

# Blushing Blunders

Re-shaping data's role in modern trading after Citi's Revlon error

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# Blushing blunders

Jenna Lomax analyses why a fresh look at data services is needed in 2022 — following the recent “fat-finger” error of 2 May, as well as the 2020 debacle involving Citi and make-up giant Revlon



On 2 May 2022, a mistyped transaction by the London desk of New York bank, Citi, caused a fat-finger error for the European market which sent equities into a freefall, momentarily wiping off US\$315 billion from the European stock market.

A fat-finger trade, as it is coined in the financial industry, is a major mistake made by human error, instead of a computer or automated process, with the wrong information manually inputted for a trade.

The Citi incident came almost two years after another Citi fat-finger error in August 2020, when the bank accidentally sent creditors at make-up giant Revlon a combined payment of almost \$900 million, when it only intended to send (a comparatively mere) \$7.8 million in the form of an interest payment.

“We are still talking about this [error] because of the size of the transaction, the profile of the bank involved, and the potential consequences for the syndicated loan market,” says Mark Gibbs, head of Quant architecture at technology firm Coremont.

Just two years on, Gibbs adds: “We are already seeing so-called “Revlon clawback” clauses being written into credit agreements, which waive any rights of the lender under existing legislation.”

Fat-finger errors do not just lie with Citibank, of course. The aforementioned instances just so happen to give this writer two good examples for her article. Fat-finger errors are nothing new, and have been bringing data service blemishes to the surface for banks and traders, for some years now.

As the saying goes: “You have to know the past to understand the present.” With this adage in mind, over the course of the last 20 years, the financial industry has, to some extent, become a victim of its own success concerning trading and instant payments. Increased globalisation, coupled with the wonders of human ingenuity, are two factors that have brought the financial industry more growth — yet also more risk.

In the case of the Citi-Revlon error in 2020, Citi put the blunder down to a “clerical error”, whereas payments expert, Andy Schmidt, vice president and global industry lead for banking at CGI, says the error represented an operation and risk teams question: “Where do you draw that line between fulfilling an

obligation, and more thoroughly checking an outbound payment — an action that could slow down a payment itself?”

Essentially, the stakes that underpin modern instant trading sit so much higher, compared to those in years gone by. As the world has grown metaphorically smaller; the amount of money one single payment can carry — and at such a rapid rate — does little to heed trading anxieties.

In addition, “headlines will be made when a company approaches nearly one billion dollars worth of an error, as with the Citi-Revlon error,” says Steven Strange, head of product (asset management) at ION Markets.

### Fresh look

Modern securities markets started centuries ago, yet many of the biggest blunders (and near blunders) have happened in the last 10 years alone — due to the amount of money one single payment can send through, but also at the rapid rate in which payments can be sent consecutively.

The 2018 Samsung mistake saw an employee at South Korea’s Samsung Securities mistakenly allocate 2.8 billion shares to the company’s other employees, instead of giving them a dividend of 2.8 billion won as intended.

The cost of the mishap could have been as much as \$100 billion, but only some shares were sold. However, the mistake still led to an investigation into Samsung Securities’ methods of trading.

Four years prior, in 2014, there were a series of accidental orders for shares in some of Asia’s largest corporations. Orders included a request for 1.9 billion shares in Toyota.

The requested trade, among others, was later found to be made by a single Japanese trader. If the trade had been accepted, and not just requested, the cost for this potential blunder could have cost an eye-watering \$711 billion.

The above case studies all have the same commonality: they were all created by human mistake. Completely overcoming human error in fat-finger trades may be near-impossible, but

minimising their occurrence can become a reality, agreed the industry experts who kindly contributed to this piece.

As CGI’s Schmidt outlines: “An error within the remit of payments can be massive, as the Citi/Revlon error indicated — the industry will never completely eradicate them, but it needs to protect against them and prevent them as often and as well as it can.”

Throwing automation into the mix came out on top as — if not an overarching cure — a sufficient treatment to the minimisation of fat-finger errors, contributors said. Another answer to overcoming fat-finger errors was outsourcing for both technology and data services.

“We are seeing the pendulum swing very much in the direction of outsourcing,” says Roy Saadon, CEO of AccessFintech. “The amount of data banks are required to handle is growing exponentially. It makes little sense for each bank to try and build its own data services in-house.”

When deciding what part of their data infrastructure to outsource, a bank or trader needs to distinguish between machine learning and artificial intelligence (AI), when incorporating their differing capabilities, especially into data services.

Put simplistically, machine learning can be implemented to notice an anomaly in relevant patterns of data, while AI can be used to put a warning in a trading platform to alert when a payment is likely to be too big or incorrect — something that Vincent Kilcoyne, executive vice president of product management at SmartStream, expands on.

“Everybody is claiming they have the right data and they are building AI models. While that is interesting, the exciting part is when you take those AI models, and you incorporate them into your control infrastructure,” he says. “If you do not do this, you will have instances like fat-finger crashes.”

“When you do incorporate them, the challenge is to have your data control infrastructure include AI models, which can then help you analyse errors before they potentially happen. You can use AI models to help you interrogate why warnings were not given before a potential fat-finger crash,” Kilcoyne adds.

## Good foundations

Of course, the start of any challenge starts with the gathering of knowledge and analytics — the data.

“Data has to be accurate right from the start of the process, otherwise the whole process itself, and the end product, is compromised,” comments Daron Pearce, brand ambassador for Europe, Middle East and Africa at Goal Group.

When discussing whether data services need an evolution or resolution to lessen, if not completely eliminate fat-finger trades, AccessFintech’s Saadon says: “Both — as life is always a compromise! The most dramatic change (the revolution) has already happened — [the industry realises] that data is at the forefront of innovation. It is being treated as an asset.”

“The fantastic news is that organisations see the benefits of upgrading their technology to better handle their data. It is also becoming an easier process to manage and once completed, can improve workflows across financial services. Evolution can be a painful and painstaking process, but the results are worth it,” he adds.

SmartStream’s Kilcoyne also says bankers and traders need to consider both a resolution and evolution in changing data services. “There is a whole rethink that needs to happen — an evolution in master and reference data,” he outlines.

This evolution is needed, “to make sure that when banks and traders are looking at trades from a global source perspective, they actually have all of the underlying identifiers in the global marketplace available to them,” he highlights.

In addition, through a resolute approach, Kilcoyne adds: “Bankers and traders can optimise their use of global position data, and align this with their operational processes. By fusing those two elements together, they can eliminate most errors, and lessen the disconnect in the way in which they operate.”

## Building coverage

Realistically, the need to build on data architecture teams has not come at a great time, amid external factors such as the “Great Resignation”, and longer-running industry obligations such as regulation compliance, though the latter has always been expected from a bank and trader — even more so since the Financial Crisis of 2008.

Even so, research from ACA Group, released in February 2022, revealed that 97 per cent of reports under Markets in Financial Instruments Regulation and European Market Infrastructure Regulation contained data-related inaccuracies in 2021.

There is also evidence to suggest that firms either remain naive around their reporting obligations, have misplaced confidence in the quality of their reporting, or simply do not know that they are in breach, the research adds. This siloed way of operating for reporting — where one department is not



often aware of what another is doing — is also mirrored in the problems behind fat-finger trading.

ION Markets' Strange expands: "As a financial firm, you must have a good foundation to understand the data that is available to you — that includes all the services and data of the products that consume it. Having a solid foundation of that understanding is significant. You can then build your architecture teams and avoid having siloed teams working on the "latest and greatest" with data scientists."

In addition, the siloed nature of such teams is just one reason why the building of improved architecture teams is needed, whether it is for meeting regulatory compliance (as ACA Group deems the industry is still struggling with) or a better understanding of relevant data, before going ahead with a trade. However, it is not just siloed teams in the industry that need addressing, it is also those teams' willingness and ability to change that will streamline data and also payment services to mitigate fat-finger trades.

"Improvement will only come if businesses are willing — and able — to upgrade the systems, processes, and workflows around the key functions around payments," says CGI's Schmidt.

"This is especially true in the world of faster cross-border payments where payment settlement is immediate and irrevocable and laws can vary from country to country."

Regardless of the external influences, such as regulation compliance and struggles to find staff — at a time where it has been well-documented the industry is leaving their jobs in droves — the fact still remains that reduced global settlement compression times, and generally faster cross-border payments (as Schmidt alludes to) also conjure up their own stresses for data services. With this, bankers and traders are navigating a new territory — albeit, not a territory that has popped up overnight. Settlement compression times have been tightening for many years, while payments have been increasing both in quantity and in monetary volume.

"Inevitably, more payment accidents will occur as payment volumes continue to increase," outlines CGI's Schmidt.

## Mixing it up

With all the above considered, and despite the financial industry's competitive nature, would an increase in discussion forums and standardisation help to mitigate fat-finger trades, or is it mostly further outsourcing for data services that will provide answers?

Goal Group's Pearce says: "There is no silver bullet. Data service providers need to collaborate on global standards and quality measures. Outsource providers need to continue to invest and consolidate their capabilities."

Coremont's Gibbs highlights: "Increased industry cooperation is very beneficial — allowing people to learn from others' true mistakes rather than the sound bites or hypotheses that they may see in the media.

"There seems to be some schadenfreude industry-wide," he adds. "But the reality is, many industry participants will have initiated fire-drills around their own risk management and payment processing systems."

The level of risk apparent through any trade is of course dependent on the size of a financial institution, and the amount any entity, or person, has been given to trade. The level of risk also depends on where in the world a bank or trader is accessing its data, and who from — internally or externally.

In addition, the bigger the bank or trading company, the more likely outsourcing of data services is likely to be, but this needs to remain a competitive edge for global banks' survival, says ION Market's Strange.

"We should be creating industry forums around common goals, but where outsourcing is concerned, you need to remain competitive," he says. "You need to take the technology that is available and then add your unique selling point, or your "secret sauce", so to speak."

Mihir Joglekar, business analyst at AutoRek, expands: "For large global corporations where the business operates across multiple time zones and cross-continental teams, by far the most effective and efficient solution is to outsource data services."



Though he adds: “Data services, industry standards and outsourcing are three distinct, but not mutually exclusive, areas and, in order to remain competitive, financial institutions should be looking to improve quality standards across all three.

“To prioritise one over the other would increase exposure to operational risk, and ultimately compromise a bank’s competitive advantage.”

### Changing face

A financial institutions’ competitive advantage and disadvantage is the speed at which a modern bank or trader is able to send money instantly — it is a double-edged sword.

The general consensus is: data services need to be further automated to avoid fat-finger errors, but the complicated debate remains: are some in the industry still not ready, willing, or able?

However, as Schmidt outlines: that is simply not an industry choice in 2022. “As necessary as it is to have the right brakes on your car in order to avoid an accident, you have to have appropriate safeguards around key functions like payments, to prevent – or at least mitigate the magnitude of a potential error,” he comments.

Realistically, humans will, for the foreseeable future, be needed to finish a trade, meaning errors, on some level, will always be an occurrence. Nonetheless, the data challenges that precede trade activation, are not impossible to overcome.

“It is worth pointing out that the reason companies like AccessFintech exist is to manage the myriad data challenges our clients face,” AccessFintech’s Saadon surmises. “It is our bread and butter, and our worth grows as these challenges become more complex.”

SmartStream’s Kilcoyne concludes: “Ultimately, the game is changing, the data is there, the analytical capability is there — it is the ability to mobilise that remains the challenge.” ■