



# NDFs

An exciting FX growth story of wider market access, new trading opportunities and increasing electrification

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**What factors are driving increased volumes and fast growing demand for NDFs?**

**CT:** Asian and LATAM regions are seeing significantly higher growth compared to developed economies, despite trade war worries. International investors looking for positive yields have increased their exposure and with that, their hedging requirement. The increased electrification of the NDF market has also created a virtuous circle of liquidity, with improved access and transparency leading to increased activity, which in turn allows for more liquidity and tighter spreads. This reduction in transaction costs has made NDFs a viable asset class for investors with a shorter-term horizon.

**How has the industry been working to improve and facilitate market access to NDFs?**

**JV:** I think its fair to say that access to NDF's is much easier now than it was a few short years ago. That's the result of

a lot of hard work by a small group of people. It's also important to recognise that each of the underlying, is very much it's own market. INR is not the same as KRW and BRL is not similar to TWD. Building a better experience for users involves combining very different elements, market by market, where there is a combination of bank, non bank, futures, manual, electronic, prime and clearing all working together to serve up a better eNDF market.

**What pressures are encouraging more trading firms to move to a cleared model for NDFs?**

**TN:** With NDFs in scope for UMR, holding bilateral NDF positions has become expensive for some firms. Basel III's Risk-Weighted Assets (RWA) and Leverage Ratio framework attributes lower capital requirements to cleared versus bilateral portfolios. Once you combine the higher capital costs of bilateral trades with the additional initial margin (IM) required under UMR, the balance tilts in favour of

clearing as many products as possible, including NDFs. Comparing a firm's bilateral IM under UMR with cleared IM will show that clearing is much cheaper and offers both capital and margin benefits. Clearing also allows some firms to manage their aggregate average notional amount (AANA) and possibly reduce the scope of eligible sub-accounts for the UMR.

**How has clearing helped to reduce the cost of NDF trading and provide support for firms like Prime Brokers active in this market?**

**TN:** Participants trading bilaterally under UMR face the daunting challenge of determining who to trade with in order to optimise IM, as not all execution counterparties have equivalent collateral or IM implications. As a result, where it is more efficient to do so, prepared firms will switch from a bilateral to a cleared strategy, where all participants face the CCP as their counterparty, and hence face lower post-trade fees from optimization vendors, third-party custodians, and other consultants. Most foreign exchange prime brokers (FXPBs) are part of business units that include clearing brokers. Some of these FXPBs intend to move a large amount of their client business from FXPB to cleared FX, which offers significant cost savings to FXPBs, clients and executing brokers from a capital and margin perspective.

**In what ways is the NDF market more robust than it was 4 or 5 years ago and why are more buy-side firms than ever before now able to exploit opportunities with these instruments?**

**EB:** There are a number of factors that have contributed to making the non-deliverable forwards (NDF) market more robust over the last 4 or 5 years. To begin with, an ever-present desire for aggregated NDF liquidity coupled



Christopher Torrington

The increased electrification of the NDF market has also created a virtuous circle of liquidity



with regulatory driven transparency requirements created an environment ripe for increased electronification. This increased electronification set the stage for increased volumes and one only need consult the 2019 Triennial Central Bank Survey to confirm this. While non-deliverable forwards volumes are not explicitly tracked in the survey, it notes a significant pickup in average daily turnover of outright forwards (+43% 2019 vs 2016), attributing a large part of the rise to non-deliverable forwards (NDFs). As volumes grew, liquidity providers became more comfortable streaming prices, further increasing liquidity and enhancing market robustness. More recently, banks have begun to roll out NDF specific algos to their clients, further driving the need for streamed pricing.



Edward Brown

Platforms need to operate under clear rules of engagement in order to provide the foundation for orderly and deterministic trading

**How have leading providers been responding to pressures to compete in this market by launching new products and working to differentiate their offerings?**

**CT:** As the NDF market matures, I would expect it to follow a similar path to G10 electronification. First, liquid tenor NDFs were traded electronically, then NDF swaps and more recently NDF algos were introduced. Whilst at first having a streaming electronic NDF price at all was an achievement, now the differentiating factor has become the ability to offer deep liquidity by leveraging the internalisation power of a large franchise. In Asia, Singapore is further extending its position as the main voice trading centre for NDFs with investments in eTrading infrastructure. Citi has been a part of this effort bringing our pricing engine closer to clients in this key location.

**Why is pricing such an important issue in NDF trading?**

**BL:** Although liquid NDFs are already trading electronically, the market still has

an issue regarding price transparency for illiquid NDFs; particularly for markets such as CIS, Africa and Asia. Despite rising client demand, finding the fair price for the instrument and the size required is still a challenging, manual process for two main reasons. Firstly, there are tight controls imposed on the illiquid instruments due to liquidity and bank risk limits. These controls eventually impact price. Secondly, as market data is scarce, constructing a price for illiquid products is not simple or easy. Market making and trading the risk needs the right knowledge, experience and skillset to be done successfully – particularly in the context of a new regulatory environment which requires dealers to evidence that they are offering best execution to clients.

**In what ways has the arrival of NDF clearing helped newer players enter into the market?**

**TN:** Clearing presents a new phase in the evolution of the FX market. Early adoption of clearing presented

a significant opportunity for first-mover banks and has enabled them to become leaders in their space. From the buy-side perspective, central clearing reduces the pressure of efficient counterparty selection, since all participants end up facing the central counterparty (CCP) on their transactions, no matter who the original counterparty to the trade was. This leads to wider counterparty selection and opens up opportunities for newer players.

**In what ways can the NDF market still be a challenge for many trading firms who may have to deal with a variety of issues including unexpected volatility spikes?**

**BL:** Whilst liquid NDFs have higher trading limits, more available pricing, and more plentiful participating counterparties, trading illiquid NDFs is significantly more difficult.

As a consequence of tighter controls, the specialist banks and dealers who are engaging fully with NDFs are taking a





Jon Vollemaere

Building a better experience for users involves very different elements market by market

lot of risk onto their own book, which they manage as they make markets. When there is something that moves the market, volatility will increase and sudden price movement will catch participants out. This is normal in a market where information is scarce, but is a factor trading firms need to take into account.

**Managing sizeable risk in NDFs remains a real challenge. What can be done about that?**

**JV:** Clearing is the natural choice for larger risk or longer dates and excuse the pun, but the statistics clearly show that. There is certainly an increase in the number of firms wanting to or intending to use clearing as a risk mitigation on NDF. At the end of the day – just like any book – the more buyers and sellers you can match off against each other the better, albeit in some clients that is still pretty much done on a spreadsheet, written a long time ago by a guy who doesn't work here anymore – so maybe clearing is an even better idea. You

also get the benefit of netting, off sets and some clearing houses have real flexibility in what is considered 'margin'. At the end of the day the risk is in USD – which tends to make NDF's far more appealing in a number of ways compared to the underlying where there is a larger amount of risk concentration.

**Given voluntary clearing is already being taken up, are there any risks to the market in prematurely introducing mandatory NDF clearing?**

**TN:** Although there are no mandates for clearing FX, the UMR incentivises firms to clear certain eligible products, including NDFs and FX options, voluntarily. [Thus, an NDF clearing mandate may not have a significant impact on the broader industry].

**An efficient electronic market in one month NDFs has now been established. How can e-trading providers now meet the needs of a**

**broader section of the market? For example, to cater to those trading firms seeking off the run dates and longer tenors and rolls?**

**JV:** Providing odd dates or amounts is easily resolved with an RFQ model around it – pricing is not as competitive as the one month so the LP is rewarded for that price but at the same time he's potentially able to help balance out that book problem discussed above. In terms of what we see for NDF 2020 – there is a great opportunity in the CNY/ CNH market where the CNY is an NDF and we have always had the view that there's room to grow in the NDF to CFD world. Opening up retail for NDF will benefit everyone in a number of ways.

**We are starting to see the arrival of NDF algos. Why does this market lend itself well to algorithmic trading?**

**CT:** The first iteration of NDF algos attracted interest from clients who were used to using them to execute their spot business. Feedback has been lukewarm however, with reports of high market impact and as well as high cost. Part of the challenge has been that today there is only one interbank venue with significant volumes to access. I expect the next generation of NDF algos to focus on internalisation ability, where a bank with a footprint like Citi will be able to offer something unique.

**What types of firms are increasingly looking for NDF algo products and why?**

**EB:** Institutional firms trading NDFs today, including both corporates and traditional asset managers, are increasingly looking at NDF algos as they continue automating workflow. Based on experience in the spot market, these client profiles understand the benefit of algo products and are

looking to expand their use where appropriate. Given the increased turnover and robustness in/of the NDF market, leveraging NDF specific algos is a natural extension of this approach and as such, banks have begun answering this call by rolling out their own NDF algo. However, it is still early in the evolution of NDF algo products and it may be some time before they become mainstream.

**What impact has the introduction of non-bank liquidity providers to the NDF market had and in what ways are new players like these helping to strengthen it?**

**JV:** Non Bank LP's where there from the start when it comes to eNDF pricing and that needs to be fully recognised. Many banks were unable to electronically price or afraid of doing so. That has now changed. If you look at INR as an example – its not banks that lead that market – it's hundreds of small Indian shops in Dubai and Singapore who are pricing on the back of an arb, hedge, or speculative view. The recent INR NDF numbers show that and its another simple example of the fact that 'liquidity attracts liquidity' regardless of who's the first price each day.

**How important is it to protect the existing ecology of NDF trading and what can platform providers do via the use of toolsets and rules to prevent disruptive behaviours in this relatively fragile market?**

**BL:** Traditionally NDF trading has primarily been a voice market, but digitalisation of these products is rapidly changing the ecosystem. We see this as a positive market evolution, providing the platform providers adhere to toolsets and logical rules to protect the integrity of the market. For example, digital platforms can build customer confidence in the products, as they can compare providers and



Bobby Lau

We expect EM and Frontier NDFs to have a major impact due to the growing appetite to diversify into certain countries

attain prices at a click of a button. This avoids liquidity abuse as well as giving clients more autonomy. We operate in markets where we have long-standing relationships and experience, which we think is key to navigating these markets successfully. This knowledge means we are able to determine liquidity in a very granular way, and can price these products effectively in order to prevent disruptive behaviours.

**Is manual trading likely to remain a key part of the NDF market for the foreseeable future or can we expect ever more electrification?**

**BL:** We are seeing a major shift towards liquid NDFs being traded electronically more frequently than over voice, and are closely monitoring the development of algorithmic strategies on established currencies. Illiquid NDFs are still largely in the development stage for digitisation and remain mostly on voice. The forces to digitise the illiquid NDFs are multiple and are underpinned by client requirements and demand, as

well as regulatory changes such as best execution.

**What steps can be taken to increase participation in the NDF market and widen its appeal still further?**

**CT:** Two related factors have been holding back the faster development of the NDF market. Firstly, availability of credit has made NDF trading expensive as well as making multilateral trading venues difficult to operate. Clearing of interbank trades has helped ease this challenge, however Prime Brokers have not yet followed suit, inhibiting the growth of customer business. Secondly, the patchwork of national regulations have led to a fragmented marketplace of SEFs, MTFs, RMOs and more. Clients may have to use multiple venues and sign multiple rulebooks to be able to see prices from all of their LPs. Recent announcements of mutual recognition between the CFTC, EU and MAS should spur the development of venues able to cater to all clients.



Tamaryn Nuttall

Those that choose to clear their NDFs may have a competitive advantage

**What work still needs to be done to further improve the ability of market infrastructures to support NDF clearing mandates and implement processes for managing events such as a counterparty default?**

**TN:** Clearing workflows in mandated asset classes, such as Rates and Credit, use straight-through-processing (STP). There is still work to be done for the industry to find a way to seamlessly submit FX trades from the point of execution to clearing. The adoption of diverse FX EMS/OMS providers, single-dealer and multi-dealer platforms will require the collective efforts of all dealers, prime brokers, clearing members, CCPs and platforms.

**What's needed to protect the future of the NDF market and to ensure that it evolves into a healthy ecosystem?**

**EB:** Several critical components are necessary to ensure the NDF market continues to evolve into a healthy

ecosystem. First, it is important that there be a diverse participant base. Without that, it will be difficult to draw in the natural interest necessary to sustain a healthy marketplace. To do this, the market must also support differing credit profiles/relationships and trading modalities, including bilateral, credit intermediated, cleared, disclosed, anonymous, streaming, RFQ/RFS, etc. Finally, platforms need to operate under clear rules of engagement in order to provide the foundation for orderly and deterministic trading.

**Looking ahead why is NDF clearing likely to become an increasingly important tool for trading firms as the regulatory and market landscape develops further?**

**TN:** Maintaining bilateral positions may see firms incur larger costs for certain trades from a capital and margin perspective. Those that choose to clear their NDFs may have a competitive advantage, and may be able to offer

better pricing and balance sheets to their counterparties.

**NDFs have been instrumental in driving growth across Asian FX markets. Why are they likely to have the same impact across other Emerging and Frontier markets?**

**BL:** Clients are always looking for ways to diversify risk management and increase alpha. Clients are used to trading FX markets with a certain level of pre-execution information and post-execution analysis, which is lacking in illiquid NDFs. As a consequence, client demand is still relatively small. Fast and accurate information from electronic channels will attract more clients, increasing the trading flows and limits available for these currencies – ultimately helping those markets to grow. As with the Asian and Latam markets, we expect the EM and Frontier NDFs to also gain major growth due to the increasing appetite to diversify into these countries.

**The latest BIS survey figures regarding outright forwards showed that NDFs accounted for a significant share of the increase in trading between 2016 and 2019, with especially strong activity in Korean won, Indian rupee and Brazilian real NDF markets. What assumptions can we draw from this data?**

**EB:** As certain segments of the NDF market grow (e.g. Korean won, Indian rupee, Brazilian real, Taiwan dollar) and become more liquid, we should assume there will be a continuing expansion of the ecosystem with the introduction of new market participants and providers. This can already be seen in the recent number of platforms announcing a streaming NDF service, bank also announcements and growing willingness of Prime Banks to provide credit intermediation.