerable challenge.

Regulatory pressure on the rise

Despite ongoing social distancing rules and home working, regulators such as the FCA are still strictly enforcing financial firms' obligations under Market Abuse Regulation (MAR). Regulatory Compliance teams cannot simply rest on their laurels due to the circumstances, if anything they need to be even more vigilant and must utilise the right RegTech solutions to ensure compliance is protected.

Embracing the New Compliance Normal

The Shield platform addresses all these potential issues whilst automatically managing compliance data and delivering proactive surveillance. For further details or for a demonstration, please visit www.shieldfc.com.

WHY SHOWING YOUR WORKINGS IS ESSENTIAL FOR TRUSTED AI AND KYC

Hugo Chamberlain
COO, SmartKYC

The concept of artificial intelligence (AI) has been in our collective consciousness for decades, mainly due to far-fetched Hollywood depictions of AI-powered killer Terminators, i-Robots and Replicants. These fictional portrayals, twinned with outspoken views from technology titans like Elon Musk and Professor Stephen Hawking, have led to some pretty fearful views of this powerful technology.

But in a relatively short amount of time, the usage of AI has exploded, with the global market expected to reach a revenue of $118.6 billion by 2025. So does this boom in uptake correlate with increased trust in the market? Or does the industry need to work harder to win customer confidence? In this article I'll look at what can happen when AI goes unchecked, and how know your customer (KYC) analysts could benefit from explainable AI (XAI).

Biased Black Boxes

As with any unfamiliar and revolutionary technology, there will always be a healthy dose of scepticism from the market in which it operates. When Jethro Tull introduced the horse-drawn seed drill in 1700 he was no doubt met with a fair amount of eye-rolling or a raised eyebrow here and there. This type of uncertainty has followed into the information age, and not without good reason. A cursory look at the many cases of shocking AI-decision making shows why:

- The Correctional Offender Management Profiling for Alternative Sanctions (COMPAS) is a case management and decision support tool used by U.S. courts to assess the likelihood of a defendant becoming a recidivist. Though optimised for overall accuracy, the model predicted that black defendants were more likely than white defendants to be incorrectly judged to be at a higher risk of recidivism, while white defendants were more likely than black defendants to be incorrectly flagged as low risk.

> "As with any unfamiliar and revolutionary technology, there will always be a healthy dose of scepticism from the market in which it operates."

> "As with any unfamiliar and revolutionary technology, there will always be a healthy dose of scepticism from the market in which it operates. When Jethro Tull introduced the horse-drawn seed drill in 1700 he was no doubt met with a fair amount of eye-rolling or a raised eyebrow here and there."

- Just five years ago Amazon found out that the algorithm it was using for hiring employees was biased against women. Why? Because the algorithm learned from the past to inform the present, and as it based decisions on the number of successful resumes submitted over the past ten years – overwhelmingly from men – it was trained to favour men over women.

- Most recently and indeed currently in the UK, Ofqual's (The Office of Qualifications and Examinations Regulation) use of algorithms to grade A-level students because exams were not taken due to the COVID_19 pandemic has been met with much controversy and complaints and seems to have 'not worked', causing the government to return to a much more 'human' approach. One wonders if they will have to explain their AI algorithms to the Information Commissioner's Office at some point.

The general explanation for this kind of discrimination is that AI models are made by humans and therefore reflect their biases. They also reflect the bias inherent in the data itself. But whether that bias is conscious or unconscious, human-led or data-led, is almost irrelevant. Once the trust is gone, it is extremely hard to win back. If AI decisions are made within opaque black boxes, the technology will never shake off its shady image.

XAI: The Key to Unlocking Trust

To increase the trustworthiness and transparency of AI programmes, many firms should have adopted explainable AI (XAI) to describe the purpose, rationale and decision-making process in a way that can be understood by the average person.

Of course, the more information is provided to this kind of technology, the more data it has to work with to disambiguate and find information on the right client. So, for structured data sources, fixed parameters can be put in place e.g. full name, year of birth, country of birth, country of residence and company affiliation. An AI model can then do much of the heavy lifting associated with searching, reading, disambiguating and filtering results when conducting background checks, all while providing the KYC analyst with a full audit trail at every stage whether the decision is to onboard or reject.

For unstructured data, the process gets tougher, but not impossible, especially if a multilingual search and analysis platform is in place. This kind of platform can automatically surface contextually relevant intelligence, providing reasoning for categorising the decision the way it did.

The Expectation of Explainabilty

The perception of AI has come a long way from the science fiction of the past, but it still has some work to do to be widely accepted and trusted by firms and its customers. Explainability is key to changing perceptions and, while it isn't crucial for every AI project, when business relies on detailed knowledge of specific individuals, such as during client onboarding or KYC checks, it is crucial that any decision can justified quickly and easily to avoid any accusations of bias. If customers receive anything less, not only will AI continue to suffer from a negative PR problem, but you could potentially suffer too.

ACHIEVING GROWTH IN AN EXCEPTIONAL YEAR

Matt Smith
CEO, SteelEye

Compliance is something all regulated financial firms must do. Our mission is to make it easy for them to accurately comply with financial regulations and to give them value from their data.

In less than four years since SteelEye was established we have been fortunate to be recognised as a leading FinTech, with a customer base of over 80 clients around the world.

Despite the obvious challenges of the pandemic, we experienced continued growth over the past year, winning a large number of new clients, including Schroders and Fidelity International, and nearly doubling our team. We were also recognised by HFM, WatersTechnology and Risk as a leading provider of RegTech, reporting and surveillance services. So how have we continued to grow throughout such tumultuous times?

For SteelEye, it is the combination of a relentless focus on data management and quality, the practical application of modern technology, and hiring and retaining talented people. I am immensely proud of what we have achieved as a team and happy to share some of the key elements of our growth.

An unwavering focus on what we are here to do

From the outset SteelEye's focus has been on data. We are passionate about what can be achieved and the problems we can solve by helping firms bring together and use their data. This was true when we founded the company and is true today.

We have built a platform that consolidates and normalises huge volumes of structured and unstructured data, then turns it into information that can instantly be used. This has enabled us to simplify compliance by offering an extensive suite of RegTech services all in one platform.

By solving the industry's data problems and achieving our mission of making compliance easy, the trust in the financial markets will improve for the benefit of everyone. By keeping this at the forefront – particularly during difficult periods – we have been able to consistently deliver and grow.

An increasingly complicated landscape

Over the last year, compliance has become even more complex. Lockdown introduced soaring trading volumes and high market volatility. The amount of data produced from digital communication channels also went through the roof.

This meant that the need for services that simplify compliance became even stronger in the market. Firms were forced to embrace modern technology to adapt.

Creating a culture that people want to be part of

We have hired some of the leading talent in the industry, but hiring the right people is only half the story. We have invested significantly in how we inspire, engage, and motivate our talent.

Our culture is imperative to our success. Working in a scale-up environment is fast paced, and we all understand and embrace this pressure. But we also make sure that we enjoy the ride. We actively invest in our culture to make sure that SteelEye is more than just somewhere people go to work.

Working remotely has presented some challenges, but we have met those in unique ways, for example setting up twice daily zoom social meetings to replicate coffee breaks and hosting weekly socials with a range of themes including murder mystery sessions, quiz nights, and wine tastings.

The key to growth

There is no secret to success. It is a combination of hard work, purpose-built solutions that meet an actual need, and having the right people that are as passionate about our mission as I am.

THE CLOUD VS CO-LO: HOW THE TORTOISE CAN BEAT THE HARE

Steve Toland
Co-Founder,
TransFICC

For many years firms trading in Fixed Income, FX and Equities have invested in co-located infrastructures, responding to the market's almost incessant demand for low latency connectivity.

Opinions are now changing - certainly in Fixed Income - where more firms are adopting a combination of co-location and the Cloud.

The Need for Speed

It's well understood that the location of infrastructure in relation to data centres impacts speed:

- **Co-locating in a data centre = 20-200 microseconds**
- **Cloud infrastructure = approx. 7 milliseconds**
- **On premise technology = approx. 7 milliseconds (assuming you are in the same country)**

FX/Equities Vs Fixed Income

Commoditised markets like FX and Equities demand raw speed. The same products are quoted on different venues, with many firms using trading algos, resulting in a race to best price. Traders need low latency connectivity to compete with high frequency traders and other tech-savvy participants.

But FI is different, with different assets trading in multiple different ways. Speed is certainly important, but so is accessing different types of bonds or enabling complex (often manual) workflows.

FI Workflows – RFQ and Post Trade

There are a significant number of RFQ workflows in FI, and any time a human is involved the perceived benefit of co-location is negated.

If a bank manually intervenes in a quote, this typically adds 5 seconds to the process, then if a buy-side trader manually accepts the quote this could take anywhere between 5 and 30 seconds. With a best case scenario of 10 seconds added for manual intervention in RFQ, any investment in using co-location to achieve a round trip of under 500 microseconds is wasted.

Co-location is not needed where RFQ is the norm or for post trade when the deal is already done.

The Cloud - Scalability on Demand

If more memory is needed, firms using co-location need new servers. This is expensive, with a typical cost of $10,000 per server.

Compare that to the Cloud, with elastic compute capability, where firms are able to spin up infrastructure programmatically. Not only is this significantly less ➡

than the capex of a new server (or multiple servers), it can be completed in minutes as opposed to days or weeks.

Market Fragmentation
Fragmentation presents firms with a fundamental issue – where to co-locate?

The answer depends on the required venues. Bloomberg's data centres are on the East Coast of USA, BondVision is located in Milan, and MarketAxess is in Washington DC. TradeWeb is in New York, Chicago, London and Tokyo. CME is located in Chicago, and Eurex is in Frankfurt.

In a world with over 150 FI venues, and data centres around the world, the costs can mount up.

The Tortoise Can Beat the Hare
We recognise that one size doesn't fit all and that the Hare wins in a sprint. Some trading firms require low-latency co-location, like those consuming premium market data or accessing a CLOB. In these cases there is a need for speed.

But the Cloud is increasingly being seen as an appropriate infrastructure for many types of Fixed Income trading. The tortoise wins where flexibility, scalability and low costs are important - in workflows like RFQ, Axes, post trade or manual intervention.

At TransFICC we offer clients both co-location and the Cloud. In FI we see trading firms increasingly move to an infrastructure where they build as much as possible in the Cloud and co-locate infrastructures where low-latency trading is essential.

CRAFTING TRANSPARENT INVESTMENT

Georgia Stewart
Co-Founder, Tumelo

Our story

Tumelo was established at Cambridge University, where founders (Georgia, Will, and Ben) campaigned for the sustainable investment of their university's £6 billion investment fund, influencing the University and their fund managers to vote for climate protection, gender equality, and human rights at companies within the investment portfolio.

They recognised a global problem: Millions of ordinary people contribute to our investment system through ISAs, workplace pensions, and other investments yet have no visibility over where their money is going and no voice at the companies they own through those investments. The result?

A society that is disengaged and an investment system that is broken and unsustainable.

Tumelo was created to change this.

At Tumelo, we engage investors on issues they care about at companies they own, giving ordinary people a voice in the boardrooms of global companies like Facebook, Google, Shell & Netflix, on issues like climate change, gender equality, and human rights. In doing so, we help investment firms engage with their clients and we help companies engage with their true shareholders so that our financial system can better serve people and planet.

Our solution is white-label so2ware delivered via APIs and/or a user dashboard. Our so2ware integrates with existing investment platforms improving customer engagement, acquisition, and retention for providers.

Values/mission/culture
Tumelo's vision is a world where all investors can create and benefit from a more sustainable investment system. We want to help every investor have a positive influence on the companies they own.

Our vision is to give every investor a voice.

Tumelo's mission is to provide transparency and engagement technologies that enable pension members and retail investors to contribute to and benefit from a more sustainable and positive investment system.

Our mission is to empower platforms to engage investors.

We are a brilliant, dynamic team made up of capable individuals. We're welcoming and supportive of each other. We're hardworking and ambitious, for ourselves, each other, and our customers. We aim to create a supportive environment to work in where we can stretch and challenge ourselves and each other.

We work together with passion and with pace to deliver what's needed for the company and to make our impact. Our culture is really important to us and so we are always working on it. We work in small, close, cross-functional teams that outperform large, slow departments.

Diversity and Inclusion
Tech and especially fintech face a D&I challenge. We're proud to have a brilliant gender balance on the team as a whole and to support a variety of lifestyles with an inclusive culture and flexible work set-up. We're proud to be the home team to powerful female leaders but there is always more we can do. Diversity and inclusion is something we need to remain proactive about and considerate of, and is why we should celebrate and get involved with platforms raising these issues, like this one!

Trends in the market place
ESG undoubtedly has taken the spotlight for the biggest trend in the financial services sector in 2020/21. Fintech's are frequently coming out with new solutions that factor ESG into various aspects of the industry, predominantly falling into some type of scoring metric to compare investments against each other based on how 'pro-ESG they are'. While ESG scores might be useful for fund managers, everyday investors have very different characteristics and very different use cases. Generally, they have less understanding of nuance, lower capacity to intake information and make comparisons, and less time to dedicate when investing isn't their day job.

On the other hand, current market provisions for investment transparency and shareholder engagement are archaic or non-existent. Substantial disintermediation means that less than 1% of retail shareholders engage in shareholder voting at companies they own. Even though many shareholder votes are on critical issues like human rights, climate change, and gender equality [Hargreaves Lansdown, 2019].

This dearth of transparency and empowerment leads to low financial literacy and small savings pots putting the public at risk of poverty in retirement. It also creates an unsustainable investment system which relies on short-term decision-making and puts profit before purpose.

Tumelo has an existing platform for retail investors and pension members to see and give their opinion on shareholder votes at companies they own. We have received massive support in these efforts, both from large pension providers and innovative investment platforms. Having now officially launched with two of the UK's biggest pension providers we expect to be rolling out our services to the majority of UK pension members within the next two to three years.

Policy is beginning to follow suit and direct attention to fund manager stewardship, encouraging more transparency for fund managers to use their shareholder vote in line with their members' values. The pensions minister Guy Oppermann has issued a working group to "address the overly complex and archaic voting infrastructure; underinvestment in the stewardship function in fund management; and transparency of voting policies and outcomes". With the government determined to issue real change in this area, our solution, being the first of its kind, will pave the way for bettering the industry.

Pension fund investments in the UK amount to over 2.55 trillion pounds, if we ensured this money was working for the betterment of society it would make a monumental difference. We will undoubtedly see more tech developments supporting sustainability in this sector in the years to come.

HARRINGTON STARR
Your Success. Our Business

REVOLUTIONISING DUE DILIGENCE

Cindy van Niekirk
Founder and CEO, Umazi

"Though she be but little, she is fierce." When Shakespeare penned these words of Hermia, a character in A Midsummer Night's Dream, he could easily have been speaking of Cindy van Niekerk. She is the co-founder and CEO of Umazi, billed as one of the FinTechs to watch out for in 2021.

Established in November 2019, Umazi seeks to create a software-enabled market, allowing corporations to create a single digital identity to share across industries, with the goal of automating due diligence in real-time. These results can be shared with approved institutions and may be used by banks to onboard corporations, enabling partnership with validated and verified third parties.

"The existing due diligence (DD) systems of corporations and their relevant business transactions are, to put it kindly, antiquated," explained Cindy. "They require banks and corporations to collect and assess updated corporate identity-related credentials based on a largely manual, repetitive, inefficient, time-consuming, cumbersome, non-standardised, and expensive undertaking that lacks transparency and efficiency."

In spite of a global ecosystem that demands ever-more detailed and extensive verification, there is little standardisation of the content and format of this information across sectors and regions. This variation ranges from the documents required from bank to bank and from country to country, the frequency with which they must be updated, and it even affects the processes by which institutions obtain these approvals. The regulations also change frequently, as authorities endeavour to keep up with criminals who seem to develop new illicit activities faster than policing can track.

She added that almost 60% of companies view compliance as a barrier to entering new markets. There is no standardised communication between corporations and institutions, and no collaboration between industries. Consequently, there is duplication of effort, cost increases, delays and significant customer frustration, some of which she got to experience first-hand, working for top international finance houses.

A South African-born British national, Cindy has particular expertise in IT projects driven by regulatory change, having overseen large scale implementations associated with global impacting financial regulations in both London and Singapore.

"Our name, Umazi, is Zulu for 'to know her', which we thought was particularly apt, given that we are a female-led digital identity company working in a male-dominated business sector. Additionally, our logo calls to mind the shield of a Zulu warrior – another nod to my roots, but also a reflection of what the company seeks to achieve: a secure and protected platform for the creation of a corporate digital identity," Cindy said.

But what is due diligence?
A simple definition of customer due diligence (CDD) may be found on www.UK.gov: "Customer due diligence means taking steps to identify your customers and checking they are who they say they are."

Effectively, institutions are required to gather sufficient information about a potential customer in order for them to assess the extent, as well as the nature of any risks that they may be exposing themselves to when entering into a business relationship. These include and money laundering and terrorist financing risks that the customer may be associated with.

And why should we care?
Know your client (or know your customer – KYC) is a regulatory obligation for financial institutions (FIs) to verify the identity of clients, assess their suitability, and evaluate the risks involved in taking on and maintaining client relationships. KYC compliance typically involves requirements and policies such as risk management, customer acceptance policies and transaction monitoring.

KYC processes are designed to fit within the broader scope of a bank's anti-money laundering (AML) policy, but are also employed by companies of all sizes for the purpose of ensuring that their proposed customers, agents, consultants or distributors are anti-bribery compliant, and are actually who they claim to be.

It has become standard practice for financial institutions such as banks, insurers and export creditors, among others, to demand detailed due diligence information from their clients. FIs engage in rigorous verification practices, not only to comply with regulations and to prevent money laundering and financial crime, but also to safeguard their reputations and simply to follow sound business practice.

Key challenges with due diligence
One of the critical shortcomings of the current due diligence regulations is that there is inconsistency, mismatches and ongoing reforms between industries, regions and countries, making it difficult to keep up to date and compliant.

In addition, the reliance on manual data, with human interference, as well as the archaic data structures and centralised data infrastructure all contribute to inaccuracies, inconvenience and delays.

According to Thomson Reuters (2017), 39% of clients report half or less of their organisational changes to their institutions that could impact how they are being categorised according to risk, or the suitability of product provisioning.

There is a critical need for real-time monitoring of ultimate beneficial ownership (who effectively owns the corporation), to assess and mitigate circumstances relating to politically exposed persons (PEPs) and those who may be on a sanctioned list.

What are the nuts and bolts?
Umazi addresses these challenges using new technology, based on the W3C methodology, that has been built to underpin the verification of verification-related data either by a regulated party of directly from source. Regulated parties are those captured by AML directives and would therefore have an obligation to verify data before engaging in a client relationship. Direct data sources are largely government institutions (such as tax or passport offices).

This technology is ultimately the key to what makes Umazi's product revolutionary when compared to alternative solutions. This is a relatively new concept of data distribution, privacy and verification currently being piloted by reputable industry bodies. The solution is built on R3's open source blockchain network. Corda was developed specifically with the financial industry in mind and the network has already onboarded more than 300 financial institutions. Cindy and her team plan to make Umazi available for all through API interfaces and with great focus on interoperability for integration with client and bank systems. Umazi will not store any corporate or bank data.

"The Umazi platform offers a creative and disruptive digital solution, reducing the systemic inefficiency of verification processes by focussing on the client's needs, while maintaining the most rigorous regulatory standards. We propose to standardise verification information, meeting the most stringent of in-country requirements, and offer the flexibility of a customised solution for individual countries and entities," Cindy concluded.

DRIVING REVENUE GROWTH FOR BROKERS

Ahmed Heikal
Product Manager, Vela

To thrive in 2021 and beyond, market participants and service providers must work together to grow and succeed. The world is only becoming more complex by the day. Fast-moving events, new streams of data, the impact of both emerging and legacy technologies, and demanding regulatory regimes all make for a challenging environment for liquidity providers of every type and size.

Against this backdrop, market structure has been changing dramatically. Brokers' commission fees have been under pressure for some time and that trend shows no sign of change, prompting traditional liquidity providers to step back.

Meanwhile, a new breed of providers, in the form of sophisticated Principal Trading Groups (PTGs), has been filling the liquidity void. But these firms, many of which are algo-driven, have particular requirements. Low latency is no longer a nice-to-have. It's a given.

What all this adds up to is a simple proposition: There is increasing value to be found in a high-performance direct market access (DMA) platform that makes life easier for new liquidity providers by eliminating pain points, whilst at the same time allowing brokers to rapidly expand their own client reach with new lines of business at no additional cost.

PTGs need to be able to enter markets quickly and cost efficiently, with minimal fuss. Brokers need to be able to offer flexible sponsored access at a low cost with a rapid time to market. They are also looking for new revenue streams as commission fees dwindle due to the evolution of the market. And for all participants, there need to be sophisticated pre- and post-trade risk management, seamless integration, and scalability.

Vela's DMA Platform has been designed specifically with this market environment in mind. Sponsored clients can be onboarded instantly, allowing them to enter new markets around the world. Risk controls can be set within the platform, whilst drop copies of trades can be sent to broker sponsors. PTGs can choose to use Vela's front end or to integrate the platform within their systems via APIs. Clearing members using the platform benefit from a flexible framework for risk management, including global kill switches.

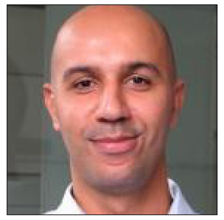
> "As with any unfamiliar and revolutionary technology, there will always be a healthy dose of scepticism from the market in which it operates."

The platform is a fully hosted and managed service delivering normalised market data and order entry. Crucially, the platform is built for speed – both in terms of low latency and the time to market for new clients.

Given the vast number of PTGs and the diversity of the markets they trade in, this is a critical factor. It means participants can seize new opportunities and make swift decisions on entering new markets, without having to worry about large upfront costs or long lead times. For brokers, the platform means they can generate more client revenue without devoting IT resources.

The challenges as a result of recent world events have led large swathes of the marketplace to reconsider their business strategies. More than anything else, they have learned that they need the ability to pivot. In such a world, the value of a high-performance DMA platform that is flexible, cost-efficient, and pain-free becomes immediately clear.

Check out this DMA Broker video illustrating how Vela can help the broker community drive revenue growth through new clients and lines of business for sponsored access through collaboration.



Wassal Dammak
Director, Collateral Management, Vermeg

HOW TO LEVERAGE UMR COMPLIANCE TO ACHIEVE GENUINE TRANSFORMATION

The regulatory push of the last decade has shaped the collateral space in a way that promoted the emergence of many service providers in collateral management in general and regulatory compliance in particular.

Typically, financial institutions in scope for UMR waves 5 & 6 need to define their collateral and liquidity strategy and assess the different options available to streamline the compliance journey as much as possible, in a context of insufficient internal resource capacity and the high volume of change required.

The journey begins by identifying when firms are in scope through the Aggregate Average Notional Amount calculation (AANA) and estimating the level of Initial Margin with each counterparty through ISDA SIMM or GRID methodology computation.

These calculations help firms to further explore possibilities to either drive down the AANA or reduce the IM level using techniques such as trade compression or moving trades to clearing through Central Counterparty Clearing (CCPs). The same calculations could, in certain cases, impact trading strategies when the cost of compliance is deemed too high.

At this stage, firms should know whether they will be breaching the 50M threshold or to what extent they will be close to it:

- **If the IM is substantially below the 50M threshold then firms need to monitor it by setting internal thresholds and an automated alerting mechanism to continuously track breaches over time.**

- **If the IM is above or close to the 50M threshold, then firms need to define their strategy for the segregated IM custody accounts (Third Party Custodian or Triparty Agents) and establish the way they will reconcile sensitivities. They need also to negotiate the legal documentation with their custodian and counterparties.**

With each step of this journey, the in-scope financial institutions will have to select the most suitable operating model to support requirements:

- **Internal build: This option may be costly but could make sense if the firm would like to closely control certain functions such as inhouse analytics for sensitivities calculation.**

- **Outsourcing to a Fund Administrator or Investor Servicer: In this case firms would completely externalize the operational and technical functions. It makes sense to leverage existing relations because most of those servicers have added UMR compliance to their offering.**

- **Using a third-party software solution: This could be a natural extension of the solution already used for collateral management especially if the software provider has developed the features needed to comply with UMR.**

- **Contracting a SaaS service: In this model the IT infrastructure, software solution and overall technical monitoring is outsourced to a SaaS provider, while operations are kept internally. This could be cost efficient; Although firms need to carefully assess data security and segregation with this option.**

Looking to the landscape of financial institutions involved in UMR waves 5 & 6, there isn't a unique model that fits all businesses and strategies. In certain cases, it makes sense to mix a combination of models.

Strategically, the model chosen should take into consideration a longer-term view because the journey of transformation will not end with compliance with UMR. Firms will still be pressurized to reduce the collateral cost and therefore will look to achieve more automation, higher operational efficiency and further standardization to reduce operational frictions and their associated risks.

The new IM requirements will further stress inventories and liquidity. Optimizing the utilization of the inventories is not a nice-to-have anymore but rather a must have once UMR wave 5 hits.

At VERMEG we think that it is possible to leverage UMR compliance to pave the way for future transformation. We can help in every level of the value chain. That's why we launched Colline.Cloud, a cost-efficient end to end collateral management service via SaaS.

If you need more details on Colline.Cloud please reach out to us, we will explore how we can help in your UMR compliance journey and beyond.

"Firms will still be pressurized to reduce the collateral cost and therefore will look to achieve more automation, higher operational efficiency and further standardization to reduce operational frictions and their associated risks."

FINANCIAL WELLBEING AND OPEN BANKING PAYMENTS

Stefano Vaccino
Founder, Yapily

YAPILY

There is no denying that the ongoing lockdowns have placed huge financial pressure on individuals and businesses. Covid made it abundantly clear that SME owners and consumers need real-time insight into their financial position to forecast cash flow. In the UK alone [4 out of 10 individuals] feel anxious, worried or stressed about their financial situation. Increasing the call for services that offer greater oversight of their personal finances to stay in good financial shape. Open Finance is the key to addressing financial wellbeing issues.

Open Finance essentially provides real-time insight into data across a wider spectrum of financial products and services such as pensions, mortgages, insurance, utilities and more. Unlocking the ability for many fintechs to utilise this data and improve their products. There is still a very long way to go for Open Finance and the fintech community has a responsibility to address the educational and technical barrier to wide scale adoption of Open Finance.

However, we're moving towards achieving a better and fairer financial ecosystem, through the rate of adoption for Open Banking products and services. There are [more than 2.5 million UK consumers and businesses using Open Banking enabled products] to manage the finances, access credit and payments. PwC data shows that 64% of adults are expected to adopt Open Banking by 2022, alongside 71% of SMEs. There is a clear trend of accelerating growth for Open Banking products and services. We expect that to continue in the form of payments throughout 2021.

An example of this is our partner Moneyfarm, who saw great success in 2020 with the adoption of Open Banking payments via the Yapily API. Just 3 weeks after the initial launch, [20% of all transfers were processed using Open Banking], with an average transfer value of just under £3,000. Giovanni Dapra, CEO of Moneyfarm said: "As one of the first digital wealth managers to make use of open banking, we're proud to see people engaging with it. Clearly, our customers want to take advantage of the benefits that it can deliver and importantly, they are recognising the improved, seamless experience across all our products".

Although there are many UX benefits to using Open Banking initiation in payments flows, the reduced fees in comparison to card networks is also a major consideration for businesses.

HARRINGTON STARR
Your Success. Our Business

Open Banking payments offer cost savings to merchants which they can either pass on onto their customers or reinvest back into their business, which will assist much needed economic growth in the years to come.

Based on Yapily data published last year - In the UK, ecommerce businesses such as Amazon, eBay or Shopify process an average of 10,000,000 transactions per month, with an average value of £67 each. At a typical card network fee rate of 1% per year, that's £80.4m wasted by merchants annually on fees to card networks. If merchants had processed their payments through Open Banking, it would have only cost them £6,360,000 per year – saving these businesses 92%, which equates to £74,040,000.

These savings mean merchants and their sellers can either pass on these cost savings onto their customers or reinvest money back into their business. We're already seeing card networks exploring Open Banking options through partnerships, such as our partnership with American Express.

There is no denying that Open Banking payments are vital to develop the payments landscape as we move into the post covid economy. 2021 provides an ideal opportunity for fintechs to create new solutions to improve the financial wellbeing of businesses and consumers. The trends are clear to see and as adoption continues to rise rapidly, so do the incentives for businesses to continue to drive these trends.

SURVIVAL LIES IN THE DEMANDS OF THE CONSUMER

Philip Belamant
CEO & Founder, Zilch

Your business intro
Zilch is the worlds first Buy-Now-Pay-Later card. This London-based fintech startup is revolutionising the space by placing consumers at the heart of its business. Born with regulation as part of its DNA, Zilch has earned the title of the only FCA regulated BNPL platform in the UK. Our unique partnership with MasterCard enables our customers to shop wherever and whenever they want and by using a combination of Open Banking Technology and soft credit checks, we grant our customers a real-time view of their spending. This encourages responsible lending and spending and eliminates the chance of over-indebtedness and credit-related anxiety.

Your values, mission, culture
At Zilch, our mission is to always put the customer first. Our over the top lending model is ripping up the rule book when it comes to traditional lending. Where incumbent players pitch the retailer, work with the retailer and trade through the retailer, our unique partnership with MasterCard means we never rely on the retailer. Instead, we can put all our focus on the customer - they sign up directly with us and can use Zilch to pay anywhere, keeping track of all purchases and repayments in one place rather than spread out over multiple suppliers.

We take affordability and transparency very seriously ensuring that we do everything to help customers proactively and responsibly manage their cash flows and maintain financial wellness. Our aim is to democratise credit in a responsible way that is personalised to the customer - whether they pay a purchase back over 6 weeks, pay half up front or pay for it all - it's whatever works best for them. Streamlining payments and simplifying the lending process is our top priority in a world where font size 6 and unclear terms and conditions are no longer acceptable.

At Zilch, we say culture eats strategy for breakfast. In other words, our team, not just the technology, is ultimately what will set the path ablaze for us in 2021 and beyond. The common goal - placing our customers first - is our ultimate mission and having the right people with the same values matters hugely to us.

Why diversity, equity and inclusion is important to you
In the past, Gen Z have been called the 'credit invisible' generation either because they do not have enough credit history to apply for traditional credit lending options, or are dissuaded from borrowing because of jargon heavy platforms that are complicated to use.
Incumbent credit checking platforms have denied worthy borrowers of credit, or, on the flipside allowed them to borrow more than they can afford to pay back. Our unique processing model enables us to offer innovative payment solutions by providing a safe and accessible form of credit to those who may have previously been denied or been sceptical of borrowing. In this way, we protect our customers but ensure everyone who has the money to pay, just not right now, can purchase what they need when they need to.

Challenges you face and overcome
Like any fast-growing industry, the BNPL industry has experienced its own growing pains. As a result, a challenge for the industry is overcoming the mixed perception towards BNPL providers - especially with concerns surrounding regulation. To overcome this, Zilch worked closely with the FCA for 12 months as part of the Sandbox programme making us the first BNPL provider in the UK to be FCA regulated. We welcome the recently published Woolard Review which encourages changes to ensure a healthy market for unsecured lending and regulation - this can only be a good thing.

Growing our team from 15 to 80 people during a pandemic has also been a unique challenge. Again, we have had to lean on our strong culture and phenomenal team members to make the rapid growth not only possible, but extremely successful.

Trends in the marketplace
It's abundantly clear to me that consumers are ready for a dramatic change when it comes to credit and lending, this change is largely fuelled by Gen Z and millennials, who demand transparency, efficiency and responsibility. Providers must take note and provide a service that meets this demand - those that don't keep up will struggle to survive.

As well as encouraging discussions around regulation in the space, other trends in the BNPL marketplace see these kinds of solutions continue to grow in popularity with people seeking alternative methods of finance - other than traditional institutions. New players with innovative solutions provide an opportunity for the industry to flourish, with healthy competition encouraging providers to exceed the expectations of their competitors and customers and offer the best service possible.

> "We take affordability and transparency very seriously ensuring that we do everything to help customers proactively and responsibly manage their cash flows and maintain financial wellness."

HARRINGTON STARR
Your Success. Our Business

About Harrington Starr

Imagine if you had a Recruitment partner whose purpose was to help you grow.

Imagine if you had a Recruitment partner that believed better people made by better clients, better candidates and better people.

Imagine if you had a Recruitment partner that cared as much about putting the right people into the right businesses, as they did about investing back into the community they belonged.

You can!

Harrington Starr.
Your Success, Our Business.

In 2010 we launched Harrington Starr and over the past seven years we have become the Global Leaders in Financial Services and Commodities Technology recruitment, insight, events & consultancy. Delivering high quality opportunities for professionals on a permanent, retained, contract, and interim basis, to over 800

For more information, please contact:
Toby Babb at Harrington Starr

T: 0203 002 2850
F: 0207 022 1750
E: toby.babb@harringtonstarr.com

Harrington Starr Company
Registration Number: 7246003
Company Headquarters:
Vintners Place, 68 Upper Thames Street, London EC4V 3BJ
Company Telephone Number: 0203 587 7007
Company Email: info@harringtonstarr.com

HARRINGTON STARR
Your Success. Our Business

EDITORIAL TEAM

CONTRIBUTORS

Presented by

TOBY BABB

Edited by

SCOTT RICHARDSON

NADIA EDWARDS-DASHTI

ALEXANDRA WHITE

SARAH CONNOLLY

GEORGIA RICHARDSON

Claudine **EASTWOOD** | Rebecca **WALSH** | James **HOUNSLOW**

Rob **GRANT** | Harry **VANE** | Hari **SOPAL** | Richard **TWUMASI**

Lee **HARDING** | Harriet **LAMPLUGH DE SMITH** | Ian **BAILEY**

James **PLATT** | Kashasa **BARRETO-INMAN** | Andrew **NITEK** | Erin **MACE**

Ryan **WATERS** | Catherine **O'BEIRNE** | Barry **ANSELL**

George **HARRIS** | George **BEAN** | Ricky **SINGH** | Matt **KERWIN**

Jake **BROWNE** | Pete **DELLEANI** | Ben **DENNISON**

designed by www.danielbiddulph.com

HARRINGTON STARR
Your Success. Our Business

Harrington Starr Limited

WWW.HARRINGTONSTARR.COM

E: INFO@HARRINGTONSTARR.COM

UK VINTNERS PLACE, 68 UPPER THAMES STREET
LONDON, EC4V 3BJ
T: +0044 203 587 7007

US 575 5TH AVENUE, 17TH FLOOR
SUITE 113, NEW YORK, NY 10017
T: +1 646 381 2067

FOLLOW US ON TWITTER @harringtonstarr

FOLLOW US ON LINKED IN (search Harrington Starr)

DOWNLOAD OUR FREE APP

GLOBAL LEADERS IN FINANCIAL SERVICES AND COMMODITIES TECHNOLOGY RECRUITMENT