Why FX can now move towards deep dive analytics

By Matthew Hodgson, Founder and CEO of Mosaic Smart Data

Having access to the right data at the right time is vital for profitability and performance. In 2019, the financial industry spent a record USD 50 billion on market and trade data. Spending on data products and services was up five per cent on 2018 and is expected to rise by the same rate again by the end of 2020. It stands to reason, then, that the use of suitable data in all markets, including foreign exchange (FX), can have a huge impact on profitability.

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ARE TRADITIONAL METHODS OF DATA ANALYTICS HAMPERING FX?

As the most liquid global market, trading currencies is a major element of what keeps the financial services industry and associated businesses running. Yet, FX is such a disparate market. The lack of any central repository or ticker system, as is the case for equities, means there is no transparency of trades. The multitude of data inputs and variable messaging results in inconsistencies of operation, with traders having no overview of prevailing pricing structures. The prevalence of bilateral flow deals negates an apparent need for such an overview, and the sheer volume of

activities makes it difficult to aggregate data in real-time. This disparate nature of the market is a real challenge for data scientists. In traditional operations, the 'pull' factor, whereby an analyst asks questions of a database and waits for answers via a queueing system, is too slow for today's fast-paced operations.

To make the market more streamlined, a shared computational language and consistent messaging are needed. Normalisation – that is, standardisation or harmonisation – of data would lead to the ability to share that data in near real-time, enabling understanding and activity at a lower latency.

WHY IS NOW THE RIGHT TIME FOR A CHANGE?

Institutions are spending more and more on buying data from trading platforms and exchanges, but instead the impetus should be on asking practical and business-critical questions that can offer value-generating insights. New technologies can enable this.

Innovation in the architecture of data analytics has led to better and faster options. Instead of asking for data via 'pull' processes, new platforms can offer 'push' methods, whereby intelligence is offered without prompting. Not only does this offer insights and therefore guide participants to trading

opportunities, but the proactive nature means there is no need to wait for answers. This allows for up-to-the-second actions.

This is a transformational shift. When I think back to my time working in foreign exchange and fixed income markets, answering basic questions about our business activities was often impossible. In trading across various platforms, each capturing trades in a different format at varying levels of detail, the best option each morning was to look at the previous day's end-of-day report. In today's fast-moving trading environment, that's almost useless when it comes to making informed decisions. It's like driving down the motorway only looking in your rear-view mirror.

The problem of disparate data, which is underutilised and spread out across an institution, should be tackled so that participants can move from a siloed, historical view to a global, real-time view. It may sound obvious, but market participants really should be able to

understand their business at any level of detail, from the most granular level up to the institution-wide or franchise view in real-time. And they should be able to easily manipulate that data to answer a wide range of business-critical questions.

THE MOVE FROM 'BIG DATA' TO 'SMART DATA'

Every market participant today needs data analytics, but having a mass of 'big data' is not enough. To engender an environment that comprehensively provides useful data – that is, real insights that can be acted upon in an up-to-the-second manner – there is a need to transform those big data inputs into smart data outputs.

With artificial intelligence (AI), there is the ability to guide participants' attention to particular areas of interest. And if the context for such guidance is offered, all the better. Whereas institutions traditionally rely on having quantitative analysts forecasting likely actions and explaining their reasoning, the use of platforms that generate smart

data can replicate that activity quickly and personalise the output for all front-office participants in the institution.

In addition, the benefit of an electronic platform is that it can operate 24/7, enabling a real competitive advantage. Moreover, the use of machine learning means that such a platform can learn from experience and provide an increasingly expert and personalised service.

PERSONALISED SERVICE

The use of smart data analytics and aspects such as Natural Language Generation (NLG) are the way forward in having access to a personalised trading service. Today, we're all familiar with a multitude of options in our personal lives such as Netflix, whose technology learns from our viewing habits and makes recommendations based not only on our interests, but also on those of other people with a similar demographic profile.

Amazon, Google, Facebook, LinkedIn - all these services are doing the same thing. It is fundamental to what has made them part of our everyday lives. This same principle should – and can be – applied to financial market analytics.

This is more than just about creating convenience. One of the most powerful aspects of modern big data analytics is the ability to identify patterns which might not be intuitively clear to us. If your analytics platform isn't bringing these patterns to your attention, then it is only providing you with a fraction of its potential value.

SPOTTING OPPORTUNITIES

One of the fascinating things about how artificial intelligence has developed is just how differently it can approach problems compared to even the most expert human-thinkers. If we are not building smart systems which can share their own analysis and insights, as well

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as answering our questions, then we are not maximising the potential of our technology.

For example, when DeepMind Technologies built AlphaGo - the first artificial intelligence programme able to beat Masters of the notoriously complex Korean boardgame Go - the programme introduced multiple, never before seen moves and play patterns to this centuries-old game. Computers approach problems from fundamentally different perspectives to human thinkers. It is no surprise that they can often reach very different conclusions, but the development of AlphaGo has made a significant shift in how the world's top players approach the game they've devoted their lives to understanding.

In any market environment, spotting opportunities before competitors is a key component of success. So, by creating a dialogue between man and machine, where technology can advise as well as serve us, we would be able to maximise the effectiveness of both.

PARTNERING WITH OTHER EXPERTS

As with any industry, the chance to collaborate with experts in other sectors can generate new thoughts and methodologies. The European Space Agency (ESA) is one such organisation that works with fintechs to explore new processes. Analysis of its algorithms used on satellites can identify anomalous readings on the thousands of highly tuned instruments, acting as an early warning system for potential technical faults.

These anomaly detection systems provide the ESA with a far more sophisticated and fine-grained way to spot problems than a simple threshold model, which alert engineers when a measure goes outside a particular range. They rely on learning what it means for measures to be in a normal state - which might change as the satellite moves through its environment - and then flagging up what is no longer normal, for the engineers' attention. In other words, finding anomalies.

Why is this anomaly detection useful in financial markets? We know that what is normal is constantly changing. However, if our models can understand what normal is at any given moment, they'll be able to be much more sophisticated in flagging up to market participants points of deviation from the norm. These anomalies are the points which open up space for opportunity in the market.

SMART DATA IN FX MARKETS

So, what does this all mean for FX markets? FX trading is, of course, based on any number of real-world situations. Whether counterparties want to arrange a spot contract, or an airline is looking for a forward option to buy fuel, or corporates want to manage their FX exposure in any given region, the need for accurate and timely data is key. The issue is naturally made more complex by changeable geopolitical and socio-economic factors; the on-off trade war between the US and China, and the drawn-out Brexit process between the UK and the European Union (EU), are both factors in the FX ecosystem.

Ahead of the US election in November, Donald Trump's actions may be seen as a ploy to win voters. Yet a Bloomberg article suggested that his pledge to double exports to China will not bring the gains he anticipates; it indicated that lingering tariffs are likely to drag on, hampering business investment and leading to a loss of GDP of up to USD 316 billion by the end of 2020.

For the UK, trade negotiations with the EU and new arrangements with other countries will be complex, with uncertainty continuing until deals are finalised. And tensions in the Middle East – and between the US and Iran - are an ongoing cause for concern. Whatever happens on the

world stage, the unpredictable nature of international relations has a huge effect on the FX market.

Of course, these aren't the only influences. The FX market is moving further into electronic trading. Algorithms that lead to automated currency trading can operate faster than any man or woman on an FX desk.

If humans are to compete with fast-paced automated trading terminals, companies should consider collaborating with specialised fintech partners to take advantage of their innovative technologies. JP Morgan is well-known for incubating emerging tech companies through its In-Residence Program, and it is this forward-thinking attitude that enables the bank to remain at the pinnacle of the financial industry.

Resilience in FX markets can be leveraged by the use of sophisticated smart data analytics – that is, not just gathering big data, but gaining a 360-degree of the market. The questions all market participants ask are 'what is happening, why is it happening, and what will happen next?'. And to fully realise those questions, the use of an analytics platform that offers guidance towards opportunities – and conversely, information on what to avoid – as well as showing context for those options, provides huge scope to move forward in FX markets.

BENEFITS OF SMART DATA ANALYTICS FOR FX PARTICIPANTS

Participants across the FX space can benefit from a deep dive into smart data analytics in accessing and disseminating accurate information in real-time.

On the sell-side, banks can increase customer loyalty and grow their market share to become more profitable. Automation leads to smaller ticket sizes, and real-time analytics generates

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insights on the business activities of each customer; it is so much more useful to know what customers are doing, and with whom. This can help improve business models for all FX trades and manage the tiering of customers to optimise market segmentation.

On the buy-side, the use of smart data enables real-time transaction cost analysis and consequently will lead to better benchmarking and execution selection. One normalised data-set allows for a proof of best execution with supporting evidence.

For central banks, a normalised data model facilitates the ability to see all trades – electronic, direct and voice – in one standard format. An analytics tool enables trading venues to fully understand their customers' business activities, enabling the creation of appropriate reports and leading to any necessary supportive actions. And settlement providers and custodians are able to provide real-time analytics and accurate reporting for customers.

COMPETITIVE ADVANTAGE

Companies that engage in new technologies will have a huge competitive advantage because the benefits of smart data are compounding: firms which can, through superior performance, capture a larger portion of the market, will have more complete data to work from. That leads to enhanced performance, which in turn leads to an even greater market share.

This is a virtuous cycle which will mean performance and efficiency improvements will continue to accelerate for these early adopters, but will also make it extremely difficult for late-comers to catch-up.

Nuance and specificity in data analytics, and the ability to leverage even one pip, can lead to significant gains in FX markets. In this huge global market, this aggregation of marginal gains and the atomic level of understanding of all client, product and channel activity, is the real fuel to drive sustainable competitive advantage.

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