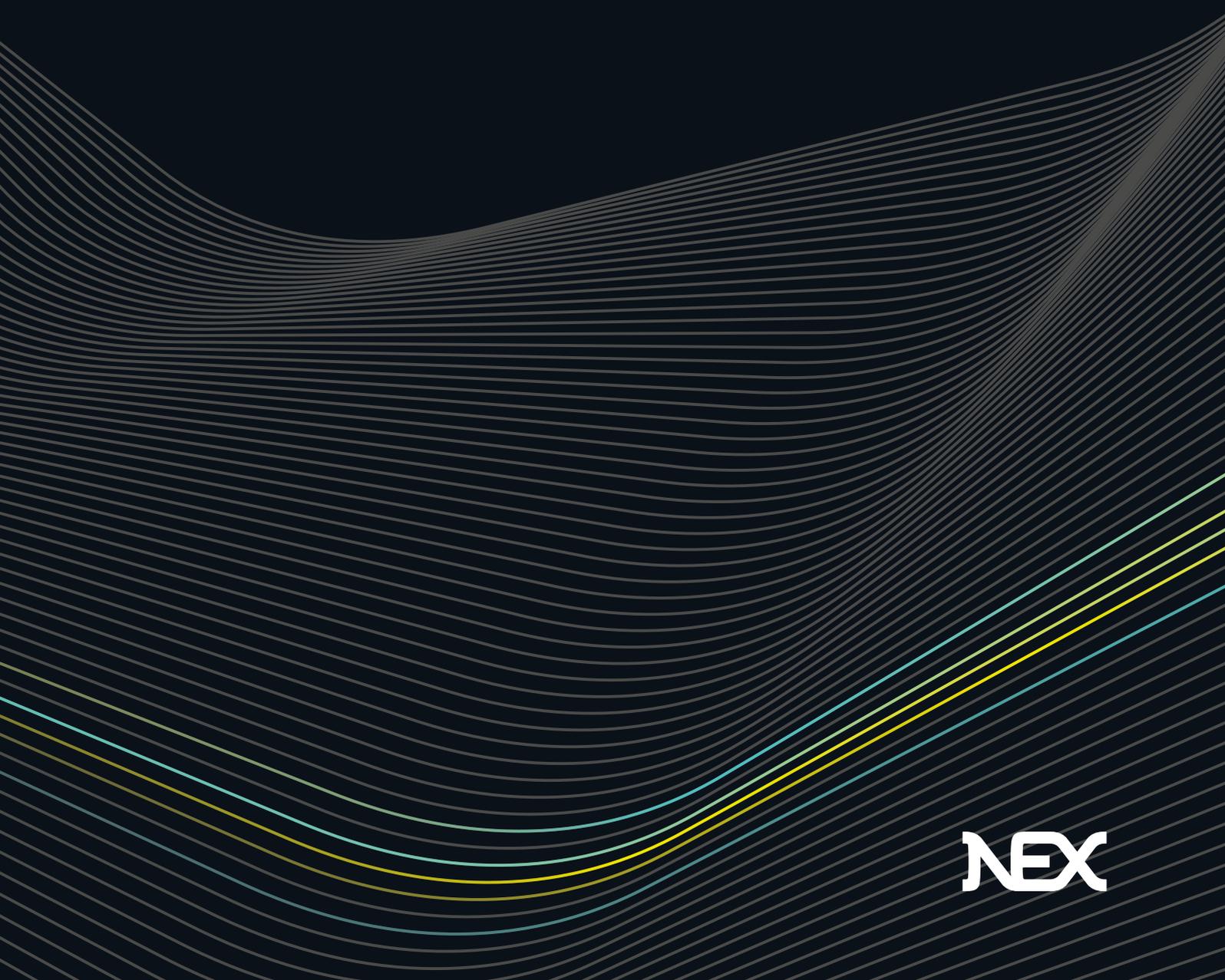


EBS

THE FX GLOBAL CODE

CHANGING TRANSPARENCY AND BEHAVIOURS

The background features a series of thin, wavy lines that create a sense of motion and depth. The lines are primarily light gray, with a few lines in yellow and light blue that stand out. The overall effect is a modern, abstract design.

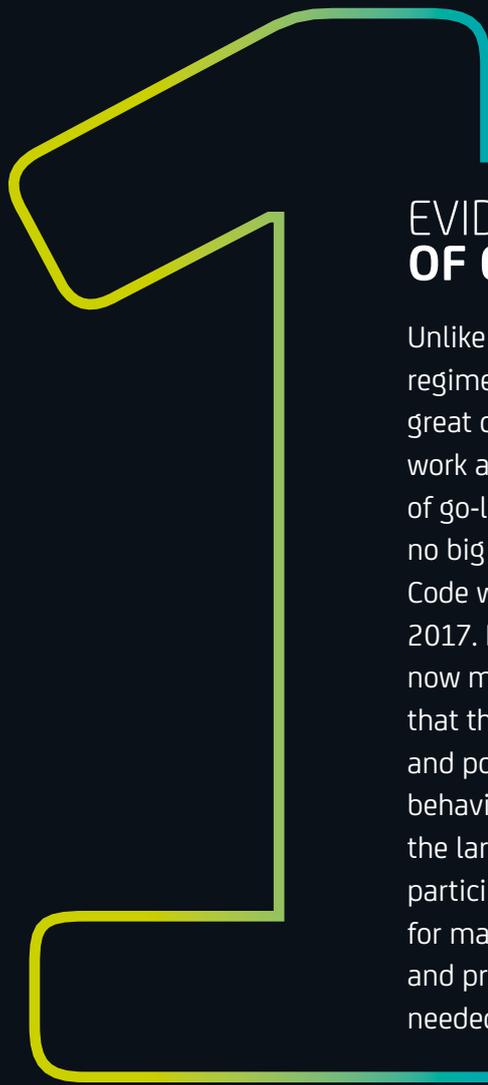
NEX

This report explores how market participants are now offered greater transparency through data-driven insights, which has in turn improved counterparty relationships, and has contributed to a healthier market ecology. The report also assesses what more can be done to encourage further take up of the FX Code of Conduct (the Code) and offers predictions for the future.

Ever since the 2008 financial crisis, markets have become accustomed to a new regulatory norm as global regulators seek to address misdemeanours of the past. Ten years later and the arrival of numerous regulations such as Dodd Frank, MiFID II and EMIR have dramatically changed the way that markets operate with the core purpose of providing greater transparency and improving behaviour. These regulations span most financial markets and asset classes, however the foreign exchange (FX) market – especially the spot market – had until 2017, been left broadly untouched.

In May 2017, the Global Foreign Exchange Committee launched the Code with the intention of promoting good practice in terms of transparency and ethics and improving the reputation of the wholesale FX market. Unlike regulations introduced in other markets, the Code which was drafted by the FX industry, provides a set of ‘global principles’ which market participants are encouraged to commit to by signing a disclosure known as the ‘Statement of Commitment’.

One year on, over 500 institutions have signed the Statement of Commitment and over 300 have chosen to post this on a public register. On 9 May 2018 the Bank of International Settlement, owned by around 60 central banks, crucially signed their disclosure suggesting that the wind of change has begun within the FX industry. However, there are thousands of participants in the FX wholesale market, made up of Liquidity Providers (LPs) and Liquidity Consumers (LCs), and take up is still relatively low outside of the largest FX market participants.



EVIDENCE OF CHANGE

Unlike new regulatory regimes which require a great deal of preparatory work and resource ahead of go-live, there was no big bang when the Code was introduced in 2017. However, there is now mounting evidence that the Code is quietly and positively changing behaviour amongst the largest FX market participants responsible for market making and providing much needed liquidity.

Principle 17

Last Look

One area where we are starting to see positive change is Principle 17, the most commonly debated element of the Code which focuses on 'Last Look' – a market participant's final opportunity to accept or reject a trade request against its quoted price.

Previously, the market was concerned that Last Look provided LPs the ability to step out of a trade when the market had moved against its position. To address this concern, in December 2017 Principle 17 was amended to advocate that all activity undertaken by a market participant in the Last Look period be fully disclosed to clients. The purpose of this amendment was to ensure all participants appropriately manage their risks and that there is full visibility over the use of Last Look by the respective LP.

Since making this amendment, transparency has increased for LCs on the other side of a trade who are now able to compare the reject rates of an LP on a relative basis, effectively creating a framework where sustainable and profitable relationships can be identified more easily. This environment also allows LPs to make informed decisions and facilitate pricing that is more favourable to their clients but lower risk and still profitable to their desk. Trading decisions based on this information may lead to greater continuity and stability in pricing for the benefit of the whole market.

Taking this a stage further, if multi-dealer platforms are able to provide their clients with enhanced data, the insight gained from increased transparency and the resulting actions of market participants will encourage better behaviour within the FX markets and achieve the overarching goals of the Code.

As a result of an industry-wide move for greater transparency, over the past 18 months EBS has witnessed spreads tighten and reject rates and hold times come down, becoming more symmetrical in the process. Looking at the top 10 liquidity providers on the EBS platform, average hold times have reduced 61% from 93 milliseconds 18 months ago compared with 37 milliseconds today. Similarly over the same period reject rates have reduced by 41% from an average of 5.3% to 3.15%. This suggests that market participants are adhering to the core principles of the Code, utilising enhanced data analytics to provide greater transparency and improve market behaviour.

Screenshot from Quant Analytics¹ shows how data driven insights can influence client behaviour

LC A, using the Net Alpha analysis, has discovered that LP 5 has a hold time demonstrably higher than most other LPs at 154 ms. Despite a low reject rate of 2.9% and a positive Net Alpha, LC A has the data and transparency provided by Quant Analytics to challenge LP 5 as to reduce their hold times in line with other similar profile LPs i.e. LP 10 where fills are 100% and hold times 8ms, thereby ensuring better certainty of execution.

	Rej Count	LP Reject %	EBS Avg LP Rej	Net Alpha (USD per...)	EBS Net Alpha (US...)	LP Hold Time
Total	293	3.2%	6.9%	6.17	9.63	36
LP1	9	0.3%	5.6%	4.97	9.80	51
LP2	116	4.8%	7.1%	7.20	9.65	4
LP3	0	0.0%	7.1%	15.64	10.48	11
LP4	88	6.5%	7.5%	7.57	9.59	65
LP5	21	2.9%	6.8%	7.37	9.79	154
LP6	8	1.3%	6.6%	5.18	9.46	29
LP7	20	17.8%	9.6%	-35.10	4.44	76
LP8	14	3.6%	6.6%	7.46	11.25	34
LP9	14	4.1%	7.2%	5.26	9.96	39
LP10	0	0.0%	6.4%	6.99	8.64	8
LP11	3	3.2%	6.9%	4.13	8.18	14
LP12	0	0.0%	5.2%	1.59	10.71	11
LP13	0	0.0%	4.5%	0.00	13.83	82

¹ Quant Analytics is a NEX Markets analytics service which provides EBS clients with greater insight into their trading performance relative to the wider EBS FX community.

Adapting matching logic and execution to improve market behaviour

When looking at how to comply with the Code, much of the market has focused on the relationship between the LP and the LC. Yet trading venues have an important role to play in supporting price discovery and encouraging adherence to the core principles of the Code. For example, by adapting matching logic and execution workflow, trading venues are able to provide clients with deep analysis of their orders and market data which ultimately results in positive market behaviour.

Prior to the introduction of the Code, LCs who typically swept for larger tickets created significant market impact which often resulted in a worse price over time. Following the Code, EBS launched aggregation logic in 2017 to move orders to single ticket (full amount) liquidity above a pre-defined size. The change in matching logic has seen clients benefit from tighter spreads and improved certainty of execution on both sides of the trade; valuable to the wider market.

Data from EBS demonstrates how aggregation logic has encouraged better LC behaviour

To date, much of the Code has focused on the behaviour of the LPs. However, in the past LCs who have executed by the sweeping matching logic have been responsible for more market impact and a lower yield, simply to ensure their orders are filled.

The uptake of aggregation logic matching on EBS has resulted in a greater number of LCs matching via full amount trading where the race conditions for hedging are removed and LPs are able to maintain and quote tighter spreads. This approach benefits both the LC and the LP as LPs are encouraged to price more competitively, and market impact is lower.

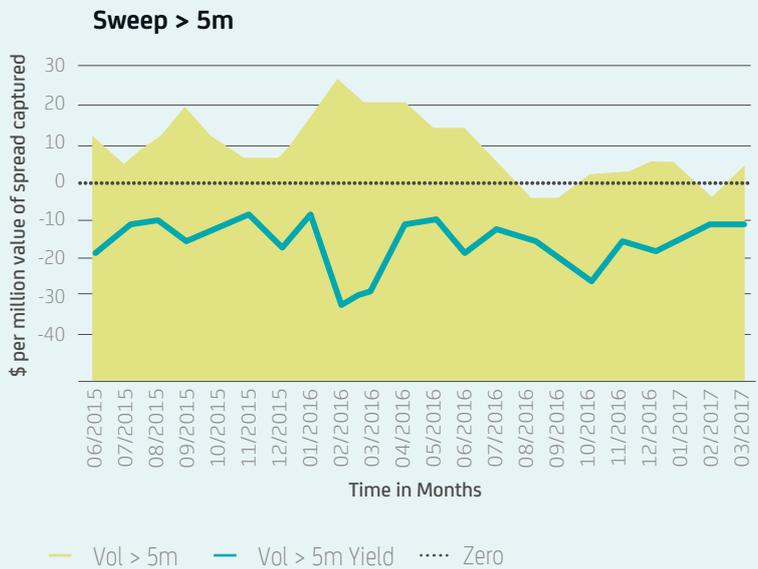


Fig 1. This aggregate bilateral liquidity is primarily used for smaller deal sizes or to break up larger orders to work over a period of time. Allowing for adequate time between sweeps will encourage higher fill ratios and more competitive prices.

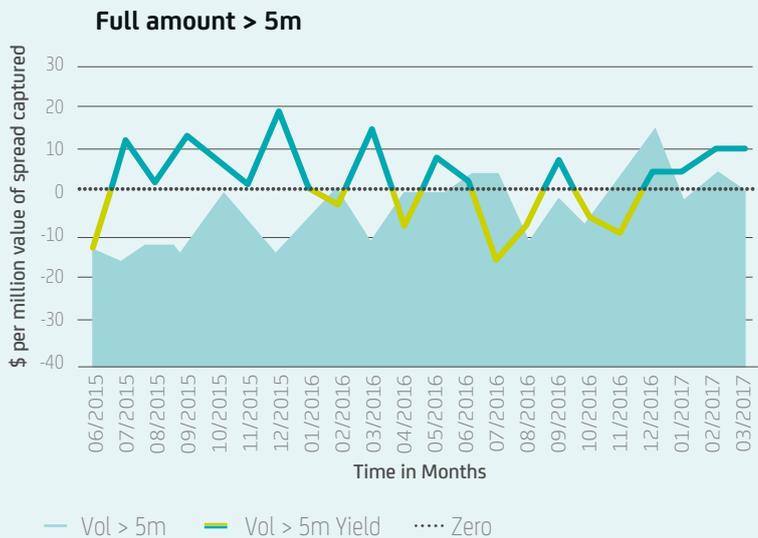


Fig 2. This aggregate bilateral liquidity pool is conducive with less market impact. Executing through one LP and one ticket means the trade is easier to internalise and manage risk, thereby offering the LC better pricing and greater assurance of execution while reducing market impact.

Spreads

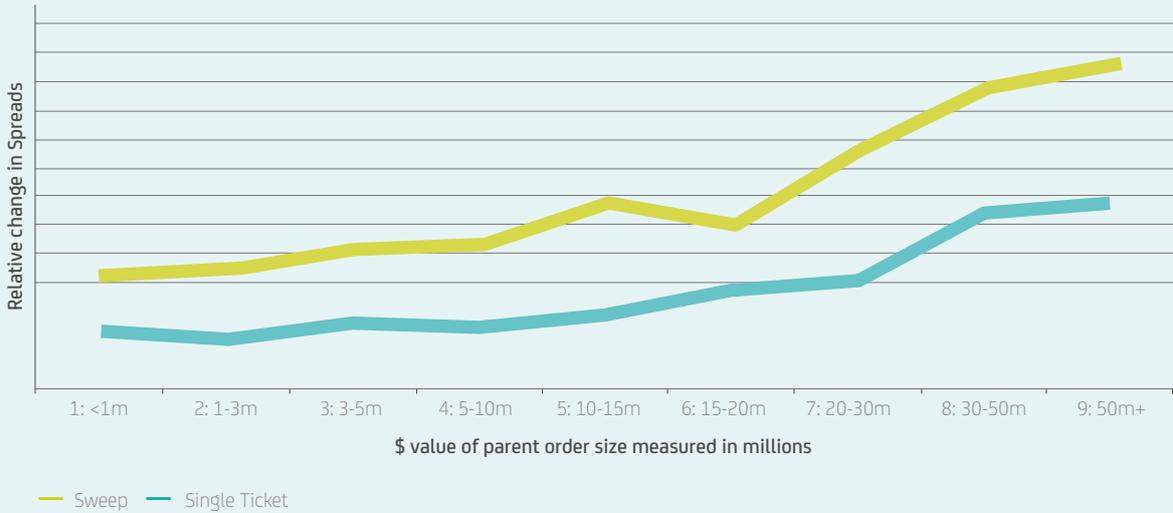


Fig 3. This graph represents relative change in spreads across parent order size buckets, comparing Sweep versus Single Ticket spreads. The results demonstrate that Single Ticket spreads for larger buckets on aggregate are tighter than when transacted over Sweep.

Sweep V Single Ticket Volumes



Fig 4. The above graph represents the relative share of volume transacted in Sweep and Single ticket pre and post the move to the new Aggregation Logic, where orders > \$5m are automatically executed against Single Ticket Liquidity. Single Ticket volumes now match Sweep volumes on a 50:50 basis compared to 80:20 prior.



TRANSPARENCY AIDING BEST EXECUTION

At present, the FX industry is focused on how improved transparency from both the LP and the LC can aid best execution. LPs committed to the Code are encouraged to provide competitive pricing and more efficient execution to their clients, while managing their own prices and risks.

Yet when faced with uncertainty around the behaviour of a client, the easiest way for an LP to manage the risk is to widen their pricing. However, the more information the LP has about the LCs transaction profile the more accurate the price they can provide. If both the LP and the LC take responsibility for disclosing all relevant information and aggregation venues add flags to their static reporting suite to clearly identify to the end user which LPs and LCs attest to the Code, the marketplace will be more efficient and mutually beneficial for all.

Transaction Cost Analysis (TCA) has been actively used in the institutional investor space for many years and has been instrumental in introducing greater transparency, which in turn has led to more efficient pricing and improved execution. With the arrival of the Code, the active trading community is beginning to see the value in providing and benefiting from greater transparency. Led by multi-dealer bilateral venues, enhanced analytics allow market participants to compare their trading performance relative to community averages, thereby preserving the integrity of participants' data.

Data from Quant Analytics demonstrates LP reject rates relative to the EBS average

By analysing the reject rate of an individual LP versus the EBS LP community and the cost of each reject, LCs trading via EBS have greater transparency and can make more informed trading decisions and encourage reject rates to come down. LC A, has discovered that their reject rate with LP 5 is 30.9%, where as the same LC only has a reject rate of 3.2% with other LPs. LC A has two options – to look further in to the data provided and make changes to their behaviour – or to choose not to use LP 5. Either route is acceptable but with the additional transparency provided by Quant Analytics, LC A can make an informed decision and have greater clarity in the outcome of their trading activity.

LP Inst Code	Match Vol (USDm)	Trade Vol (USDm)	Rej Count	LP Rej %	EBS Avg LP Rej	Other LP Avg Rej	Net Alpha (USD ...	EBS Net Alpha (U...	LP Hold Time
Total	884.48	831.43	51	6.0%	7.1%		7.51	8.85	31
LP1	145.93	145.93	0	0.0%	6.7%	6.8%	9.67	8.85	4
LP2	130.64	127.14	3	2.7%	7.3%	10.6%	9.66	9.00	77
LP3	118.00	118.00	0	0.0%	6.3%	10.5%	6.67	8.36	53
LP4	107.43	106.43	1	0.9%	7.7%	7.5%	8.16	8.41	2
LP5	101.23	69.95	32	30.9%	7.6%	3.2%	3.93	8.95	5
LP6	76.09	74.77	1	1.7%	7.6%	10.7%	6.62	9.17	55
LP7	59.27	56.94	2	3.9%	7.0%	7.2%	4.67	9.13	38
LP8	44.39	44.39	0	0.0%	8.1%	10.0%	7.42	9.11	9
LP9	21.98	20.65	1	6.0%	6.4%	7.4%	0.97	8.80	54
LP10	20.85	18.87	2	9.5%	7.1%	3.3%	4.37	11.04	62
LP11	19.63	19.63	0	0.0%	7.6%	7.0%	17.31	8.40	7
LP12	13.72	12.40	1	9.6%	6.1%	8.0%	12.21	9.51	29
LP13	10.91	1.91	8	82.5%	4.7%	0.0%	1.69	9.41	34
LP14	9.71	9.71	0	0.0%	8.7%	5.2%	12.26	6.96	7

While best execution is not enforced in the spot FX markets, there are several metrics that participants can use to assess best execution, such as:

Last look hold times

The time taken for a market maker to respond to a client's order request once it's received from the trading venue.

Fill ratios

The percentage completion of a client's order.

Cost of rejects

Calculated as the difference between the average price of similar executed orders which took place immediately after a reject and the actual price of the rejected order.

Alpha

Is defined as the instantaneous added value of each LP that the client trades with, taking into consideration reject rates and last look hold times and comparing them to their community / platform averages.

Providing these metrics is merely a start, the next steps are to standardise the methodology across the sector and ensure like-for-like comparison of behaviour. This should drive best practice and in turn encourage behavioural change and ensure a more robust, fair and transparent marketplace.



WHERE DOES
THE FX MARKET
GO FROM HERE?
**PREDICTIONS
FOR THE
FUTURE AND
CLOSING
THOUGHTS**

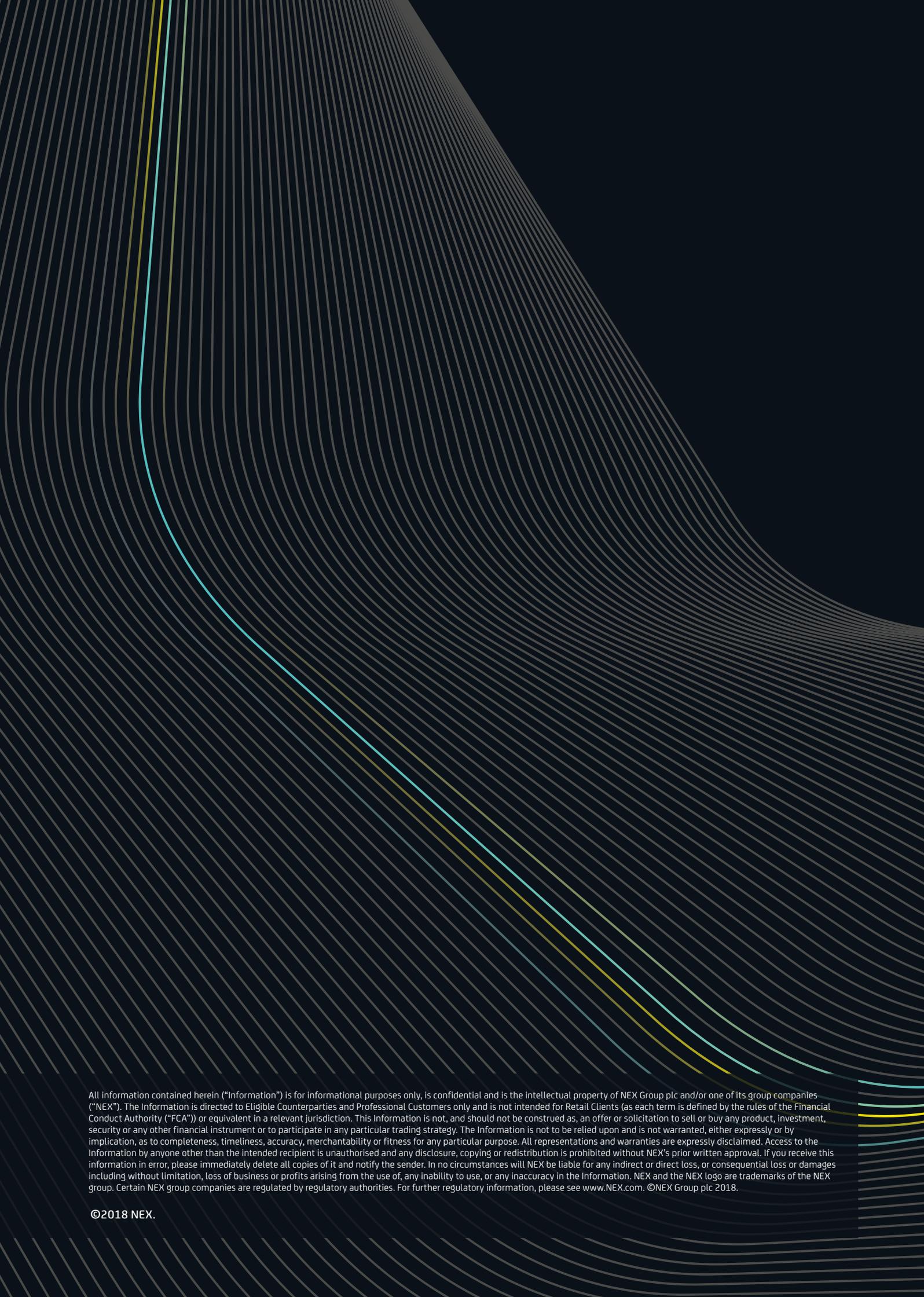
The Code has achieved a lot in its first year, particularly when taking into consideration its principles-based initiative, rather than being a mandatory directive. The industry is responsible for getting behind the Code and encouraging greater adoption to create a healthier market environment for all.

In the next couple of years, we predict there will be several industry defining moments:

- Increased attestation to Global Code of Conduct Registers. Market participants that have signed up to the Code will encourage others to sign up and market behaviour will therefore improve at a steady pace as more strive to conform. In addition, adding flags that clearly identify to the end user which LPs and LCs have attested to the code could incentivise greater sign up.
- The proliferation of data and analytics in the industry will increase transparency and result in:
 - an increase in best execution
 - improved behaviour
 - reduction in the use of Last Look
 - an increase of trust amongst all participants
- Coupled with developments in data science and machine learning, market participants will be able to monitor performance more effectively and encourage an improvement in trading behaviour, such as requesting tighter pricing or changing counterparties.
- A move away from static reporting towards analytics via API feeds will allow clients to receive near real-time analytics in a raw format to supplement their own proprietary analytics.
- Central Banks have played a crucial role in promoting the Code and ensuring its adoption. If the change of behaviour is not forthcoming or less prevalent across the market participants than hoped, it is likely that more robust legislative or regulatory action will be taken.
- In the UK specifically, regulators will use the Code to start monitoring market conduct and could link the principles to existing conduct regulation effectively enforcing the Principles outlined in the Code at that point.

It is critical that market participants get behind the Code in 2018, the second year of its existence. If the wholesale FX industry does not take this opportunity to sign up to a common set of principles written by those respected in our industry, it is highly likely that we will end up with regulations which will be lengthy and expensive to implement.

The Code has already encouraged greater transparency and a change of behaviours for the better. With full adherence, we can create a fairer, healthier trading environment for all.



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