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GLOBAL TRANSACTION BANKING & SECURITIES SERVICES

THRIVING IN A HYPER-CONNECTED WORLD

Alexandre MAYMAT
Head of Global Transaction & Payment Services

David ABITBOL
Head of Societe Generale Securities Services

Welcome to Expert Views, Societe Generale's dedicated insight into some of the compelling topics that are scheduled for broad discussion at Sibos, taking place in London, one of the world's great financial capitals, for the first time ever.

This year's overarching theme – thriving in a hyper-connected world – has sparked off lively internal debate amongst subject matter experts across the Global Transaction Banking and the Securities Services divisions of Societe Generale. Expert Views represents our attempt to synthesise their thinking and to communicate the key findings to our core audiences.

The individual and combined emphasis is very much on adapting to the future, and enabling clients to maximise the myriad opportunities that are certain to present themselves in this hyper-connected world where conversations feature numerous topics, such as blockchain, artificial intelligence, instantaneity of action and payment, and the relentless rise of machines.

They even, if only occasionally, include human beings. Such carbon-based life forms will still have a key role to play throughout the financial universe, however much the futurologists roaming across the planet would have it thought otherwise. Data banks, after all, cannot always be left entirely on their own, however open and transparent they become.

*Quis custodiet ipsos custodes?** Thus asked the Roman poet Juvenal in one of his satires (Satire VI, lines 347–348, Wikipedia assures us). The same might be asked today of the abundance of data and the producers of data. Custodians, perhaps, dare we suggest? We like to congratulate ourselves that our minds are as open as our architecture can be and that our core values – human relations, security and trust – underpin all of our thinking and each and every one of our actions.

We hope that the issues covered in these pages coincide with at least some of your own interests and thinking. In any event, we trust that our institutional and individual thinking will help enrich the potential and the enjoyment of this landmark Sibos congress, and play their part in driving future achievement and fulfilment in our industry, with new arrivals and incumbents each maximising their different strengths in their different specialities.

What others might see as threats to their industry and to their own prosperity, we see as challenges to be faced, addressed and successfully met in order to advance our joint legacy. Above all, we look forward to thriving with clients and suppliers alike in an increasingly hyper-connected world. ■

**Who watches the watchers?*

CONTENTS

GLOBAL TRANSACTION BANKING
& SECURITIES SERVICES

SOCIETE GENERALE GLOBAL TRANSACTION BANKING

Global Transaction Banking (GTB) integrates business activities such as payments & cash management, cash clearing services, international trade finance, receivables & payables finance and transactional FX, within Societe Generale Group.

These various areas of expertise are provided to financial institutions and corporates, from multinational companies to large or medium-sized companies that conduct business internationally.

2,000
EMPLOYEES

6,000+
FINANCIAL INSTITUTIONS AND CORPORATE CLIENTS

44
COUNTRIES

OUR SOLUTIONS

CASH CLEARING & CORRESPONDENT BANKING

PAYMENTS & CASH MANAGEMENT

TRADE FINANCE & SERVICES

RECEIVABLES & PAYABLES FINANCE

TRANSACTIONAL FX

OUR AMBITION

is to offer financial institutions and corporate clients a wide range of commercial banking services so they can get the most value of **our product expertise, our global network and our in-depth knowledge of local markets**.

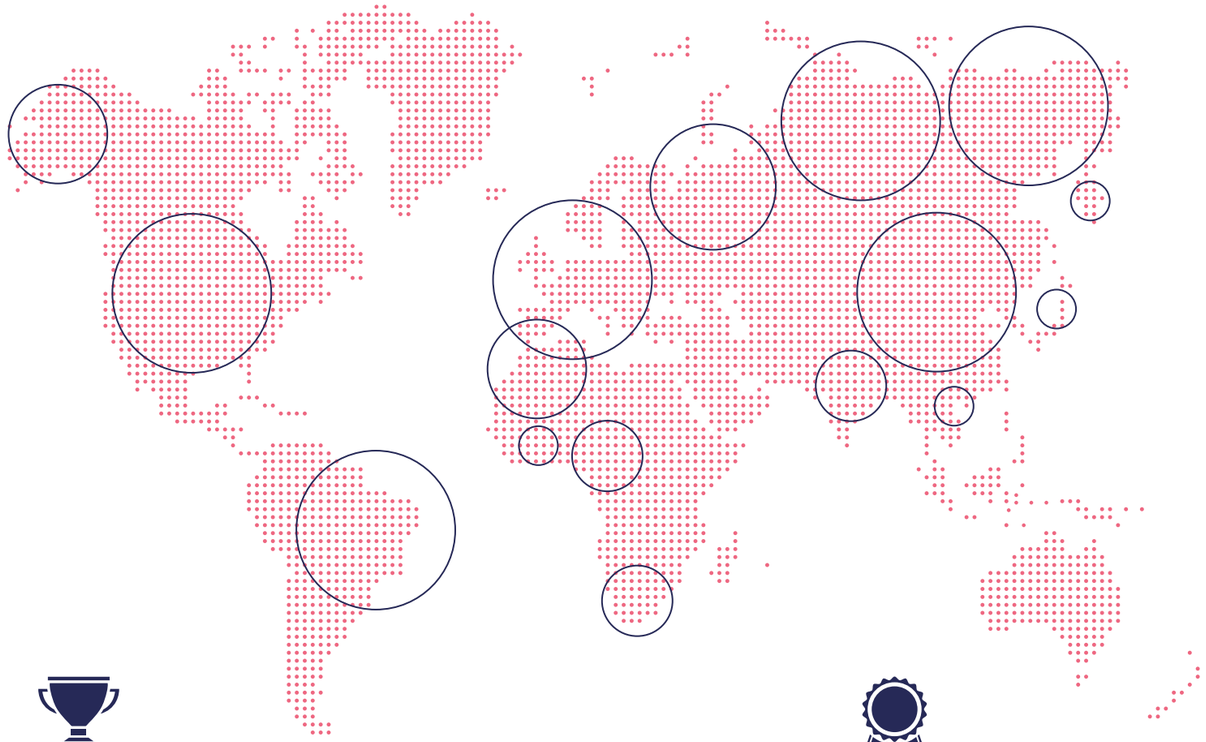
Combining experience, know-how and innovative capabilities, our employees' main objective is to help you grow, with a constant concern for the quality and security of your transactions.

A GLOBAL AND HIGH-PERFORMANCE OFFER

Whether your business is local or international, we offer you services and products that we constantly develop and adjust for you.

We are active in more than 40 countries and offer you the international expertise of a major banking group and more than 20 years' experience in our business lines.

Our responsive and dynamic teams, our solid networks, and our diverse range of products help you optimise the daily management of your transactions and commercial operations.



AWARDS

BEST TRANSACTIONAL BANK 2019 for financial institutions in Europe
• *EMEA Finance*

GLOBAL BEST BANK FOR TRADE FINANCE 2019 in emerging markets and Africa
• *Global Finance*

BEST BANK FOR CASH MANAGEMENT 2018 in Western Europe and Africa
• *Global Finance*

BEST FACTORING SERVICES 2019 in EMEA and North Africa
• *EMEA Finance*

LEADING SWIFT PARTNER, CERTIFIED SWIFTready
for the quality and the geographical coverage of our services

DISTINGUISHED PROVIDER OF TRANSACTION BANKING SERVICES
since 2013 • *Fimetrix*

CERTIFICATIONS

ISO 9001
ISO 9001 Quality certification by l'AFAQ

SOCIETE GENERALE SECURITIES SERVICES

Societe Generale's diversified bank model is based on complementary businesses around the world. The Group's expertise in securities services offers clients core banking services and the security of a global custodian.

Societe Generale Securities Services provides a toolbox of solutions and innovative, value-added securities services that allow clients to meet the burden of regulatory change and concentrate on their core mission. The Societe Generale Securities Services client portal provides a variety of online tools to manage, control and pilot their operations.

4,000
EMPLOYEES

26
LOCATIONS

OUR SOLUTIONS

CLEARING SERVICES

CUSTODY AND TRUSTEE SERVICES

LIQUIDITY MANAGEMENT

FUND ADMINISTRATION AND ASSET SERVICING

FUND DISTRIBUTION

GLOBAL ISSUER SERVICES

4,159 bn EUR
ASSETS UNDER CUSTODY

631 bn EUR
ASSETS UNDER ADMINISTRATION

Figures at end of june 2019

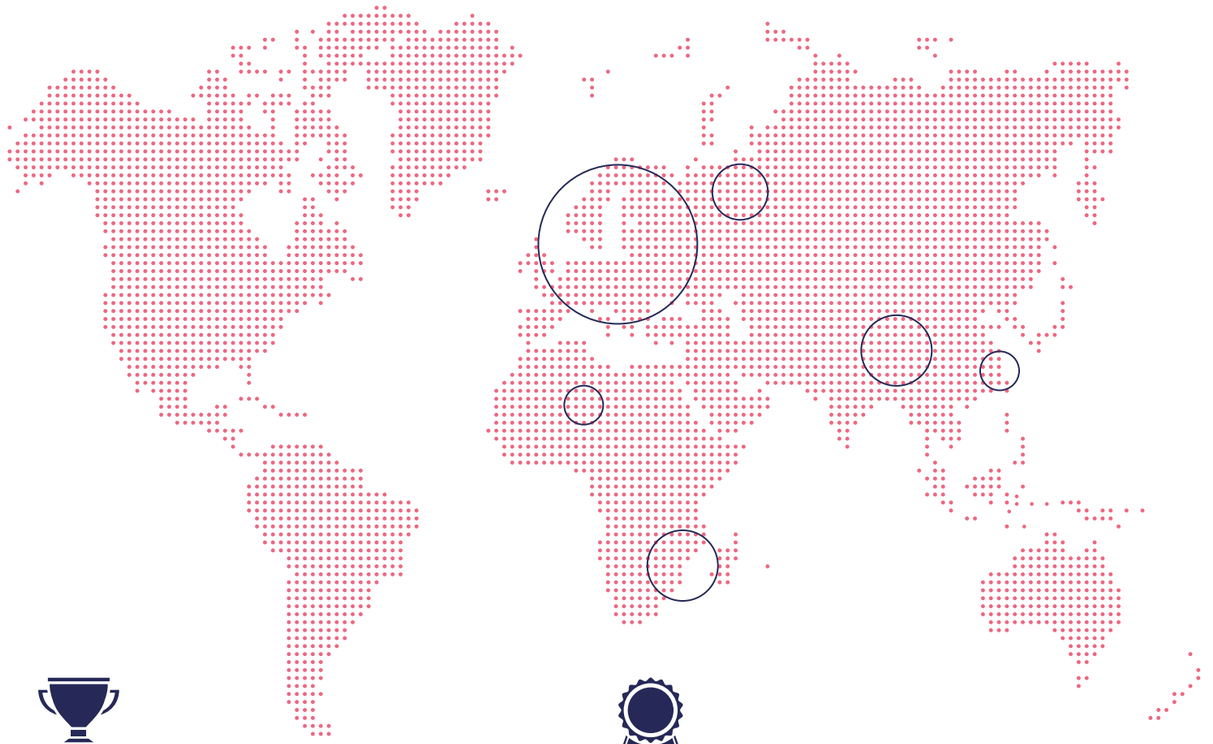
OUR CLIENTS

are **institutional investors** (insurance companies, pension funds, governmental organisations and international organisations), **asset managers, financial intermediaries** (brokers, investment banks, private banks, commercial banks) **and corporates**.

OUR AMBITION

is to be the reference partner in our main markets, recognised for our **service quality and competitiveness, agile solutions and international network coverage**.

We build **long-lasting, collaborative relationships** with our clients to help them go further in their development. In today's constantly evolving and complex world, we strive to provide our clients with increasingly **efficient and reliable securities services** on a daily basis to ensure they get ahead.



AWARDS AND RECOGNITIONS

BEST SUB-CUSTODIAN OF THE YEAR 2019 • *Global Finance*
Ivory Coast, Tunisia, Russia, Romania

CUSTODIAN OF THE YEAR 2019 (Italy) • *Custody Risk*

SGSS IN POLE POSITION FOR SUB-CUSTODY SERVICES 2019
in Central and Eastern Europe (Spain, Czech Republic, Romania, Russia, Serbia), as well as in Africa (Tunisia)
• *Global Investor Sub-custody Survey 2019*

CLIENT CLEARING BROKER OF THE YEAR 2018 • *Global Investor*

TRANSFER AGENT OF THE YEAR 2018 • *Global Investor*

SUB-CUSTODY SURVEY 2019 AWARD • *Global Investor*

CERTIFICATIONS

ISO 9001
Certified ISO 9001 version 2000 in France for Employee Savings Plans

ISAE 3402 Type II
ISAE 3402 Type II certification for the following services:
• Trustee, Custody and Fund Administration services in France, Italy and Luxembourg
• Transfer Agency services in Ireland, Italy, Germany and Luxembourg
• Master-KAG services (middle office and fund administration) in Germany
ISAE 3402 and SSAE16 Type I certification for its agency securities lending services (September 2014)

ISAE 3402
SGSS holds a ISAE 3402 Certification for Custody Services in the following countries:
• Czech Republic - Russia - Ireland - Poland - South Africa - Romania - Tunisia

OPEN BANKING: FOCUS ON THE POSITIVES

Alain FISCHER
Chief Digital Officer, Global Banking & Investment Solutions

The opening up of traditional data to new aspiring service providers presents new realms of possibilities for challengers, but it also creates exciting and intriguing relationship opportunities for incumbent banking service players.

The regulatorily mandated opening-up of traditional banking data to other would-be banking service providers is often viewed through a single lens: the vast opportunities that this presents to financial technology (FinTech) firms, aggregators and other so-called disruptors.

The apparent business theory, in so far as it might constitute a valid business theory, is that new comers to the field, who are unencumbered by legacy systems, processes and attitudes, will be free to wreak digital havoc, while analogue dinosaurs look on in paralysed bemusement. For us, nothing could be further from the truth. We take a very different view.

The new wave of dynamism supposedly unleashed by enlightened regulators and enabled physically by ever evolving technology, does in fact fit very well into our own business universe. The future will be increasingly based on the availability and transparency of data. This will of course create some opportunities for digital upstarts.

But it will also create further opportunities for banks who can envisage the necessary transformation and successfully navigate the corporate barriers to take advantage of this. Incumbent players, in short, still have a highly attractive future.

Regulators want traditional banks to make their data available via application programming interfaces (APIs). We are already doing this, via almost 4,000 APIs on Societe Generale Group's developer platform, enabling the creation of new solutions in myriad ways.

EXPLORING THE OPPORTUNITIES

For the pessimists, the era of open banking driven by regulations such as the European PSD2 (Payment Services Directive) that became effective at the beginning of 2018 has generated a common complaint, as it is perceived as unfairly benefitting the web giants and their boundless appetite for data. From my point of view, however, it is up to the financial industry to explore the opportunities which have been created and to take up the challenge of transforming them into a new form of competition.

There is no denying that the GAFA companies (Google, Amazon, Facebook and Apple), and possibly the BATX group, their Chinese equivalents (Beidu, Alibaba, Tencent and Xiaomi), although they come from a very different context, may now redouble their efforts in entering the banking sector, as confirmed by Facebook's much-publicised intention to create a so-called stable coin, called Libra.

They have all made their way into the payments industry, each with their own strategic objectives. All end up with the same ultimate target: increasing knowledge and awareness of their customers and thus improving their information-based business models. That target is now easier to achieve than it has ever been.

PRODUCING BETTER AND MORE COST-EFFECTIVE PRODUCTS

Although their entry may have been underestimated by the European lawmakers, this is part of what they had in mind when drawing up the PSD2: to promote diversity of competition, to stimulate the development and provision of better and cheaper financial services to the consumer.

> **“The regulatory mandate to open up data brings an extraordinary chance for us to modernise our approach to building our information systems. It will enable us to make them more agile, thus allowing the business to deliver more personalised products and services, at a faster rate and at a lower cost.”**

But this objective is not reserved to new entrants only; it is equally a call for banks to try and improve on their offerings, not only to remain competitive in a recently crowded marketplace but also to stay relevant to their customers and their expectations.

As alluded to earlier, the regulatory mandate to open up our clients' data through using APIs brings an extraordinary chance for us to modernise our approach to building our information systems. It will enable us to make them more agile, allowing the business to deliver more personalised products and services, at a faster rate and at a lower cost. We are optimistic that this will, in due course, extend well beyond the areas covered by the directive and will ultimately enhance every aspect of our banking services.

The challenge we face is to offer the user experience that customers now take for granted and that technology leaders and FinTech start-ups have integrated so well into their own value proposition.

Another positive consequence of new regulations is that in this specific context, the rules of the game have now been changed, the playing field has now been levelled and the goalposts have been placed where they should be, specifically with regards to security.

While aggregators and other personal finance management providers, until now, have relied upon questionable methods such as screen-scraping techniques to access the data they needed, there are now purpose-built and well-defined APIs available to do the job legitimately and efficiently, with state-of-the-art protection mechanisms in place.

All in all, I am convinced that the open banking movement will be as beneficial to us incumbents as it is to the web giants, the FinTech start-ups and other potential providers, because it will help everyone to deliver better services to their customers.

I will not pretend that it will be easy. There remains much work to be done on our core processes and on improving our digital client journey. However, we have an invaluable advantage which is the implicit trust we have from our clients. That is a very strong foundation upon which to build. ■

APIs: THE CONNECTIVE TISSUE ENABLING PLATFORMS AND CREATING THRIVING ECOSYSTEMS

Yvan MIROCHNIKOFF
Head of Innovation & Digital transformation – Societe Generale Securities Services

Banks are no strangers to the application programming interface (API) universe although they have typically created their own APIs within the confines of four walls. However, the industry is being invited to change by financial technology firms (FinTechs) trying to grab a piece of their business, as well as by incoming regulations which aim to unlock the doors of competition.

OPEN BANKING: DANGER OR OPPORTUNITY?

This is particularly true with the game-changing arrival of open banking, kickstarted by the UK's Competition and Markets Authority (CMA) and by Europe's second Directive on Payment Services (PSD2) in Europe last year. The core concept is similar to that of services such as Google Maps, which allows third parties to incorporate some or all of its services into their own programmes or apps.

Under the new regime, third-party providers have access to banks' customer account data through APIs plus they can consult customer transaction history. The customer's data remain securely in the bank account and, of course, it is up to customers if and how they share their data.

> **"The successful financial institutions will be those who can act fast and develop a modular business and technical architecture that leverage their added value while at the same time dynamically amalgating offerings and data from multiple players."**

Open APIs, though, make it much easier for customers to transfer their accounts, manage payments and conduct transactions through other banks and non-banks. In addition, clients can compare and contrast the different offerings and prices as the regulation requires would-be competitor organisations to disclose performance and fee data.

The only option for banks is to act faster than third-party providers who may steal their thunder and offer better functionality, as well as more innovative and reasonably priced products on top of their data and infrastructure. There is also a realisation that increasing demands for API-based modular architectures can create a significant drain on resources due to legacy architecture. However, the change and disruption present the banks and asset servicers with significant opportunities to reinvent themselves, simplify their complicated IT infrastructures and develop and offer new products and services that better meet their customer's needs.

BANKS AND APIS: A FRUITFUL COLLABORATION

In the past, many banks had opted for a blanket mass marketing and product-centric approach which did not always take into account the end-user's demands. Providing a wider selection of APIs gives them the freedom to tap into customer requirements and design more value-added, tailor-made products. Equally as important, it allows banks to enhance their customer service by being able to provide information and respond to questions and complaints in a timelier fashion.

What we have observed in the recent past with payment systems and retail banking is nowadays true for securities services and corporate and investment banking.

Putting the customer front and centre in an open banking world, though, requires not only a reconfiguration of the business-to-business (B2B) model but also of the mindset in terms of building a new, more flexible ecosystem, including all potential partners. Silos have to be broken down, innovation cycles accelerated and a more agile organisational framework constructed. Among the main challenges are the decisions that have to be made regarding the APIs, the internal and external information on the platform and the relationships forged. The agenda also includes pricing structures, quality of services, types of products and the customers' ability to integrate the APIs.

Thought and analysis must go into which channels should be used – for example, Symphony or Aladdin as target platforms – for stronger collaboration as well as external communications with outside partners and integration of data from across their networks in a secure and compliant way.

The successful financial institutions will be those who can act quickly and develop a modular business and technical architecture that leverage their added value while dynamically amalgating offerings and data from multiple players. The larger banks and asset servicers have already moved forward with greater flexibility and functionality via APIs. They have incorporated third-party data, struck partnerships with infrastructure players like SWIFT, software editors, FinTechs and platforms such as Microsoft and Amazon.

And the entire financial industry should develop standards for more interoperability between all of these.

TURNING DATA INTO ACTIONABLE INSIGHTS

Banks have also bundled together payment facilities, analytics and reporting as well as information from disparate systems into one package and onto one platform. They are also creating value by turning the data and analytics collected into actionable insights for clients, using AI techniques like machine learning. There is a wealth of information to be found in banking apps, including cashflow, credit history, mobile location and browser histories.

Although non-banks may pose a potential threat, incumbents have a clear advantage in that they already have a significant and sizeable pool of customers. This is their chance to build upon this by working together with third parties, to form closer ties and improve their understanding of customer needs and create the right products, services and experiences for today and the future. ■

1. B2B: Business to business

FUND DISTRIBUTION: UNLOCKING THE POWER OF DATA

Elaine KIGGINS
Product Manager – Fund Distribution Services

Do you feel like you are drowning in a daily deluge of communication? And yet it is getting harder to get to the information you really need? In an industry like asset management and in the arena of fund distribution, this is ever more prevalent.

> **“Digitalisation is finally delivering tools that could make this transparency possible. New technology allows for more efficient collection and processing of ‘big data’ and its restitution in bite-sized chunks.”**

The industry is highly regulated, with the requirement to report and control in detail – know your client, FATCA and CRS reporting, MiFID II checks.
It is also highly intermediated, with many players between the end-investor and the fund. This can make an apparently simple task, such as understanding your distribution footprint, incredibly complex.

Bruce Springsteen sang of ‘Dancing in the Dark’ but could asset managers be ‘distributing in the dark’?
Much discussion has been had regarding the need for data across the industry and the value it can bring. At the same time, **it would seem that management companies are the recipients of masses and masses of data.**
Whether it concerns daily activity reports or regular regulatory reporting, the sheer amount of data exchanged between industry participants can be overwhelming.

Could it be that the key to managing your distribution is not linked to the volume of data but rather to how it is organised?

Two factors are driving change – consumer behaviour and new technology. New investor behaviours are leading banks to rethink the client experience. The true value of data is being highlighted. Tech-savvy investors are seeking solutions that are tailored to their specific needs. To achieve this, product producers require information about clients and their goals, but also the trends for investors seeking similar investment outcomes. Are asset managers getting the information they need on these trends to allow them to respond? And if they are receiving this information, is it presented in a way that is easy to digest and interpret? Crucially, is it updated frequently and quickly enough to respond?

The challenge for asset managers is not straightforward. Fund distribution is a highly intermediated industry. The path from the consumer to the producer is a long one. Platforms, nominees and market infrastructure can introduce confusion to the distribution chain. To gain insights, it is necessary to build a hierarchy of data to enable a look-through to the underlying data.

Heterogeneous data can be leveraged to produce deeper insights. Applying artificial intelligence to these data sets can bring interaction with the information in new ways – via chatbots and natural language processing among others.

The potential benefits are clear. If you can see day-by-day, week-by-week, month-by-month, how clients are behaving, it offers a tremendous opportunity for asset managers.

In fact, it operates like continuous feedback on the product range. This in turn allows asset managers more freedom to innovate – offering the agility to know when strategies are performing well but also to quickly adapt when new solutions are called for.

The key is to channel the deluge of information in order to be ready for the challenges ahead. In the new environment, effectively managing and utilising data could well make the difference between whether you will ‘sink or swim’. ■

PEOPLE AT THE HEART OF TECHNOLOGICAL INNOVATION

Blockchain, FinTech, Regtech, Suptech... these terms describe the most commonly used innovations and new technologies in the financial sector. The recent acceleration of progress in the digital field and the necessity for users to gain technological agility make this a priority issue, particularly in the banking industry. Making these issues part of a strategy and a long-term vision is key.

Laurent MAROCHINI
Head of Innovation,
Societe Generale Luxembourg

The OECD's Oslo Manual explains that innovation refers to a product, process, or service that provides a company with new knowledge, a change involving a high degree of novelty, or a substantial improvement potentially leading to a breakthrough. Companies have always needed to innovate. The recent acceleration of progress in the digital field and the necessity for users to gain technological agility make this a priority issue, particularly in the banking industry. Human behaviour must evolve to adapt to this new paradigm, where technology is now an integral part of everyday life.

An example of this is the success of smartphones, which have a penetration rate of nearly 80% in France and 35% worldwide[1]. This success relies on sophisticated mobile applications that use artificial intelligence (AI) solutions to make them easier to adopt for as many people as possible. Another example is major e-commerce sites, which analyse each of our clicks to recommend the best purchase at the best time. These use machine learning solutions to constantly improve their purchase suggestions. A final example is the self-driving vehicle, examples of which have appeared in the United States, and more recently in Luxembourg, on a trial basis. These vehicles are also symbolic of this trend.

The development of new technologies is a global phenomenon that affects every business sector and every one of us. We encounter them daily without always being aware of them.

> **"The best way to predict the future is to invent it."**

SO WHAT ABOUT FINANCE?

The financial sector is one of the sectors most affected by new technologies. At the end of 2018, Societe Generale Securities Services conducted a survey of 100 European clients, namely traditional and alternative asset managers and institutional investors, called '**Taking the Long View**'[2], to find out how they view tomorrow's challenges in their business areas. 84% of them put digital and new technologies at the top of their list of priority issues. **Making these issues part of a strategy and a long-term vision is key for success**.
In response to the question 'Why innovate?', a majority of respondents said that it is important to innovate in order to be more effective, especially in sectors where continuous improvement has reached its limits. Blockchain, AI, and RPA (robotic process automation) are mentioned because of the promise they hold in this field. Operational efficiency is a challenge, as an increasingly industrial model is required to ensure companies' survival in the current environment of shrinking margins. The survey also reveals that operational efficiency – achieved through the use of new technologies – remains the priority for 32% of respondents. Cost-cutting, which is one motivation for innovation, has a natural and mathematical limit, however, unlike development, which can be expanded far more widely.

The creation of value in banks' relationships with their ever more connected and tech-savvy customers is crucial to be able to move away from a traditional, hyper-competitive approach. Banks are trying to reach this 'blue ocean[3]', described by researchers W Chan Kim and Renée Mauborgne as the ability to capture new demand by creating a strategic space untouched by competition. **The use of blockchain, AI and Big Data can help to boost activity in a mature market with limited growth prospects**. With all the data that banks process on a daily basis, they are therefore able to create new business models.

The regulatory inflation that has been around for the past decade has also driven the financial industry to look for tools that use new technologies so that they can meet their obligations effectively, particularly in the areas of risk control and management.

> **"'Innovation' comes from the Latin word innovare, which means to 'renew'. Novare, from the root novus, means 'change' or 'new', and the prefix 'in-' indicates inward movement. Hence the important concept of acceptance of change."**

IS THE IMPLEMENTATION OF NEW TECHNOLOGIES A DREAM OR A NIGHTMARE?

Introducing new technologies allows organisations to experiment with new, more efficient, and less costly project management methods. A first phase known as Proof of Concept (POC) aims to test the advisability of a product idea or a service in an environment that is not linked to the information system. If this first phase is successful, a second phase of developing a minimum viable product (MVP) begins. These two phases do not necessarily require significant financial investments and are often handled by innovation laboratories created by financial institutions to trial these technologies.

The release of the product or service, which is the final stage in a successful innovation process, requires its implementation within the information system. This stage is complex due to the constraints associated with any link to the information system, and especially cybersecurity issues.

The release phase can be complex even if an MVP is successful. **This complexity may hinder the development of new technologies.** Blockchain is one of the technologies most commonly tested by banks, for example, but its implementation takes time, particularly because of the regulatory uncertainty surrounding it. According to PWC's 2018 global survey of the development of blockchain and its potential[4], this is one of the main obstacles to its adoption.

There are therefore many obstacles to introducing new technologies, which are different for each company depending on their maturity and history. A significant financial investment may be needed, but this is not the only factor determining success.

DO PEOPLE LIMIT OR ACCELERATE TRANSFORMATION?

The human factor and resistance to change are considerations that should not be overlooked as limitations on either technology itself or its implementation within an organisation.

The integration of new technologies within organisations is not just an IT project. It involves **a more global transformation of business models**, sometimes requiring the establishment of a new ecosystem and therefore flexibility in its protagonists and a change in the corporate culture.

If a lack of leadership, culture, and digital skills persists, it hampers the success of the digital transformation.
While the complexity of current environments is indeed real, what about people's understanding of new technologies such as AI and blockchain within companies? **Despite investments and initiatives, organisations still do not feel that they are well enough supported or equipped to introduce such a transformation.** The shift in a company's culture towards innovation should be driven by senior management teams, who will support the creation of an environment conducive to entrepreneurship, decision-making, collaboration, and the right to make mistakes.

To summarise, it is essential for organisations to have innovation strategies and the ability to transform themselves in the face of increased competition. The human factor is vital because it is at the heart of the process. As US professor and business management consultant Peter Drucker points out:
At Societe Generale, the future is fundamentally people-centred in all its aspects. *The banking group firmly believes this and launched a message of confidence and optimism with its new brand signature last November. This demonstrates its ambitions for sustainable growth for the benefit of its customers, the economy, and society, declaring that '**the future is you**'.* ■

1. Source: *Statista*, 2019 forecasts
2. Available at www.securities-services.societegenerale.com
3. *Blue-Ocean-Strategy*, W Chan Kim, Renée Mauborgne, researchers at the European Institute of Business Administration
4. PwC study, *Global Blockchain Survey 2018*, September 2018

AUTOMATION, EXCELLENCE AND THE TRANSFORMATION OF CLIENT-BANK RELATIONSHIPS

Clients want the world, and more. And why not? Delivering to clients what they need is, after all, literally our institutional *raison d'être*. Clients expect, even increasingly demand, levels of reliability, predictability, speed of delivery, transparency and simplicity that are unheard of in our industry. As we discuss here, the demands now being placed upon technology are rising alongside the supply of solutions offered by technology.

Tanguy AUMON
Chief Marketing Officer and Chief Client Officer, Global Banking & Advisory

Aurélien VIRY
Head of Payments & Cash Management, Global Transaction Banking

> **"In this unparalleled new age of growing digital interaction, our clients tell us that the relationship model – which many might have thought would be confined to the dustbin of banking history – does in fact continue to be the key driver for client satisfaction."**

NOT JUST ABOUT TECHNOLOGY

Technology is at the root of everything, but it is not in itself everything. It is helping banks to deliver and is in turn leading to a transformation of the treasurer's role. As the automation of day-to-day activity grows relentlessly, the corporate treasurer can focus on a more value-added agenda, which will on any given day involve some or even all of the following :

- managing risks in FX, interest rates, liquidity, fraud and cyberattacks;
- reducing costs and optimising the deployment of working capital requirements;
- scanning the market for opportunities arising from the development of new technology, the changing industry landscape and continuing changes in regulation;
- providing financial control with better insight using data analytics;
- delivering the company's strategic roadmap.

While technology makes day-to-day working life simpler, the corporate treasurer is faced with addressing increasingly complex issues in increasingly complex organisations. In a changing world, the treasurer also deals with an ever-rising number of options proposed by an increasing number of different market participants.

At some point in the future, interoperability and the harmonisation of standards might prevail but this is hardly the case yet. In this context, treasurers need trusted partners to help make sense of this complexity and help them make the right decisions.

WHAT WE ALL NEED TO KNOW

Client feedback has a central role to play in an effective process. In the interests of continuing corporate development, we regularly ask clients for their feedback using NPS© methodology (Net Promoter Score).

What clients tell us is not only insightful, it is also very different from what many involved in the industry might predict. The results show that execution is a prerequisite, but it is not the be-all and the end-all.

For corporate clients, what really makes a positive difference and influences their choice of banking partners is not the technology, not the execution and not even the price. If anything, as counter-intuitive as it might seem, these three components – which most financial sector professionals would arguably traditionally regard as key to client satisfaction – are more often viewed as negative drivers of dissatisfaction if expectations are not being met.

By contrast, clients tell us that what comes on top of their list if they are to recommend their bank positively is the following, in order of priority :

- the bank's management of the relationship;
- the bank's ability and willingness to commit and to lend;
- the bank's breadth of service, products and geographical footprint.

INTERESTING AND PARADOXICAL

This is both interesting and paradoxical. In this unparalleled new age of growing digital interaction, our clients tell us that the relationship model – which many might have thought would be confined to the dustbin of banking history – does in fact continue to be the key driver for client satisfaction.

In an age of increasing organisational complexity, accelerating change, and a growing number of options, treasurers tell us that what makes the difference for them with their banking counterparts is the bank to corporate relationship.

Clients need informed and experienced partners who know and understand them. Banking partners who can align human expertise with client-specific issues to introduce the appropriate solutions at the right time, are adding true value to the relationship, helping to win trust and market share.

Organisations are not merely the sum of their machines, their processes and their staff. They are a living, breathing amalgam of demonstrable culture, history, ambition and achievement. Clients need a trusted banking adviser supporting them over time and through the entire lifecycle of an organisation, including phases of expansion, consolidation and adaptation.

INVEST TO ADAPT

What have come to be regarded as arguably the core theses of Darwinism – evolution to reflect a changing environment and the survival of the fittest – are being tested and proved in 21st century circumstances of which Charles Darwin could never have dreamt.

Those that continue to invest in strengthening the corporate-to-bank relationship will find themselves on top of the world. Those that get it wrong? Well, maybe they ought to have read 'On the origin of species', Charles Darwin's most famous text. ■

Jean-Pierre GOMEZ
Head of Regulatory & Public Affairs Lux, Societe Generale Luxembourg

Laurent MAROCHINI
Head of Innovation, Societe Generale Luxembourg

By 2025, Millennials are expected to represent 75% of the global workforce[1] and therefore be tomorrow's future investors. Financial firms are trying to target these young adults, mindful of their developing needs, but they might need to reinvent their approach if they wish to appeal to this new generation.

HOW COULD MILLENNIALS DISRUPT THE FINANCIAL INDUSTRY?

> **"While the digital revolution is indeed underway, another movement could disrupt the financial sector: the social evolution of new generations."**

While the digital revolution is indeed underway, another movement could disrupt the financial sector: the social evolution of new generations.

The X generation is now giving way to millennials, who are challenging and reinventing traditional definitions. From the digitalisation of exchanges to the importance of sustainable development, millennials often do not share the same mindset as their parents.

BUT WHAT WILL BE THE IMPACT ON THE ASSET MANAGEMENT WORLD?

To understand why and how millennials might cause a revolution in terms of asset management, it is necessary to examine three key points.

Firstly, digital natives are motivated to invest first and foremost by their ability to have a real impact on society. They naturally seek to maximise the value of their investments, but they want to do so in a socially responsible and environmentally friendly way. This generation has clearly understood the promise of responsible investment. Its growing demand for this type of financial product opens new horizons for the asset managers of tomorrow.

Another characteristic of the millennial population is their lack of trust in financial institutions. According to the Millennial Disruption Index, 71%[2] would prefer to go to the dentist rather than listen to a bank's advice. This indicator highlights the need for traditional banking and financial services organisations to reinvent themselves if they wish to stay relevant. If not, millennials will likely turn their attention towards new players such as the GAFAs groups (Google, Amazon, Facebook, Apple), and their Chinese equivalent BATX (Beibu, Alibab, Tencent, Xiaomi) or other market players yet to emerge, such as the neo-banks.

The third point requiring asset managers to react is the expectation of millennials that services will be digitalised. Having grown up at the same time as new technologies, they expect the autonomy and the agility digital offers. ATADAWAC: "At Any Time, AnyWhere, Any Device, Any Content" is what this new generation is expecting to receive as a service. Flexibility, autonomy and up-to-date digital solutions are key elements to meet millennials' expectations.

NEW BUSINESS MODELS IN ASSET MANAGEMENT?

As we have seen, the asset management industry has no option but to adapt and listen to the voice of the new generation. The innovation can be perceived from different angles:

- **Process Innovation:** In the era of digitalisation, platforms such as robot advisory offer the customer experience that can attract a wide range of investors, especially the new generation. It offers transparency, as well as a fully-digitalised solution across all devices.
- **Product Innovation:** Products should be in line with investors' values and expectations. A number of players in the industry have already launched investment funds in the environmental, social and governance (ESG) field[3]. Some of them are already going beyond in order to further develop the impact.
- **Commercial Innovation:** Social networks are used more and more to attract new generations and as a channel of communication. Some platforms have already emerged using the social network at the epicentre of their strategy. Social network trader eToro can be considered as the traditional example of new players, even if the company was born at the same time as the social network boom. The ability of copying the strategy of traders is definitely a new model in the wealth management industry more globally. The ability to trade crypto assets is also very attractive in the eyes of the new generation.

Asset management has no choice but to transform itself to survive. We are still at the beginning of the journey, but it is necessary to adapt quickly to be equipped with relevant products and solutions when the new generation is ready to invest. ■

> **"Asset management has no choice but to transform itself to survive."**

1. www.ey.com/Publication/vwLUAssets/ey-the-future-of-work-is-changing-will-your-workforce-be-ready/$FILE/ey-the-future-of-work-is-changing-will-your-workforce-be-ready.pdf
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Geneviève DOUHET
Head of Innovation,
Global Transaction Banking

RESKILLING FOR SUCCESS IN THE FOURTH INDUSTRIAL REVOLUTION

Technology is changing the nature of jobs within the financial industry. As fresh perspectives are required, banks should seek to create more diverse workforces who can bring different skills into play.

According to a World Economic Forum survey[1], more than one in four adults in OECD countries reported a mismatch between their current skills and the qualifications required for their job. In the banking sector, new digital technologies such as automation and artificial intelligence are reshaping not only customers' experience, but also those of bank employees as processes and jobs are transformed.

As a manager and innovation director, I see every day how technology is reshaping our needs for IT talents. Reskilling is required as some traditional skills are no longer appropriate for specific tasks. The digitalisation of retail branch networks, automation and digitalisation elsewhere in banks, as well as the implementation of AI (artificial intelligence), has led to a **shortage of skilled IT workers**. Particularly severe is the shortage of skilled data scientists and other IT workers such as agile developers, according to my own experience and what I hear and see from my peers.

In addition, **the nature of a banking career is changing, from a straight career path to several careers within a lifetime**. Business transformation cycles are much shorter than those of workforce development: the industry has gone from a 40-year lifelong career to a transformation cycle of six months to one year. For example, today, 90%[2] of the data handled by an IT specialist has been created in the past two years, showing the acceleration led by technologies and digital ecosystems.

In the banking activities that have not been affected by the Fourth Industrial Revolution, managers tend to tap into the talent pool of the university or school from which they graduated. This community mindset has led to low diversity among those working within these areas. Achieving innovation in an environment of homogenous skills is a challenge.

TECHNOLOGY AS A CATALYST OF DIVERSITY

Technology is an opportunity to bring diversity in profiles and promote an innovative mindset among employees. By tapping into non-traditional sources of employment, banks are likely to create a more diverse workforce. Diversity can be achieved by fostering social inclusion and enlarging talent pools among under-represented schools or education courses.

Banks, like most companies, are also working on offering a real employee experience (work environment, new ways of working, balance between work and personal life, etc.), rather than a lifelong career within the organisation. A continuous feedback loop between banks and educational establishments will help both to create wider, more skilled talent pools of individuals with greater employability.

Technology can also contribute to increased gender parity. For example, **SmartCo**, which was launched by Societe Generale's innovation lab in Dakar, is an initiative designed to encourage technology entrepreneurship among women in Africa. For the first edition, 100 women project leaders, mainly from outside the group but also women staff members, were selected to develop and create sustainable solutions. We believe this helps to promote female empowerment in IT, but above all, it aims to set a basis for promotion and social harmony through women's learning.

1. World Economic Forum, *Accelerating Workforce Reskilling for the Fourth Industrial Revolution*, July 2017, www3.weforum.org/docs/WEF_EGW_White_Paper_Reskilling.pdf
2. www.forbes.com/sites/bernardmarr/2018/05/21/how-much-data-do-we-create-every-day-the-mind-blowing-stats-everyone-should-read/#29de3ec760ba

“What is at stake is not only financial institutions' productivity, geared with the knowledge and skills to adapt to technological shifts; it is also about creating an inclusive work environment, by investing in people who will become active leaders in societal change and promote diversity and reskilling themselves.”

INJECTING FRESH PERSPECTIVES VIA RESKILLING PROGRAMMES

Reskilling the workforce can bring new perspectives to a financial institution through a variety of ways:

- **Reskilled workers can bring a new vision,** particularly if they come from other industries with different customer experiences;
- **Reskilled workers will not have the cognitive bias** of replicated patterns that are developed if a worker has stayed in the same activity or industry for a number of years;
- Those who have overcome the psychological barriers of reskilling might be **more adaptive and think "outside the box"[2];** It may sound like a paradox, but this requires more 'soft' than 'hard' skills;
- And a reskilled worker is likely to become a promoter of social or gender inclusion, encouraging others by saying: "I have done it, why not you?"

In reskilling the workforce, a bank should first map how client user experience and technology have an impact on current skills and jobs, define the target in terms of skills and adapt retraining programmes. They should also prepare for technology-driven disruptions that will require retraining of the workforce.

The initiative will combine hiring new staff, training existing staff and reskilling others. Within Societe Generale, we launched **Simplon**[3], a retraining programme that reskilled 15 people from inside and outside the bank to become web developers in 21 months. Management has an important role to play: senior managers must be able to guide the transition and impart their knowledge and experience. The challenge is to find managers willing to welcome reskilled workers in their team and spend managerial time to facilitate their integration. The capacity – and willingness – to adapt are key success factors in any reskilling programme.

Financial institutions need to create a corporate culture that promotes learning and innovation, autonomy and empowerment to foster self-reskilling and development, if they want to remain to the forefront in the increasingly competitive talent race. ■

3. Simplon is a network of social digital factories in France and abroad which has trained more than 4,000 trainees in the digital sector since 2013. It aims at making the digital sector a place of inclusion and to reveal talents among groups underrepresented in this field.

WHY AI REQUIRES A CULTURAL SHIFT IN THE SECURITIES SERVICES INDUSTRY

To make effective use of artificial intelligence (AI), banks need to take a people-first approach.

Matthew DAVEY
Head of Business Solutions, Societe Generale Securities Services

In our daily lives, we use AI almost without thinking; the algorithms in our apps tell us everything from what to buy, where to eat and where to go on holiday. But the advance of AI and other related technologies such as machine learning (ML) has been slower for many businesses – especially in the securities services sector.

The slow take-up reflects a paradox about AI: while most business executives now see it as critical to their business future, there still is uncertainty about what it is and how to deploy it. Moreover, there is widespread misunderstanding about how AI works and its implications for companies and society. In particular, there are concerns that AI could destroy jobs and even eventually challenge the dominance of humans. Some of these concerns are valid, though others are closer to science fiction.

> “Robotic process automation is already being adopted for repetitive processes in securities services. It has demonstrated clear cost benefits and efficiency and accuracy gains.”

People tend to have inflated expectations of what AI can deliver, which can lead to disappointment. The reality is that AI is a collection of innovative technologies, each with different functionality and specific uses.

At one end of the spectrum is robotic process automation (RPA), which is already being adopted for repetitive processes in securities services. It has demonstrated clear cost benefits and efficiency gains. RPA can be implemented with limited operational changes: it uses existing systems and data to automate repeatable, clearly-defined processes that are carried out today by people.

RPA can also pave the way for more sophisticated forms of AI, including ML, natural language processing (NLP) and image recognition. These differ from RPA as they use unstructured data and, rather than repeating a simple task, are instead able to ‘make decisions‘ based on a probability outcome from statistical data analysis. These technologies are scalable and efficient and therefore have the potential to drive exponential growth.

WHERE ARE THE OPPORTUNITIES?

There are myriad potential uses of AI in securities services, often deployed alongside RPA. For example, image recognition can be used as part of the know your customer (KYC) process to scan a passport image before RPA is used to process the structured personal data. Similarly, AI can be used to spot patterns and improve fraud detection. Given banks’ huge data volumes, AI could serve as an important competitive differentiator by reducing error rates to deliver efficiency gains and cost savings.

> “AI is a general purpose technology that will be deployed for a wide range of uses. One consequence of this is that people need to be at the centre of any AI initiative.”

Such use-cases highlight one of the potential challenges for the deployment of AI in securities services: all AI technologies require readily available digital data. While the banking sector generates huge volumes of data, much of it is often in separate legacy systems and can be difficult to access and consolidate. Banks also have significant responsibilities in terms of client confidentiality and regulatory obligations that need to be respected before data can be leveraged on an aggregate basis.

While many banks may initially be focused on AI to create cost savings and efficiency gains, the potential for AI to generate revenues by developing new products and services is enormous. Banks are starting to draw insights from their massive data stores in order to create value. For example, analysis of operational data from the transfer agency (TA) business, can be valuable to the front office of an asset manager to assess the effectiveness of sales and marketing campaigns to distribute their funds, as well as for compliance purposes.

A PEOPLE-FIRST APPROACH

It is important to recognise that innovation is not just about new technology, but also requires cultural change. Unlike many previous innovations, AI is a general purpose technology that will be deployed for a wide range of uses. One consequence of this is that people need to be at the centre of any AI initiative. As is often said, the goal should be ‘augmented intelligence’ rather than ‘artificial intelligence’.

This approach does not limit AI’s potential benefits. For instance, NLP can be used to continually check for price quotes and respond to clients automatically, allowing a human operator to focus on client service, while still retaining oversight of the pricing process.

Traditionally, the view is that technology staff within financial services need to learn more about the business to improve effectiveness. With AI, the reverse will increasingly be true: the business must get to grips with new technologies. This process still cuts both ways, however. The CIO (Chief Information Officer) role in securities services will not only be based on technical expertise but increasingly require soft skills and the ability to act as a change agent.

AI seems certain to become critical to securities services in the future. Given the scalable nature of the technology, initial incremental benefits could rapidly create monumental changes. Firms that fail to investigate its potential uses risk being left behind. But as the industry embraces AI, it must also change its mindset and ensure that business leaders learn enough about the technology in order to understand how it can help their business. Until this happens, we will continue to see a gap between the use of AI in our personal and professional lives. ■

CUSTOMER SERVICE IN THE AGE OF ARTIFICIAL INTELLIGENCE

Laurent MAROCHINI
Head of Innovation,
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Julien MOLEZ
Group Data & AI Innovation Leader

Artificial intelligence (AI) and related technologies have captured the imagination of financial institutions. But are there threats among the opportunities?

“AI gives banks the opportunity to differentiate themselves. If you are not different from the competition in the future, you will cease to exist.”

Since the financial crisis of 2008, there has been an acceleration in the digital transformation of financial institutions. During this transformation, data volumes have increased, new FinTech competitors have emerged as have new business models, and cloud computing has opened up the possibility of much greater processing power. Digital transformation has also laid the foundation for many use-cases of AI in financial services.

The benefits of AI fall into three broad categories:

- Transformation enabler: AI can help banks to execute better, faster and at a lower cost. It also has the potential to improve risk management processes;
- Improved customer relationships: via greater personalisation, and augmenting the role of human staff, AI can create better customer proposals;
- New business models and revenues: AI has the potential to gather more data, enabling financial institutions to create new business models that increase revenues.

Many of the use-cases for AI are about doing more with less, about improving operational efficiency cost-effectively.

But AI also opens up a world in which financial institutions can differentiate themselves, improving customer relationship management by interacting more effectively with customers and gaining a better understanding of their behaviour. By understanding customers, new, better and more tailored products and services can be created, increasing revenues for banks in a competitive environment.

THE CHALLENGES OF AI

Amid this promise, there is an elephant in the room – what impact will AI have on jobs and employment levels within financial services, and indeed on society as a whole? Conversations about AI and robotic process automation (RPA) often centre on large-scale replacement of humans with technology. The spectre of social unrest, caused by widespread unemployment, is of concern.

Rather than view AI as a threat to human staff, financial institutions can deploy AI to aid staff and augment human capabilities. AI tools can help employees to navigate through the complexity and volume of data. A financial institution will always need human expertise because every client’s financial situation is unique.

In compliance, financial institutions will not be able to rely solely on automation. Output data from AI systems is probabilistic; there is never a ‘yes’ or ‘no’ answer so bringing a human to review AI output is required, particularly when it comes to regulatory reporting.

Another threat raised by AI is the growth of cyber-attacks. AI is not the sole preserve of financial institutions – fraudsters and cyber attackers also have access to open source AI algorithms. Cyber security will be an important element in the development of AI in financial services.

Financial institutions should also remember that AI cannot do everything; it is not a magic wand. We should not expect too much of AI – there are some cases where it will be very powerful but other areas where its value is yet to be demonstrated.

COMPETITIVE DYNAMICS

The potential benefits of AI for operational efficiency and business models have sparked significant investments in technology and a race for talent, particularly data scientists and analysts. However, to unlock the full potential of AI and give a significant competitive advantage, the technology must be combined with other digital levers, such as open banking, digitisation, social media and potentially blockchain.

The ‘big tech’ companies, which have mastered these different components from their inception, have had data at the centre of their business models. This sector presents a new competitive threat to banks and such organisations are coming into the financial services market very quickly.

Banks that do not adopt AI at scale might become laggards, operating at higher cost and unable to provide customers with key services and high-quality user experience.

TOWARDS RESPONSIBLE AND ETHICAL USE OF DATA

As an increasing number of AI systems are developed, financial institutions must ensure that they implement the correct governance of algorithms, deploying a good enterprise-wide data framework and ensuring data, along with models and algorithms, and ensure that related data is properly generated, stored and can be audited.

If we let AI proliferate across the financial institution without such governance, it will be difficult to answer regulators’ and clients’ questions about the use of data. ■

“AI is a key transformation enabler for banks, enabling better, faster and cheaper execution but also opening new business opportunities at scale but requiring to be paired with a responsible approach.”

Laurent MAROCHINI
Head of Innovation,
Societe Generale Luxembourg

The Fourth Revolution is here with the concept of total digitalisation. Considered as one of the greatest innovations since the internet, blockchain celebrated its 10th birthday in February 2019 and is at the epicenter of the revolution. According to the World Economic Forum, it could account for as much as 10% of global GDP (gross domestic product) by 2027[1].

HACKING THE BLOCKCHAIN

By definition, blockchain is an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent way.

Its promise of security is one that warrants further focus, however.

What could be controversial is that the number of hacks has never decreased.

Security is crucial if the entire financial industry wants to benefit from the technology and meet its obligations in terms of investor and banking protection.

IF BLOCKCHAIN CANNOT BE HACKED, WHY CAN CRYPTO CURRENCIES BE STOLEN?

There is often a confusion between the technology blockchain and the use of the underlying crypto currency or crypto asset. A crypto currency is defined as a digital currency stored in a blockchain. The biggest hack in terms of value occurred in its infancy with Mt Gox in 2014 (value of €700m in 2014) and more recently with Coincheck in Japan in January 2018. Every day, individuals are hacked in crypto exchanges and their wallets.

Crypto currencies introduce new concepts with the public/private keys pair and this requires special attention in terms of security. Education is crucial to prevent hacking and dedicated solutions to store digital assets with cold storage are already in the market. The security of crypto exchanges is an important element in the choice to store digital assets.

IF A FINANCIAL COMPANY MOVES ASSETS TO A BLOCKCHAIN, IS THERE A RISK OF BEING HACKED? WHAT ARE THE DIFFERENT POSSIBILITIES AND SOPHISTICATED TECHNIQUES?

Since 2009, we have witnessed the creation of a large number of blockchains using different protocols like 'proof of work' which is the best known but also 'proof of stake' or 'proof of authority'.

In the case of a public blockchain, transactions are verified and validated by at least 51% of the so-called miners (more than 10,000 nodes in bitcoin[2]). The '51% attack' or 'The Gold Finger' consists in gathering more than 50% of the computing network. A pool of mining in China has already reached 42% of bitcoin computing power[3]. The potential impact could be to freeze the validation of transactions and to process double spending (buy a transaction and delete a transaction). This method requires huge investment and the community closely monitors such processes, even if an instance of double spending occurred in Ethereum Classic as recently as January 2019[4].

1. www3.weforum.org/docs/WEF_GAC15_Technological_Tipping_Points_report_2015.pdf
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> “Crypto currencies introduce new concepts with the public/private keys pair and this requires special attention in terms of security.”

THE POTENTIAL FAILURE OF THE SMART CONTRACT

The smart contract is a piece of computer code running on top of the blockchain allowing the execution of automatic actions. When pre-defined rules are met, the agreement is automatically enforced. From a security perspective, a smart contract cannot be hacked. What could occur, however, is a failure in the drafting of the smart contract. A recent study[5] found around 3%-4% of smart contracts to be faulty by only checking via an algorithm for the most common exploit possibilities. “The DAO” (decentralised autonomous organisation) is one of the key symbols of a fund which has been hacked following the vulnerability of a smart contract for more than US$50m[6]. The audit of smart contracts before going into production is crucial to secure the process.

… AND WHAT ABOUT QUANTUM COMPUTING?

Quantum computing is based on the principles of quantum theory to perform computation. This will be the era of the modern super computer. Blockchain technology is based on asymmetric cryptography. Quantum development could make the blockchain more vulnerable and more at risk from a security perspective. Quantum is still a nascent technology but its impact could surpass blockchain technology.

In our digitalised world, security is not optional. It is essential. Even if we consider that blockchain is secure enough, nascent emerging technologies and the fast pace of change will remain challenging in the coming years. ■

Useful links:
- hackernoon.om/5-reasons-why-we-need-to-define-security-of-blockchain-c146253e7e81
- www3.weforum.org/docs/WEF_Building-Blockchains.pdf
- www.forbes.com/sites/forbestechcouncil/2018/10/12/how-secure-is-blockchain-technology/#4fa4b41472f0
- www.technologyreview.com/s/610836/how-secure-is-blockchain-really/
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- bitnodes.earn.com
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THE UNFULFILLED PROMISE OF BLOCKCHAIN

Valérie VILLAFRANCA
Head of Group KYC
Transformation Project

Blockchain has already been a buzzword for a long time but its potential to revolutionise the compliance industry is yet to be seen.

> “There is a lot of hype about blockchain but so far it has not delivered the promised goods.”

Finding the right solutions for the labour-intensive know your customer (KYC) processes is not easy and to date there have been few use-cases on the market. However, progress is being made and the Clipeum initiative could prove to be one way forward.

The Clipeum project is a KYC (Know Your Customer) platform based on a distributed registry technology. It is a consortium led by Societe Generale and 12 European financial institutions including BPCE/Natixis, Credit Agricole, Commerzbank, Allianz, Banque Postale, BpiFrance, Euler Hermes, Tikehau and UniCredit. The aim is to build a European network linked to other initiatives such as the SWIFT KYC registry but with the clients at the centre having full control over data sharing and access permissions.

A decentralised network that leverages the flexibility of DLT provides a data storage or hosting separated by party or jurisdiction in a sovereign and General Data Protection Regulation (GDPR)-compliant by design service. It is also the perfect use-case for the passporting of KYC within a group composed of many different banks. Moreover, it creates a permanent record and audit trail of when and who provided information, therefore enabling traceability by design again. The “hash function” which is a code consisting of letters and numbers used to identify and represent pieces of KYC data, is stored “off-chain” and shared by the client and the financial institutions concerned.

Since it allows both globality and specificity it eliminates the need to design a KYC standard set of documents that should fit the needs of all participants and allows the flexibility of a set of documents specific to each relationship to be exchanged between the stakeholders on an ad hoc or permanent basis.

The main hurdles in KYC/AML have been well documented. Despite advances in technology, compliance processes remain burdensome, manual and fragmented and can cost individual large financial institutions around US$400m annually, according to a recent Thomson Reuters study. One problem is the lack of standards and legal frameworks due to the steady stream of regulation that has come onto the market over the past decade, including GDPR (General Data Protection Regulation), which has inserted yet another layer of complexity in terms of the collection and managing of customer data.

THE POTENTIAL

There have been many challenges in automating B2B (business-to-business) processes on KYC use-cases because they involve a centralised data repository. This may be technically easy to implement but pose other issues, in particular the maintenance costs related to the requisite level of service and security. Other obstacles to overcome include the exposure of network participants to the single point of failure principle, censorship, cybercrime and data leakage. Also, the pricing power lies with the centralised solution provider.

Distributed ledger technology (DLT) answers some of these technical challenges and offers a built-in security and resilience that central repository and data storage solutions don’t allow. However, not all blockchain platforms are suitable for financial services. To date, the most appropriate are the private, permission-based models offered by DLT for handling KYC compliance. These include Corda’s R3, JP Morgan’s Quorum and Hyperledger/Linux Foundation.

Although there are several operational and cost benefits to blockchain, expectations should be realistic.

The reductions that can be achieved are often overvalued. Therefore, one must be realistic about blockchain. Though it is indeed answering some challenges about sharing KYC documents, as well as answering some the most acute challenges such as GDPR, security or traceability, thinking it will divide costs by 10 compared to classical centralised repository solutions is fantasy.

A more likely scenario is the 25% to 50% cuts shown by Singapore’s recent proof-of-concept prototype of a blockchain KYC utility. KPMG joined forces with three Singapore banks – HSBC, OCBC, Mitsubishi UFJ Financial Group, and the Singaporean regulator Singaporean regulator Infocomm Media Development Authority – to conduct tests between February and May 2017. They passed the Monetary Authority of Singapore’s test scenarios by lowering duplication and providing a clear audit trail. Clipeum consortium results based on the proof of concept conducted in October and November 2018 are in line with this estimate. ■

> “Initiatives such as Clipeum, though not a panacea, might prove effective solutions at tackling some of the major KYC documents sharing challenges.”

OPPOSING FORCES: HOW BANKS ARE ALIGNING COMPLIANCE NEEDS WITH REAL-TIME PAYMENTS

The demand for faster, even instant, payments is already a fact of everyday life. What will come next?

Eric LE LAY
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Head of Interbank Relationships, Global Transaction Banking

Thanks to the advances made, possibly by the emergence of SWIFT gpi and instant payment systems, this is not a phenomenon restricted to high value corporate payments, but also includes lower value retail payments. The next logical step – connecting payment systems operating 24/7 in different currencies – is already on the industry's radar.

SUCCESS CAN BRING ITS OWN PROBLEMS

Success can bring its own problems. Front-line experience and independent statistics demonstrate that instant payments suffer much higher rejection rates compared with their "standard" equivalent. Anecdotal evidence suggests rejection rates can be 10 times higher, even more, when considering cross-border transactions even if they are in the same currency.

This is mostly because, if a filtering or anti-fraud tool identifies an atypical payment that requires investigation, it is rejected due to impossible payment processing within the maximum time expected by the client (usually a few seconds).

As a consequence, banks face the challenge of achieving the right balance between the instant "new normal" expected by the customers and the authorities, and the need to abide by compliance regulations.

WHAT DO WE NEED TO DO, AND HOW?

There are short-term, medium-term and long-term answers to these questions. In the short term, new technologies can help solve the problems created by other new technologies. These include intelligent scoring and improved detection tools based on artificial intelligence and machine learning to help make the right checks and the right choices as to what to do next.

> "Trust is at the heart of our markets, and remains of the utmost importance for financial users. It must not be sacrificed upon the altar of technical innovation. "

Despite our conviction of the value of combining the best of human intelligence with the best of machine intelligence, human beings are not able to identify "false alerts" within seconds. By learning "a posteriori", after the event, machines can interpret data instantaneously and help focus analysis on the core elements of payment messages.

For example, we can help machines learn not to generate an alarm about a transaction message that includes the phrase "scuba diving" because it contains the letters that spell "Cuba".

PRE-PAYMENT SCORING

Scoring[1] before payment execution can be developed further by existing market infrastructures. This can be matched with each single bank's own scoring system, letting the latter taking the decision on whether a payment should be processed, declined or receive further attention.

Other potential short-term measures include the development of new payment formats allowing for fuller and richer data exchanges: the global move towards the ISO20022 standard will clearly help financial institutions to guarantee secure payments processing while abiding by compliance regulations.

Switching our attention to medium to long-term potential developments, we all need the help of the authorities and regulators.

A huge advance would be the creation of a single, unique, harmonised sanctions list to replace the current *mélange* of national and regional lists. Differences would of course remain at each individual bank level, but the risk of cross-border misunderstandings and the consequent raising of false alarms would be greatly reduced. This pre-supposes, however, a strong and concerted harmonisation effort amongst regulators in different countries.

Other possible medium-term developments could include the concurrent adoption of detailed common norms and guidelines on the application of sanction screening application by regulators in different jurisdictions. One aspect of this could be a requirement for the remitting bank to take full responsibility for the identity and actions of the remitting client, while the beneficiary bank does likewise for the beneficiary client. This could enhance efficiency without incurring additional undue cost.

TOWARDS BETTER INFORMATION SHARING

As all experienced bankers and regulators know, rules themselves can be a part of the problem. This is especially so in areas where they are clearly contradictory, as in the case of mandating the sharing of data between banks and with regulators while demanding the upholding of data protection.

We must find a way to balance the demands of observing data privacy rules and fighting fraud, perhaps by allowing a greater degree of information sharing. If payment service providers could exchange information between themselves about the attempted fraudulent use of an IBAN, this would help in preventing someone identified as a would-be fraudster from trying to deceive other payment service providers. The more the speed of payments accelerates, the greater the necessity to exchange key information and act swiftly.

LEVELING THE PLAYING FIELD

One final warning centres on the granting of access to payment markets and payment systems to new players, that category often referred to as disruptors by the global media industry. We believe that such access in a hyper connected world should be contemplated only after a thorough analysis of the disruptors' activities based on established facts and demonstrable results.

As these new players are regulated, we should expect the same quality of know your customer (KYC) diligence and fraud detection at every stage in the chain. New players in the payment chain should ensure they enhance their compliance, resilience, data privacy and fraud management processes to meet the very highest standards demanded by the market.

Levelling the playing field means new players will not only have the same rights but will also have the same obligations as incumbent stakeholders.

This should be particularly true in times of financial stress, when uncontrolled failure of even relatively small institutions could trigger a much wider loss of confidence in the market.

Trust is at the heart of our markets, and remains of the utmost importance for financial users. It must not be sacrificed upon the altar of technical innovation. ■

1. A score is a statistical number that evaluates a counterpart's trustworthiness based on its payment history.

REMOVING FRICTIONS IN CROSS-BORDER PAYMENTS

Didier BALLAND
Head of Product Development & Marketing, Cash Clearing Services, Global Transaction Banking

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Cross-border payments are getting faster, but friction remains, slowing some payments down.
Will the industry ever achieve 100% STP (straight-through-processing) rates in cross-border payments?

“We will never entirely eliminate friction in cross-border payments, but how we respond to it and resolve any blocks to payments will be key. Reducing the amount of time it takes to resolve an issue will reduce the amount of friction.”

The digital transformation of financial services has accelerated the pace of cross-border payments; in many cases payments are settled almost instantly. But within this real or near real-time environment, friction that can lead to enquiries or investigations still exists, slowing down the payment process. According to SWIFT, 2%-5% of cross-border payments are subject to an enquiry or investigation, resulting in a time lag in the payment being completed.

The source of such friction varies, including internal and external factors. For example, each country to which a correspondent bank sends payments can have its own rules, regulations and requirements for data. Understanding the different requirements globally requires a high level of expertise. Problems can also occur when clients fill data fields with the incorrect information or in the wrong format. Because there is no single, global regulator overseeing cross-border payments, there are many different formats and peculiarities. This fragmentation means cross-border payments are difficult to automate.

SWIFT estimates that enquiry management is costing banks 25-35 times more than payment processing itself and that efforts to automate cross-border payments processing have had very limited results.

THE TOOLS TO FIGHT FRICTION

Standardising cross-border payments formats will help financial institutions to eliminate many of the frictions. SWIFT’s move to the richer file format of ISO 20022, which is easier to understand and brings more fields into play, will make life easier for financial institutions and their correspondents. The format will allow more data to be included which can satisfy local regulatory requirements.

Financial institutions can also reduce friction by implementing dedicated platforms for cross-border correspondent payments. Such a platform can enable a bank to route payments quickly and efficiently to the appropriate correspondent and automatically populate that payment with the correct data in the correct format in order to process it straight through.

Automation alone will not solve all the problems a financial institution faces, however. Digital tools must be combined with the expertise of experienced staff. It is unlikely that financial institutions will ever achieve 100% STP rates, and for the small number of payments that require investigation, financial institutions will need expert people who are dedicated to cross-border payments and can quickly check what information is missing in order to let payments go through.

THE ROLE OF FINANCIAL REGULATORS

A significant number of cross-border payments are stopped because of the different approaches to compliance and screening. Document and compliance checks often have to be made. Even within a particular regulator’s jurisdiction, banks may have different risk policies and manage different

“It is very important for all of the financial services industry to unite behind technical and compliance standards for cross-border payments; if the industry manages to stay united behind standards it will help everyone to improve the services that are provided to both retail and corporate clients.”

lists of names, requiring certain payments to be stopped and checked on a daily basis. One bank may stop a payment for a certain individual, while another may not. Typically, the only way for a financial institution to deal with any payments that are blocked is to have dedicated IT and compliance teams to undertake screening and comprehensive work-throughs.

If regulators engaged in greater collaboration and co-operation, better co-ordination of what is mandatory for particular fields in a payments message would result.

THE COST DRIVER

In the low interest rate and tight margin environment of the banking world, financial institutions continue to seek low-cost operations. The key to low-cost cross-border payments is to reduce friction as much as possible. However, the only way to reduce friction is to process payments straight through.

The payment frictions banks face fall into two categories: technical and logical. An example of a technical payment block would be a formatting problem. Theoretically, such a problem could be removed by creating and observing standards around formats. Over the longer term, technical friction may be removed via such standards and better IT systems.

A logical block, on the other hand, arises from an individual bank’s internal compliance rules. This is a challenge for banks as the differences in local markets will continue to bring friction. Another example is intraday liquidity management: banks are more rigorously checking – live – the available liquidity on a correspondent bank account, creating a new source of potential friction.

THE ROAD TOWARDS FRICTIONLESS PAYMENTS

Deeper co-operation between SWIFT, its member banks and regulators across the world will help to remove many of the frictions in cross-border payments. Technology will also have a role to play.

SWIFT gpi is addressing a number of blocks in cross-border payments. For example, it pre-validates payments before sending them across borders, helping to improve STP rates. APIs (application programming interfaces), on which correspondent banks can call before they send a payment into the system, could direct banks about which fields must be filled and how. Artificial intelligence and machine learning processes are already used to alleviate both technical and logical frictions.

In a real-time payments world, speed and transparency in cross-border payments, as well as security, will be essential. Financial institutions may not yet be able to eliminate all frictions, but with the use of standards and technology, they will be able to make friction a minor, not a major, inconvenience, while providing both fast and safe cross-border payments. ■

THE WAY FORWARD FOR CROSS-BORDER PAYMENTS

Jean-François MAZURE
Head of Cash Clearing Services, Global Transaction Banking

Aurélien VIRY
Head of Payments & Cash Management, Global Transaction Banking

While cross-border payments are much easier than in the past thanks to digitisation and regulation, there is still a lot of work to be done.

In a world filled with geopolitical risks, tighter margins and heavy compliance burdens, corporates have become much more vocal about their demands of greater transparency and speed. They want the same seamless, real-time, data rich, affordable experience they receive from the tech behemoths such as Google and Amazon.

A recent report from SWIFT and McKinsey entitled *A Vision for the Future for Cross-border Payments*[1] underscores that corporates and other customers are driving the need for change. They are looking for **reliable payments delivery, access to preferred payments methods and the ability to track exchange rates and schedule payments** based on this information. Companies are also expecting that data incorporated in payments transactions can be linked into any ecosystem in which they participate. In the future, payments will be open system-based and embedded within corporate processes.

Great strides have been made with SWIFT's global payment innovation (gpi), a cloud-based initiative introduced in 2017 which allows banks and corporations to send cross-border payments more quickly than if they were using SWIFT's former network. It also permits the tracking of payments and monitoring of compliance with SLA (service-level agreement) contracts, both of which shine a greater light into the processes.

Currently over 250 banks send more than US$100 bn per day in cross-border payments, representing over 30% of SWIFT's total cross-border payments traffic, according to the report. Separate figures from SWIFT show that nearly **50% of gpi payments are credited to end-beneficiaries within 30 minutes**, 40% in under five minutes, and almost 100% are credited within 24 hours. The aim is to make gpi a universal standard by 2020 for all 10,000 banks on SWIFT's global network.

At Societe Generale, we have always been among the front-runners in gpi, since the beginning seeing the strong necessity to better stick to corporates' key expectations. For instance, more recently, we have been **one of the first banks offering access to the full information embedded in the gpi tracker to our corporate clients**. **The service is up and running in 11 geographies, in Europe and Asia**.

> **"At Societe Generale, we have always been among the front-runners in gpi, since the beginning seeing the strong necessity to better stick to corporates' key expectations."**

1. SWIFT and McKinsey & Company, *A vision for the future of cross-border payments*, Report, October 2018

TIPPING THE BALANCE

Another major development within gpi has been on the market infrastructure side. In May, banks from France, Germany, Italy, Luxembourg, Russia and Spain joined with SWIFT to test real-time gpi cross-border payments through the **Target Instant Payment Settlement (TIPS)** system. The European Central Bank has been a driving force behind TIPS, which came onto the market last year and is available to both consumers and businesses across the 19 states in the eurozone, offering near real-time payments via smartphones, PCs and in-store payment points.

The ECB joined forces with SWIFT to extend the reach of instant cross-border payments throughout the region. By settling the cross-border legs of payments through TIPS, banks can benefit from the instant crediting of accounts at ultimate beneficiary banks across Europe. The ability to do so, even when the final legs of payments have to be cleared on arrival within the destination country, is key to ensuring ubiquitous availability of real-time cross-border payments. One of the obstacles has been that during the final stages, these payments were sometimes delayed due to local clearing systems.

The European trial follows a similar arrangement successfully conducted by SWIFT last year with Australia's domestic instant payment system, the **New Payments Platform (NPP)**, and a group of banks from Australia, China, Singapore and Thailand. For the time being, there has been no such programme in the US as the country is not as advanced in instant payment schemes as its Asian and European counterparts. Still, challenges remain to be overcome, especially when a currency conversion or a compliance related RFI has to be performed.

GREATER INSIGHTS AND DEPTH OF INFORMATION

Another area of focus and work in progress is to create a more data-rich environment in the payment landscape. All eyes are on the migration to ISO 20022 starting in 2021. The open international standard defines key business processes and data, which is compatible with existing and emerging technologies. Unlike many of the legacy formats it replaces, **ISO 20022 provides detailed, well defined structures for key information** – including all the parties involved in the payment, remittance information and payment purpose details. In principle and in the long term, this migration should bring further operational efficiencies, with possibly more STP payments and fewer delays in the alert management process.

Although it is a major undertaking, consistent end-to-end data and procedures will result in greater operational efficiencies, faster automation of transactions and compliance processing as well as improved customer service. Corporates will be able to better manage reconciliations, credit risk and fraud mitigation while treasurers can possibly leverage the data to produce more accurate forecasts, working capital reports and enhance decision-making.

At the end of the day, major developments have facilitated and advanced the cross-border payment activities. There are still problem areas such as non-transferrable currencies or those that need central bank approval due to strict FX restrictions. However, again, SWIFT as well as industry players – such as correspondent banks – are working together to devise solutions and offer a better experience to end-beneficiaries. ■

BANKS AND INSTANT PAYMENTS –THE CURRENT AND FUTURE SWEET SPOT

A huge amount of progress has been achieved in recent times in the field of rapid, even nearly instant payments. Few would, or even could, argue with that assertion. Intraday transfers between domestic retail and corporate accounts have become entrenched to the point where even technophobic customers have embraced them.

Jean-François MAZURE
Head of Cash Clearing Services,
Global Transaction Banking

The next big advances will be made in the international arena and already the statistics speak for themselves. Thanks to the SWIFT gpi initiative, somewhere in the region of 40% of all cross-border end-to-end payments are processed within five minutes, from the point of remittance to the point of final receipt[1].

For optimists, those for whom the glass is half-full, we are well on the way to creating a new normal in the payments landscape. But one must acknowledge the cry of pessimists, for whom the glass is half-empty, and accept that there remains a good deal more work to do.

MAJOR OBSTACLES READILY IDENTIFIABLE

The major obstacles are readily identifiable and negotiating them successfully will not be a simple matter. It will require a combination of will, investment in technology, geographical coverage either directly or indirectly, and other resources, including patience.

Which takes us indirectly but neatly to the key issues that have been identified as the subject of the panel to which this article will act as something of a companion piece. Banks have successfully shown that they can deliver fast, even sometimes instant, cross-border payments around the world with SWIFT gpi.

We are asked whether, with a growing number of banks signing up to join the service, traditional banks can regain the market share lost over the past few years to the ranks of alternative providers, the so-called challengers and disruptors, often financial technology firms with a severely limited product range, who are offering cheap cross-border payment models.

In all the excitement surrounding the brave new digital world, it can be easy to forget that banks retain a number of advantages over would-be disruptors, advantages based on history, brand recognition, reputation, geographical reach (directly or indirectly) and proven track records. But at the same time – and as long as a consumer does not experience any trouble – speed and cost remain the major triggers for selecting an international fund transfer provider. For corporate treasurers, it is obviously another story.

ASTONISHING RECORD SO FAR

That we have reached our current level of attainment in terms of the speed of effecting international payments is little short of astonishing, given the constraints imposed upon the global financial world by geography itself, physical distances and differing time zones. Not to mention an almost bewildering array of long-established local working patterns, differences between legal and regulatory jurisdictions, and distinctive cultural and social habits that dictate not only that daily opening hours but also opening days themselves can vary markedly, particularly when it comes to religious and secular public holidays.

A payment instruction initiated in Australia and aimed at a beneficiary in France, for instance, might well arrive at its planned destination when the local clearing system is simply closed. When a payment cannot be processed in such circumstances, hours might be lost. This understandable constraint explains why even a straight-through-processing (STP) payment cannot always reach the beneficiary's account as fast as expected by consumers who are accustomed to immediate delivery. This constraint will persist until a way is found to channel cross-border payments to local instant payments mechanisms.

1. Source SWIFT, June 2019.

> **“Intraday transfers between domestic retail and corporate accounts have become entrenched to the point where even technophobic customers have embraced them.”**

Even then, two obstacles remain to be overcome. It might be the case that payments are blocked for client-specific reasons or for matters related to compliance issues, further dragging down the average rapid or instant payment execution times.

Another delaying factor is the need to effect an exchange rate conversion at the beneficiary level. If the issuer does not denominate the payment in the currency of the beneficiary, the payment cannot be, by definition, instant.

An important element in this context is one of education, of the remitting client, in matters pertaining to foreign exchange. Alternatively, auto-conversion schemes should be seriously considered by the ordering bank to optimise the speed of their cross-border transactions to instant systems in the country of destination.

STICKING WITH TECHNOLOGY

Sticking with the theme of technology, but with a more positive edge, another driver of faster to instant payments is growth in the number of capable global systems. There are around 40 such clearing systems in the world today, compared with fewer than 32 years or so ago. This instant payment wave will undoubtedly continue to grow in number and reach, with SWIFT gpi aiming to surf on it and continuing to encourage the interconnection of systems.

Among the major upcoming investments in the payment industry, the ISO 20022 migration is certainly among the biggest and the most challenging, given its huge and widespread impact on current IT systems. It should bring richer payments messages, increasing the chances that we will have all the information we need to apply payments or instruct compliance cases. On the other hand, it could lead to more compliance alerts requiring the refinement of certain parameters in our filtering tools.

WHAT COMES NEXT

A key part of that future is of course automation. Full STP from payment initiation to payment receipt, is essential for instant, accurate payments. Without full STP, it just will not happen.

Against such a multi-faceted backdrop, I would argue that the banking industry's performance looks good to date. If only we can identify the most effective way to render pricing for lower value payments more attractive, and so prevent digital native operators from eating into that segment of the market. ■

BANKS CAN HELP CORPORATES TO ADAPT TO THE CHANGING WORLD OF TRADE

Benoît DESSERRE
Deputy Head of Global
Transaction & Payment Services

As geopolitics and technology evolve, banks must support their clients. But to become truly valuable partners they will have to adopt a new mindset and learn to work together more effectively.

> **“Corporate treasurers need to stay abreast of changes and the erection of potential trade barriers. In many instances, companies need to ensure that the US market remains open to them and must therefore expand their political horizons and – from a treasury perspective – become more flexible.”**

The headlines are full of news about trade wars between the US and China, increases in tariffs and the slowing pace of global trade growth. The reality is not quite so stark: overall trade continues to grow, albeit at a slower rate relative to economic growth than in the 1990s and 2000s. However, we are seeing an evolution in the nature of trade, and consequently trade patterns.

In the recent past, cost was the main determinant in most trade transactions. Now, other considerations – most obviously geopolitics – have become important. As a result, new trade corridors are emerging. Instead of trade between the US and China, there is a move to other Asian countries, for example.

These developments are occurring rapidly and are subject to sudden shifts. Corporate treasurers need to stay abreast of changes and the raising of potential trade barriers. In many instances, companies need to ensure that the US market remains open to them and must therefore expand their political horizons and – from a treasury perspective – become more flexible.

AN INCREASED EMPHASIS ON SELF-SERVICE

Fortunately, technology has the potential to facilitate greater flexibility, as well as improve speed and efficiency. In the past, it took treasurers a long time to access information and implementing connectivity was cumbersome and costly. Now, treasurers increasingly want to do more for themselves. Rather than relying on a phone call (and having to wait for a response), treasurers want immediate insights via a portal that gives them visibility and control across their global operations.

Indeed, innovations such as application programming interfaces (APIs) can enable treasurers to access information and make payments directly from their treasury management systems or enterprise resource planning systems – they do not even need to use their bank portal. New solutions such as SWIFT gpi can also provide full visibility of payment status and charges applied throughout the banking chain, so that calls to chase up payments become a thing of the past.

Banks need to invest in efficient real-time solutions that give treasurers the speed and agility to make quick, informed decisions. Most importantly, they need to ensure that the vast quantity of data they have on their customers is accessible and can be analysed to provide valuable insights. For instance, many treasurers may over time lose track of how many bank accounts they have worldwide or how many transactions are made from each: this creates risks and results in unnecessary costs. Banks have such information but need to make it easy for customers to access.

Banks also need to take account of changes in how corporate treasurers work; many travel frequently and need access to information and to be able to authorise and make transactions via their smartphones or tablets. Increasingly, treasurers also expect analytics capabilities to be accessible from their bank portal when they are on the move.

A NEW TYPE OF RELATIONSHIP BETWEEN BANKS AND CORPORATES

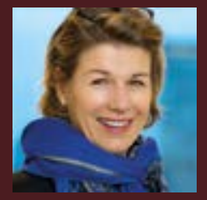
The changing geopolitical environment and the growing importance of innovative technology to corporate treasury require banks not just to provide more information and invest in technology but to transform how they interact with customers. Ultimately, banks need to move from being primarily service providers into a more advisory role, where their knowledge and experience are put to better use.

To do this effectively, banks will also need to change their culture and how they work with third parties. Historically, most banks have mainly developed their own technology internally or in some instances failed to provide valuable services. Now, given rapid technological innovation, to retain their trusted relationships with clients, banks will increasingly open up their ecosystems to third parties such as FinTechs or partner with other banks to develop solutions. By working with partners, banks can accelerate time-to-market and enable customers to rapidly leverage the benefits of new products or technology such as artificial intelligence, machine learning and blockchain: the we.trade digital platform is a good example of this approach.

The world is undoubtedly becoming more complex. Many of the geopolitical certainties that have underpinned international relations and global trade for many decades are under pressure. To prosper in this new environment, corporate treasurers must help their companies become more agile and nimble. And the banks that support corporate treasuries around the world have an important role to play in helping them achieve these goals and deliver increased strategic value to their organisations. ■

> **“The changing geopolitical environment and the growing importance of innovative technology to corporate treasury require banks not just to provide more information and invest in technology but to transform how they interact with customers.”**

LEARNING TO LOVE THE TRADE ECOSYTEM



Marie-Laure GASTELLU
Deputy Head of Trade Services,
Global Transaction Banking

It is no exaggeration to state that trade is a vast and fragmented ecosystem, involving a wide range of different players across various industries: manufacturers, retailers, customs, transport and logistics, insurers, banks and others. All have a part to play in their interlocking local, regional and global networks.

Despite the enormous progress that technology has enabled over the past 25 years, trade remains a heavily paper-based business. Many outside observers feel it is characterised by an astonishing lack of global standards and a preponderance towards local regulations instead, almost inevitably introducing additional complications across the board.

WHAT EVERY CORPORATE WANTS

Funding, pricing, quality of service and risk appetite have traditionally been, and will remain, important criteria for corporates when choosing their trading and financing partners.

Corporates expect financial services to be at the right place, at the right time in an easy client journey. We already see this “bankless banking” trend happening in business to consumer (B2C) models which smoothly embed financial services within the underlying business processes.

In an ideal world, corporates are looking for a united and seamless digital environment to manage their trade flows, enabling them to connect to all stakeholders involved in their supply chain, end-to-end, for tracking goods, financing, payment solutions, managing their purchase orders and invoices, etc. We are not there yet, but this is a goal that banks must take on board when defining their strategic vision of the future of trade.

NEW WORLD, NEW SOLUTIONS

New digital solutions have emerged to manage trade flows. They are often focused on a single segment of the trade value chain (commercial flows, physical flows or financial flows) and struggle to expand into the others.

Corporates see in this fragmented landscape many of the foundation stones of a new digital ecosystem without being convinced that they can yet see a clear route to an “end-to-end” value proposition.

Some players in the supply chain have started to expand their activities to cover a broader spectrum, as we can see from the introduction of marketplaces providing loans or payment solutions, like Tradeshift or Qupital. This trend is fostered by new ways of conducting business between corporates, but remains far from being the fully integrated ecosystem they would like to have.

Banks are switching the way they operate trade finance products, moving away from paper-based document management and towards data-driven processes. This enables quicker and safer compliance checks, process automation and better processing times.

WE HAVE TO SPEAK ABOUT BLOCKCHAIN

And, of course, we have to speak about blockchain, a very relevant technology for trade and trade finance because of its distributed nature and its strong native network effect. A number of banks have partnered with other banks and IT firms to build digital trade platforms using blockchain with the aim of securing and financing domestic and international trade. **we.trade, Marco Polo and Voltron** are just some of the new names on the block.

New business opportunities arise from these new technologies. **we.trade offers to small and mid-sized companies for their intra-European flows the ability to secure transactions** which are currently processed on an open account basis: thanks to blockchain smart contracts, partners can agree on the events that will automatically trigger payment and eventually financing.

> “There is a clear path to the future for those who have the vision to see it.”

As a result, transactions are much more secure than in the kind of open account trading that our grandparents might fondly recall. However well you might know your trading partner, history shows the advantage in having an independent source of support and comfort.

ACROSS THE UNIVERSE

We envisage the emergence of large interconnected trade ecosystems bringing together players from across the trade and supply chain universe, sharing a secure international legal framework and developing global standards across the entire trade value chain.

Common standards, shared legal frameworks and Interoperability of platforms are the three pillars that are absolutely essential to succeed.

As trusted third parties, banks sit on a huge goldmine of data. The combination of such data and artificial intelligence will enable banks to leverage their higher understanding of trade transactions (in tracking and analysing patterns, for example) and to offer new services.

An added complexity is that banks face a number of hurdles that would-be disruptors do not, in the form of legacy systems, whether in terms of IT, human beings or ossified processes. Corporates want quicker, more transparent and more secure systems and processes, and many do not particularly care about who provides them.

If banks miss that particular train, it is likely that more agile players will include financial services initiation in their ecosystems (as in B2C payments with Amazon’s one-click button or an Adyen card payment-type solution as used by Uber, Netflix and Leboncoin). And banks run the risk of being distanced further from their customers, of losing contextualised data, cross-selling opportunities and simple everyday interactions.

A CLEAR PATH TO THE FUTURE

To retain customer loyalty and remain a trusted partner to their corporate clients, banks will not only focus on building the future of trade around blockchain, data and artificial intelligence. They must also keep steadily investing in improving customer experience and cost-efficiency.

There is a clear path to the future for those who have the vision to see it. Those who can turn their capacity for vision into effective implementation and execution will have a central role to play in the excitement that lies in wait for us. ■

TRADE WARS SIGNAL UNDERLYING TRUTHS

Agnès JOLY
Head of Trade Services,
Global Transaction Banking

Examining the underlying fundamental reasons for the eruption of trade disputes.

The volume of space dedicated to 'trade wars' in the past few months is vast. But this does not guarantee the subject has been properly examined and analysed. I would like to suggest another perspective, questioning some common assumptions.

These mostly start with the view that the trade wars are down to the arrival of US President Donald Trump on the international political scene. His determination to secure the best deals for his country, particularly in relation to China, is broadly perceived to have precipitated a modern trade war.

But might this not be an incorrect interpretation of a deeper and subtler fundamental underlying trend? That trend is, in the view of some economists, the end of what we have all enjoyed as a golden age of sustained economic growth through globalisation.

GLOBALISATION-DRIVEN GROWTH MIGHT CONTINUE

Globalisation-driven growth might continue, but it will no longer drive the significant marginal gains we have to come to regard as normal. The growth of trade flows recorded over the period 2016-18 can be seen in hindsight as the fading impact of cyclical change rather than of further globalisation itself.

We believe that the emergence of barriers to growth can be linked to a combination of several different factors that have come to play a role in international trade.

One, the **side-lining of marginal gains** that arise from the fragmentation of supply chains based upon the outsourcing of production to lower cost countries. That source of globalised growth has had its day. There are no cheaper countries left that are comparable to China in terms of sheer size and capacity to drive down prices or drive up productivity still further.

Two, awareness of the above is leading to **new efforts to reduce the unnecessary transportation of goods,** with a particular emphasis on the return of manufacturing to countries that suffered from de-industrialisation.

Three, **internet trading** Amazon, which has established an entirely new way of e-trading over the past two and a half decades or so, has set a new *de facto* global standard. Customers not only want their products cheap, they also want them fast. The question then arises: how can suppliers serve these needs in an optimal way? This is likely to have an impact on the business model in favour of sourcing production more locally.

Four, the **fragmentation of supply chains** into small links changes the nature of supply chain financing. The more fragmented a supply chain is, the more working capital it will need. This fragmentation has been supported by the finance industry with great enthusiasm in recent years. But additional regulatory capital needs and costs incurred by growing compliance constraints have pushed banks to de-risk lending activities and allocate capital resources more prudently and profitably. As a result, the US$1.3 tn financing gap identified by the Asian Development Bank three years ago remains stubbornly open, preventing small and medium-sized companies in emerging countries from accessing the financing they need.

> "The final goal is to enable third-party investors to participate in a potentially huge market. Intelligent change will assist in closing the financing gap."

Five, the growing sensitivity to ecology and related issues. This is manifesting itself at (a) the customer level as a preference for eco-responsible products and trade flows, hence the preference for short circuiting, and (b) at the corporate level in the re-localisation of sourcing to reduce the carbon footprints of their products.

CHALLENGES AND OPPORTUNITIES: FROM LIQUIDITY TO TECHNOLOGY

Challenges famously, of course, give rise to opportunities. Banking opportunities will be generated by the new focus on revitalising regional and local markets as trade flows shift. In Europe, we are concentrating again on the financing of intra-Europe trade for which it has been essential to find new solutions, such as the *we.trade* distributed ledger technology platform.

Societe Generale is one of 13 banks in the trade finance universe operating the only functioning DLT platform. And it has been trans-acting real deals with real corporate clients since April this year.

Intra-Africa trade is another new market we are looking forward to nurturing. Local banks with a focus on intra-African trade are blazing a trail.

At the same time, it is worth exploring the new corridors emerging in today's disrupted trade environment. Vietnam and Thailand will likely benefit from shifting trade flows. In Africa, Ethiopia, and more generally East Africa, are seen as the next frontier for sourcing cheap consumer goods for the European market.

A third new opportunity lies in the development of 'green' finance. Green energy projects (solar, wind, bio-mass, inter alia) are thriving across the world, requiring financial support. On the other hand, more players in the economy, in the shipping industry (both commercial and recreational) for example, are growing their eco-awareness, which the banks are also eager to support through tailor-made financing.

A fourth is linked to the allocation of capital, in respect of which we have seen the development of various market platforms aiming at industrialising and streamlining invoice discounting processes. We see the standardisation of documents in invoice discounting as being one of the major challenges facing the international trade finance market over the next few years.

The final goal is to enable third-party investors to participate in a potentially huge market. They are currently being deterred from doing so by a lack of standardisation of documentation, commercial market practices and other key elements, including the lack of a reliable credit ratings system. Intelligent change in these areas will assist in closing the financing gap.

A FUNDAMENTAL CHANGE

The global trade war is hurting all the countries involved in a sudden and brutal way, but it only signals the more fundamental changes that are taking place in the global economy.

In this changing world, we have to think ahead about how to adapt to our clients' new needs and our stakeholders' expectations. Opportunities are there if we want to see them. ■

SECURITIES SERVICES FIRMS MUST EMBRACE TECHNOLOGY TO ENHANCE TRANSPARENCY

Sarj PANESAR
Global Head of Business Development, Asset Managers
Societe Generale Securities Services

Asset managers are turning to the securities services industry to help them comply with transparency regulations. Providers must invest in innovation to deliver smarter services at a lower cost.

> “Delegating responsibility for key compliance requirements around transparency is a straightforward way to reduce asset managers’ operational risks.”

The asset management industry has faced myriad regulations with direct and indirect implications for its business model in recent years. The Markets in Financial Instruments Directive (MiFID) II, Solvency II, the Shareholders Rights Directive and numerous other initiatives have sought to enhance transparency, both for regulators and for underlying investors. Their goal is to reduce fraud, systemic risk and the possibility of a recurrence of the global financial crisis of 2008-2009.

Increased regulation is a global phenomenon. But in Europe, regulators have been especially active in seeking to reduce post-trade risks and build a stronger European capital market, through initiatives such as the European Market Infrastructure Regulation (EMIR). Inevitably, these measures have increased the regulatory burden and costs for asset managers.

SERVICE PROVIDERS COME TO THE FORE

Increased transparency is a common hallmark of regulation over the past decade; in practice, this means asset managers must become savvier with data and more flexible in how data is reported. How is this being achieved?

To date, asset managers have largely delegated responsibility for fulfilling their obligations to security services providers. Some asset owners have built their own solutions but the clear majority outsource to third-party service providers. Asset managers would argue their job is to manage money and talk to clients; they are happy to provide email wrappers to send information to clients but would rather leave data handling to others.

In many instances, this makes sense. For example, asset lenders already hold the necessary data to meet the requirements of the Securities Financing Transactions Regulation (SFTR), while a trade reporting partner already has the necessary file required to comply with MiFID II.

Moreover, the growth of private or alternative asset markets, such as private debt, infrastructure and real estate, has increased the challenges associated with data management for asset managers, given the absence of easily available information about such assets (in contrast to publicly traded bonds, for example). Similarly, as asset managers expand into new geographies, the data associated with reporting requirements becomes more complex, in relation to onshore and offshore holding of data, for example.

Delegating responsibility for key compliance requirements around transparency is also a straightforward way to reduce asset managers’ operational risks. These have increased significantly in recent years because of a greater scrutiny and of the introduction of higher penalties for non-compliance.

THE ROLE OF TECHNOLOGY

Using data more effectively can be easier said than done. While regulations such as the Packaged Retail Investment Products Initiative have encouraged standardisation of data – and much has been learnt from the implementation of Solvency II, for example – there are currently no industry standards in many areas. Secure FTP (file transfer protocol) and even email formats are often used for data transfer, for instance.

However, innovation is poised to overcome this challenge. Application programming interfaces (APIs) could be the next stage in the evolution of post-trade services. They allow different systems to integrate seamlessly, linking a fragmented systems environment where legacy technology remains commonplace, making infrastructure more cost-effective, and accelerating implementation times. APIs pull rather than push data, making real-time visibility feasible.

Technological innovation is also delivering relatively low-cost solutions in the form of cloud computing and data lakes, which facilitate the use of open infrastructure. The advantages offered by open architecture are considerable. They allow asset managers to look across their exposure in a holistic way. Even if asset managers choose to work with different custodians based on geography and asset classes, reporting can still be easily aggregated.

New regulations such as Institutions for Occupational Retirement Provision (IORP) II – which seeks improved workplace pensions governance and accountability – are expected to accelerate the adoption of open architecture to help both asset owners and managers to meet their regulatory requirements.

SERVICE PROVIDERS MUST DELIVER

With asset managers largely choosing to outsource many of the key elements of regulatory requirements that demand greater transparency and better protection of investors, the onus is on security services providers to take full advantage of new technological developments.

However, securities services providers are, in many cases, being asked to do more for less. Asset managers are putting downward pressure on prices in the securities services industry; asset managers need to cut costs in the middle and back office as fees are eroded by increased competition and margins come under pressure from volatile markets. Squaring the circle will be difficult. But the application of innovative cost-saving technologies such as APIs, partnerships with asset managers and technology companies, and new data management services such as cloud computing and data lakes, could transform securities services. They could help to deliver improved solutions, more efficiently, in ways that benefit the entire ecosystem, including asset managers and end clients. ■

> “The application of innovative cost-saving technologies such as APIs, partnerships with asset managers and technology companies, and new data management services such as cloud computing and data lakes, could transform securities services.”

IMPLEMENTING TECHNOLOGY IN THE INVESTMENT MANAGEMENT INDUSTRY

Further to big data and application programming interface (API), consultants and futurists are predicting transformational changes due to artificial intelligence (AI), blockchain, distributed ledger technologies (DLT), and robotic process automation (RPA) in the financial industry. Different approaches are taken by investment managers regarding these new technologies: the watchers, who try to stay informed of changes; the testers, who launch minimum viable products (MVP); and finally the doers, who incorporate technology within production. What are the obstacles that prevent a watcher from beginning to test, and a tester from switching to production?

Etienne DENIAU
Head of Strategic Marketing
Societe Generale Securities Services

PREDICTING THE FUTURE

Futurists have regularly made predictions that have been proved[1] to be wrong, regarding telephones, cars, planes, the atomic bomb, computers, space travel or the year 2000. The end of unskilled work was forecast a century ago after the introduction of machine tool automation. And driverless cars, not to mention flying cars, were already on the front pages of national newspaper in the 1930s.

Technology may come to life without having an immediate clear application. The fax machine was invented in 1842, well before the telephone in 1876, and it took over one hundred years before it became commonplace. More recently, it took nine years to begin using lightly sticking glue for sticky notes (Post-Its).

TRANSFORMING TECHNOLOGIES

Further to **big data** and API, consultants and futurists are predicting transformational changes due to AI, blockchain and DLT, and RPA in the financial industry.

Traditional change analysis is split into:

1. internal impacts usually leading to **work reorganisation**, **process transformation** and **cost savings**;
2. external impacts tackling **client demand** and **breadth of offering**;
3. community impacts involving common infrastructure to improve **global security** and **market efficiency**.

DIGITALISATION IMPACT

Digitalisation bridges the gap between internal and external processes. It enables **front-to-back processes** with end-clients directly triggering production, **straight-through-processing** (STP) in the financial industry.

At the same time, with the introduction of the internet, radically **new business models** underpinned by network effects[2] have appeared with **open data** (OpenStreetMap) and **open software** (Linux, mysql) for which consulting firms can promote their expertise, free, usually with hidden revenues from advertising (Facebook) or data (Gmail), freemium where a small number of users who want an advanced service pay for most users who are using the generic service for free (online gaming), or collective (crowdfunding).

Clearly, the introduction of blockchain with bitcoin could open radically new organisations with the **creation of trust without intermediaries between users**. Very few applications are already live in the financial industry.

Much less disruptive, **robotic process automation** (RPA) is a technique, rather than a new technology, to lower the operational risk that arises from the local automation introduced by operational teams to improve their efficiency using a variety of tools, including Microsoft Excel and VBA. These automation scripts are very sensitive to any change in data model or user interface. RPA consists in **choosing a single IT infrastructure to industrialise the development of these "macros"** and to have them maintained by the IT team rather than the operational teams. Only the less versatile macros are eligible for RPA.

"Clearly, the introduction of blockchain with bitcoin could open radically new organisations with the creation of trust without intermediaries between users."

API AND DATA ARE COMMONPLACE

APIs are not recognised as a new technology anymore. They offer the amazing possibility of **extending the functionalities of an existing information system**, provided that the resilience of API provision can be managed.

Data, whether big or smart, has become a buzzword, even though the value of information has been known for centuries. The difference lies in the current possibility of handling large amounts of data. Data previously deemed insignificant can become valuable.

THREE POSITIONS TOWARDS NEW TECHNOLOGY

Leaving aside consulting firms, freelancers and futurists, different positions are taken by investment managers regarding new technologies: the **watchers**, who try to stay informed of changes, the **testers**, who launch minimum viable products (MVP), and finally the **doers**, who incorporate technology within production. There are only 9% of doers, according to SGSS "**Taking the Long View**" survey, while the watchers represent 43% and the testers 48%. So, the question worth asking is: how to move from watcher or tester to doer?

TESTERS

If new technologies have all the merits that the futurists are describing, what are the obstacles that prevent a watcher from beginning to test, and a tester to switch to production? Some consultants are as bold as to say that the investment management industry is lagging behind by five years in the implementation of new technologies compared to other industries.

There is **no real financial obstacle to begin testing new technology**. All these technologies are low barriers to entry: **knowledge** is widely available, **hardware systems** are not expensive and **cloud technology** is a way to pay per use, avoiding investment; many students are happy to put what they learn in 'real' life into practice. In addition, there is what consultants are calling '**servicialisation**': missing components can be used as a service from third parties through APIs.

As it is becoming easier to test, it is also becoming faster. This makes it possible to shorten timeframes to select the tests to continue and those to discard. So, there is no excuse for investment managers not to start testing new technologies.

DIFFICULTIES FOR DOERS

Going from test to production is tricky, as it requires mastering security. However, the ratio between the **testers**[3] (48%) and the **doers** (9%) is over five, according to the SGSS survey. This means that many projects do not find their business case, and there can be many different reasons for this. The obvious ones are linked to a lack of process mastering: **availability of business experts and poorly-modelled processes, and to resistance to change**.

Other reasons relate to **excessive expectations of the technology**: poor assessment of technology's limitations. New technologies should be seen as **additional tools** in the toolbox rather than as a Swiss penknife. New technologies should not be considered to be solutions in search of problems. Further to these business analysis problems, difficulties may arise from laws and regulations. In AI for instance, machine learning is a terrific analysis tool to support a human decision, but it has shortcomings when the logic of an automated decision must be retrieved and explained to a regulator.

Without going so far as to celebrate failure, taking a failure as an investment, **learning from this failure and pivoting the business model,** are strong factors of success, as long as there is a purpose.

The doers seem to have in common a *precise knowledge* of their business and of the **technological kit** that they are using. **Technology is only a medium to achieve their purposes**. Doers share a **practical approach** to technology and they incrementally introduce innovations with a quick turnaround time. This does not mean that their business will not radically change as the futurists are predicting. It means that their approach is to take only one small step at a time so that they can take one giant leap. **Go for it, test, accept errors and pivot, or stop early?** ■

1. Pan Am took bookings for commercial flights to the moon from 1968 to 1971, with a first flight expected in 2000.
2. Network effects are explained by Robert Metcalf, *The value of a network is proportional to the square of its users*, and David P. Reed, *The utility of a large network can scale exponentially with the size of the network*.
3. www.securities-services.societegenerale.com/uploads/tx_bisgnews/LONG_VIEW_MAGAZINE_FINAL_DEF.pdf

STABLE COINS: THE NEXT BIG THING?

Money has always been at the heart of the economy, with the purpose of facilitating commercial trade. Money has taken physical forms such as coins, notes and gold, but also electronic and more recently digital forms[1].

Laurent MAROCHINI
Head of Innovation,
Societe Generale Luxembourg

The common denominator of money is its adoption. In Money and the Mechanism of Exchange (1875), William Stanley Jevons analysed money and gave it four functions: a medium of exchange, a unit of account, a standard of value and a store of value. Ten years after the creation of the first digital currency, bitcoin, we have witnessed the launch of more than 2,000 crypto assets and crypto currencies (bitcoin, ethereum, ripple, litecoin, etc…). The marked volatility of crypto currencies since their inception is a hurdle to their development from a consumer perspective but also from a corporate one. The daily valuation that often changes by more than 20% fuels crypto currencies as a speculative asset. Would you use a crypto currency as your official means of payment if you risked paying twice as much for your pizza in a month's time?

In this context, stable coins are of major interest to all industries. The increasing investment from venture capitalists in different projects is a clear sign of this[2].

WHAT IS A STABLE COIN?

A stable coin is easily definable as a stable crypto currency. It is primarily a response to the problems of volatility and enables money's function to be fulfilled. To achieve stability, more than 50 stable coins[3] have proliferated using different methodologies:

- **Fiat currency-collateralised** i.e. a crypto currency pegged to a legal tender currency, also called **fiat currency** in crypto jargon, or a basket of legal tender currencies. Most of the crypto currencies have a stable value of US$1. The entity that issues the stable coin opens a banking account and mirrors the position. For example, if the entity issues 1 million coins pegged to the USD, they need to credit the banking account with $ 1m. This could be considered as the simplest stable coin model and is very stable (it also mirrors the model long used by the Bank of England for the issuance of Scottish bank notes, whereby each pound issued must be matched by a pound deposited at the Bank of England). This model requires centralisation and therefore a trusted custodian with a need to audit for transparency. Tether, which is one of the most popular in this category with a market capitalisation of US$2bn, is listed on more than 65 crypto exchanges[4].
- **Commodity-collateralised** i.e. crypto currency guaranteed by a commodity. The operating model is quite similar to the fiat one. Several initiatives have been launched in this space, especially in gold. It is inspired by the Bretton Woods system.

> "A number of crypto exchanges do not accept fiat currency yet, and stable coins can help better manage the risks."

- **Crypto currency-collateralised** i.e. crypto currency guaranteed by another crypto currency. The whole process is done within the blockchain, contrary to fiat currency and commodities, where a custodian is needed to safeguard the collateral off chain. This model has the benefit of decentralisation, as the collateral is held in a smart contract. However, crypto currencies, being unstable, require over-collateralisation to absorb crypto currency fluctuations.
- **Non-collateralised.** It is supported only by its value thanks to a smart contract that runs automatically. If the total offer or demand of the stable coin is increasing or decreasing, the smart contract will automatically adapt the number of coins in circulation to keep the price unchanged.

The asset-collateralised stable coin is the dominant model, and represents, in value, 83% of initiatives, which mostly run on an Ethereum protocol[5].

WHY ARE STABLE COINS SO ATTRACTIVE?

The stability of stable coins reassures the whole industry, retail investors as much as institutional investors.

They are built in such a way that global participation and near real-time transfer are possible, in seconds or minutes instead of days. To secure an exchange, most financial transactions are made delivery versus payment (DVP). For the time being, the absence of fiat currency in the crypto world prevents efficient DVP exchange in the blockchain.

Until a fiat currency is available, a stable coin pegged to a fiat currency is one of the best answers, bringing efficiency to the value chain. Many blockchain initiatives in the post-trade industry would benefit from this introduction. Moreover, it has the potential to be adopted as a real crypto currency from a macro economy perspective.

There is great potential for a number of countries in a situation of hyperinflation or monetary instability (Venezuela, Argentina, etc.) where the stable coin might become an alternative. From a trading perspective, the stable coin will be a good alternative, allowing them to add a new pair. A number of crypto exchanges do not accept fiat currency yet, and stable coins can help better manage the risks. During her speech[6], Christine Lagarde, the outgoing Managing Director of the IMF (International Monetary Fund) even mentioned the possibility of the IMF taking greater control in this domain, including issuing its own crypto currencies whose exchange rate would be governed by macroeconomic mechanisms. Governments around the world are prototyping and testing their own digital currencies. They have definitely acknowledged the potential of DLT technology with the trust of their national bank currency. This is what we call the Central Bank Digital Currency (CDBC). Different projects are already public, in the UK, Sweden, Singapore and Switzerland.

WHAT ARE THE KEY CHALLENGES FOR STABLE COINS? AND LASTLY WHAT IS THEIR FUTURE?

KYC (know your client) is still the cornerstone of all stable coin projects, especially due to their volume to capitalisation ratio which is substantially higher than traditional crypto assets. Tether's 30-day volume is similar to that of bitcoin whereas its market capitalisation is on average 30 times less valued. A good management of all aspects of KYC elements is crucial to its efficiency. JP Morgan, through JPM Coin, and Facebook,[7] have also launched initiatives in this context. That demonstrates the appeal and potential of stable coins. Despite substantial interest from regulators and the industry as a whole, we are still at the beginning of the journey. There are still clear structural and regulatory concerns to be addressed.

We need to keep in mind the role of money; **TRUST** will be the answer. ■

> "A good management of all aspects of KYC elements is crucial to its efficiency."

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2. www.bloomberg.com/news/ articles/2018-10-29/stable-coin-backed-by-circle-coinbase-draws-most-early-demand
3. www.coindesk.com/the-secs-crypto-czar-is-hitting-the- road-and-she-wants-to-meet-you
4. coinranking.com/coin/tether-usdt
5. www.blockchain.com/static/pdf/StablecoinsReport_2_21_2019.pdf
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7. coin24.fr/actualites/ facebook-va-t-il-revolutionner-le-monde-des-crypto-monnaies

WELCOME TO THE TOKEN WORLD

Etienne DENIAU
Head of Strategic Marketing
Societe Generale Securities Services

Laurent VIELLARD
Head of Client Strategic Marketing, Societe Generale Securities Services

In 2016, a major report was published on the changes that blockchain technology would bring to financial markets, reducing the need for reconciliations and bringing many billions of annual savings[1] to the financial industry.

At the time, the opinion of bankers was that the distributed ledger technology (DLT) introduced by bitcoin could be a fit for a public decentralised ungoverned currency and that it would require several technological evolutions to become fit for the financial markets.

The main issues for the bankers are:
- firstly, the **scalability** to process huge volumes;
- secondly the **confidentiality** to keep transactions private;
- thirdly the regulation and **governance** to offer the same level of protection as current markets.

SO MANY ICOS, SO LITTLE ECONOMIC IMPACT

The past three years have seen the launch of thousands of crypto currencies, often through an Initial Coin Offering (ICO) process. Andy Warhol famously said: “In the future, everyone will be world-famous for 15 minutes.”

Tutorials on the internet explain that it is possible to create a crypto currency in 15 minutes[2] and possibly become famous. However, crypto currency issues have generated little interest from regulators because of their relative small size compared to the global economy.

The global value of crypto currencies is around €250bn[3]. Just taking the euro currency alone, its fiduciary[4] value is four times larger[5] and the euro supply is about 40 times larger, and there are other legal tenders like the American dollar, British pound, Swiss franc, and Japanese yen with a large supply. Crypto currencies do not currently represent a systemic risk for central banks at this stage. However, the introduction of Libra, the crypto currency announced by Facebook, a company which claims over two billion users, may encourage central banks to react[6].

FROM COIN TO TOKEN

Creators of crypto currencies have tried to improve the technology to overcome the three main issues: scalability, confidentiality and compliance.

In financial services, most initiatives have, in various ways, reduced their scope to **private, permissioned and partially recentralised** technology to progress in the digital representation of assets without having to solve the three issues by technological improvements.

Financial regulators are being pragmatic, authorising issues on a case-by-case basis or on a sandbox basis.

The interest has now shifted from coin to token.

From an initially complex taxonomy of tokens, only three are really kept in focus in financial services: currencies[7], utilities[8]and securities[9].

Focusing on securities, security tokens have a clear issuer, which is not the case for bitcoin. This is why regulators want to apply and can apply existing securities regulations to the issuers of securities tokens.

In Europe, regulators are making a clear distinction between securities and financial instruments, because they are subject to different regulatory frameworks.

A major buzzword is **security token offering** (STO). There are solutions available today to issue and maintain a registry of holders for bonds, equities or funds. **The next challenges will be the ability to manage corporate events and to organise efficient secondary markets.**

“They always say time changes things,
but you actually have to change them yourself.”
Andy Warhol

INTO THE TOKEN WORLD

As operators see it, a digital representation of assets allows a better circulation of assets, a **greater velocity** and the capacity to exchange assets almost immediately.

Taking a real estate example, buying a property takes weeks. Buying tokens representing shares of a company holding a property would take only minutes.

Furthermore, if the token is properly designed, it could take little time to **bundle** this property with another one or conversely, to **split it into parts**. In other words, **securitisation** and **stripping** made easy.

In these transactions, the trading, the settlement and subsequently the safekeeping of the representation of the asset could be done at once. Such immediate processing would require the use of a standard unit of account linked to one of the main existing currencies, and this is the reason why there is such enthusiasm for **stable coins**[10] to use them at exchanges or at registries.

BACK TO THE REAL WORLD

Issuers and investors need to know and apply the requirements of all applicable laws, regulations and tax systems from their own country. This includes identifying counterparties (KYC), checking the origin of funds (AML), making declarations of threshold crossings, checking foreign ownership restriction, as well as reporting capital gains, or even withholding tax. All these rules (and others) apply to security tokens too.

Considering the number of initiatives relating to securities tokens, these new digital markets should stay fragmented for several years before a cross-chain of integration is built or before a leading platform emerges. In the meantime, many investors will rely on trusted intermediaries to provide a single interface for all these chains, convert cash to and from these chains, to safeguard the keys to access them or even hold tokens.

Imagining this world of digitisation is quite easy. Guaranteeing the reality of the assets represented by the tokens, and possibly the condition of these assets, understanding the applicable rules or assessing the fairness of a joint ownership agreement, or applying taxes, would be services required by issuers and investors from trusted intermediaries.

ONE STEP AT A TIME

Just like AI, DLT is already having an impact on the financial industry.

The current EU infrastructures with RM, MTF, OTF, CCP, T2S, CSD and Target2[11] have a proven reliability record for issuing and exchanging safely securities leveraging regulated intermediaries. These infrastructures may be able to reduce their turnaround time and extend the types of assets they list.

On the token side, providing that law, regulation and tax requirements are met, granting direct access to retail that are holding 30% of securities will first be an education issue but it might bring an incredible efficiency for other types of assets like non-listed securities or real estate.

The financial markets may witness a race between the existing technologies, which need to gain in agility and the new technologies, which need to gain in credibility. ■

1. Goldman Sachs, *Profiles in Innovation Blockchain*, May 2016, p. 5
2. *How to create your OWN crypto currency in 15 minute*s, www.youtube.com/watch?v=d5EipPVafsA
3. €266 bn market capitalisation for all crypto currencies on 1 July 2019 according to coinmarketcap.com/fr/all/views/all/
4. In this context, fiduciary money means banknotes and coins.
5. www.bloomberg.com/news/articles/2019-06-18/better-than-bitcoin-facebook-unveils-libra-cryptocurrency
6. Banknotes and coins represent €1,034 bn, and total euros in circulation account for €11,618 bn
7. A token that is a store value and a medium of exchange, not issued by a central bank.
8. A token linked to a network or to an issuer to fund a project and later gives right to goods or services.
9. A token behaving like a security with holders regarded as owners.
10. There are different definitions for stable coin. Here it means a unit pegged to a legal tender on which the credit risk is as almost as good as the corresponding Central Bank risk and better than commercial bank risk.
11. RM: Regulated Market, MTF: multi Trading Facility, OTF: Other Trading Facility, CCP: central clearing counterparty, T2S: Target 2-Securities, CSD: Central Securities Depositary, T2: Target 2.

MEET OUR EXPERTS

Tanguy AUMON
Chief Marketing Officer and Chief Client Officer

Tanguy Aumon was appointed Chief Marketing Officer and Chief Client Officer in February 2019. He joined Societe Generale in 2000, first as an Inspector and then as an internal strategy and organisation consultant. In 2006, he joined Societe Generale Corporate & Investment Bank (SG CIB) as Chief Operating Officer of Equity Research. In 2009, he was appointed Chief of staff to the CEO of SG CIB, then to the management of Global Banking & Investment Solutions in 2013. In 2014, he joined the Coverage business division as Deputy Head of Corporate Flow Coverage. He then became Head of Wholesale Client Satisfaction in 2016.

He is a graduate of the Ecole Nationale Supérieure d'Arts et Métiers.

Didier BALLAND
Head of Product Development & Marketing, Cash Clearing Services, Global Transaction Banking

Didier Balland is Head of Product Development and Marketing for Cash Clearing Services at Societe Generale since July 2014. He has been an expert in payments services for the last 20 years.

After a few years as consultant in cash management for major banks in France he started at Societe Generale in 2004 as head of electronic banking platforms for corporates before becoming head of VIP customers implementation teams in the Global Transaction & Payment Services division.

Matthew DAVEY
Head of Business Solutions, Societe Generale Securities Services

Matthew Davey has over 25 years of experience in senior management positions within the securities services industry.

Matthew Davey began his career as a business analyst at J.P. Morgan (previously Morgan Guaranty Trust Co.). He joined State Street Bank & Trust in 1996 to hold various positions in relationship management and investment operations outsourcing, both in Europe and the US. In 2007 he returned to J.P. Morgan to manage custody products for the UK pension fund segment, before heading up complex deal and programme management for UK asset managers. Matthew Davey went on to co-ordinate bid management at HSBC in 2011 and was later appointed Head of Consultant Relations for the EMEA region. In 2014 he was appointed Senior Vice President and Head of Asset Manager client relations for the UKMEA region at State Street Bank & Trust, before leaving the bank in 2016.

In 2013, Matthew Davey was a Member of the Outsourcing Working Group Steering Committee and was the lead author for the group's report into outsourcing oversight considerations for asset managers. He also contributed to its recent Addendum, which was published in November 2016.

Matthew Davey holds a Bachelor's of Science degree in Pathobiology with Chemistry from Reading University.

Etienne DENIAU
Head of Strategic Marketing Societe Generale Securities Services

Etienne Deniau started working in 1990 at Fimat, the Futures and Options brokerage arm of Societe Generale, for which he ran the Tokyo office from 1993 to 1997. He then moved to London to head Societe Generale's local branch for Global Banking and Securities Services. In early 2000, he left the Societe Generale group to pursue different opportunities in retail banking. He returned to Societe Generale in October 2004 and has held the following positions: Deputy Head of Investor Services within SGSS, Head of Custody and Trustee Services, Head of Business Development, Asset Managers and Asset Owners, Head of Product Engineering and Head of Strategic Marketing. He was appointed to his current position in May 2019.

Etienne Deniau is a graduate of the École Polytechnique and Mines Paris Tech.

Benoît DESSERRE
Deputy Head of Global Transaction & Payment Services

Benoît Desserre is Deputy Head of Global Transaction & Payment Services since September 2016. He directly oversees four business lines: Corporate Cash Management, Cash Clearing & Correspondent Banking, Trade Finance as well as Payables & Receivables Finance.

Benoît joined Societe Generale Group in 1989. In 1991, he settled in New York then in Dallas, Texas as a Senior Relationship Manager in charge of large US corporates. In 1995, he returned to Paris to promote the International Commodity Finance Department before being appointed Director of Commodities and Trade Finance in Australia. At the end of 2003, he joined the French retail banking network to become Deputy Head of the Paris Etoile Entreprises branch, one of the four branches in Paris managing the largest corporations for the French network. He later became Head of the Paris Etoile Entreprises branch in 2009, after two years running the Saint-Germain-en-Laye Regional Division. In 2013, he joined the Global Transaction Banking Division as Global Head of Payments & Cash Management.

Benoît holds a Master degree from the Institut d'Administration des Entreprises (MSc in Finance and Business Administration) and a diploma from the Lancaster Polytechnic of Coventry.

Geneviève DOUHET
Head of Innovation, Global Transaction Banking

Geneviève Douhet is a graduate of the ESCP Europe business school (1998). She began her career at Societe Generale's representation office in Caracas, Venezuela. In 2000, she joined the Group's Corporate and Investment Banking arm as part of the Paris-based Export Credit front office team, responsible for structuring and negotiating export credits in Latin America and then in Asia by supporting major exporters of global goods and services. At the end of 2007, Geneviève joined the Group's Strategy and Development team (DEVL/STR), where she oversaw the execution of around 10 merger and acquisition deals on behalf of the Group and led business (among which Global Transaction Banking) or cross-business strategic reviews in the field of innovation and market entrants. In 2015, Geneviève was appointed Associate Director within the Group's Innovation division to connect the Group to open innovation ecosystems.

Alain FISCHER
Chief Digital Officer, Global Banking & Investment Solutions

Alain Fischer began his career within Axa's Life Insurance Actuary Department. He was appointed Project Manager within the Economic and Financial Research Department of Chevreux in 1997, before becoming Head of Research & Sales Technology. In 2007, he joined Societe Generale Corporate & Investment Banking's (SG CIB) Cash Equity team as Global Head of Projects & Organization and then later became Global Head of Operations and Technology for the Research and Strategy department. In 2013, he was appointed Global Head of e-Business for Global Markets. In April 2016, Societe Generale announced the creation of a Digital Office within its Global Banking & Investors Solutions division and appointed Alain Fischer as Chief Digital Officer.

Alain Fischer is a graduate of the Ecole Nationale Supérieure d'Informatique et de Mathématiques Appliquées, in France.

Marie-Laure GASTELLU
Deputy Head of Trade Services, Global Transaction Banking

Marie-Laure Gastellu has been Deputy Head of Trade Services since November 2016. Engaged in the transformation of trade finance, she is an executive banker with 30 years of experience in banking, transformation, innovation and management of large French and international teams.

Marie-Laure joined Societe Generale in 1989 within the internal consulting department. In 1994, she took responsibility for a portfolio of corporate clients in Paris and then in New York, and ran SG Americas' Marketing division from 2001 to 2004.

Until 2006, Marie-Laure was Global COO of Societe Generale's division for corporate clients and investors, and was then Chief of Staff to Chairman and CEO Daniel Bouton between 2006 and 2009.

Her return to the client segment took her to southern Paris as Regional Head for the Yvelines region until 2013 and then as Managing Director of the Paris Rive-Gauche Corporate business center.

Marie-Laure is a graduate of the ESLSCA business school.

Jean-Pierre GOMEZ
Head of Regulatory & Public Affairs Lux, Societe Generale Luxembourg

Jean-Pierre Gomez is Head of Regulatory & Public Affairs at Societe Generale Securities Services in Luxembourg. In this role, he is responsible for developing the business strategy and the visibility of SGSS in Luxembourg.

He has 25 years of experience in the investment funds industry. Prior to joining SGSS in 2009, Jean-Pierre held several senior positions in collective investment, custody and fund administration, worked as consultant for three years and served as director for a number of fund management companies and funds.

He has substantial and extensive client management experience covering a broad range of fund administration services (including the core services of custody, fund accounting and transfer agency), compliance and funds corporate services.

Jean-Pierre contributes actively to ALFI, LPEA and LuxReal working groups, the Luxembourg funds industry trade associations aiming at promoting Luxembourg as main European Centre for investment funds. He is also a lecturer at the Luxembourg Institute for Training in Banking (IFBL). He is a regular speaker at international seminars and conferences.

Agnès JOLY
Head of Trade Services, Global Transaction Banking

Agnès Joly has been Head of Trade Services since July 2016.

Her main drivers can be seen as: focus on international exposure, eagerness for opening new routes and commitment for developing people.

After one year with Credit Lyonnais in Frankfurt (Germany), she was hired by Societe Generale in 1984. Initially working as a Junior Maths Expert for Export Finance, she became an FX Derivative Sales Manager in the newly created Capital Market division. In 1991, Societe Generale created a team to help Western European companies partner with Eastern countries looking for trade and economic development and she was selected to focus on the Czech Republic and Hungary. She went on to spend four years as a Human Resources Business Partner for the Capital Market division. In 1998, she returned to Export Finance in charge of the desks in Asia. She became Head of the Export Finance business unit in Seoul from 2005 to 2009. Returning to Paris, she was appointed Coverage Banker in charge of a portfolio of key clients of the bank before joining the Trade Finance division in March 2015, as Deputy Head in charge of commercial activities worldwide.

Agnès Joly is a graduate from HEC Business School with a master's degree in International Business.

Elaine KIGGINS
Product Manager – Fund Distribution Services

Elaine Kiggins is Product Manager for Fund Distribution Services at SGSS, responsible for the development of SGSS services supporting clients in the worldwide distribution of their funds. Based in Luxembourg, Elaine joined Societe Generale Securities Services in 2006 as Head of Organisation and Projects in Transfer Agency before moving to Product Management in the Asset Managers & Asset Owners segment in 2012 with responsibility for Fund Distribution Services.

Eric LE LAY
Chief Compliance Officer, Global Transaction Banking

Eric Le Lay has been Chief Compliance Officer for Global Transaction & Payment Services at Societe Generale since March 2018.

Eric began his career at Societe Generale in 1985 when he joined the General Inspection department. He has held a variety of financing positions within Societe Generale Corporate & Investment Banking. In 1996, he launched the Trade Finance activity within the newly created Commodity & Trade Finance business line. In 2003, he was appointed Deputy Global Head of Trade & Commodity Finance within the Natural Resources & Energy Financing team, before being appointed Head of Traders, Commodity Finance & Agribusiness for EMEA in 2008.

Eric is a graduate of Ecole Supérieure de Commerce in Paris.

Laurent MAROCHINI
Head of Innovation, Societe Generale Luxembourg

Laurent Marochini is Head of Innovation at Societe Generale Securities Services in Luxembourg. Since 2018, Laurent has also been Head of the Innovation Lab #LePlateauLux and Blockchain Leader for the Group.

Prior to joining SGSS, Laurent held various management positions in the banking sector in particular in BNP Paribas Securities Services and Credit Suisse Private Banking. He joined Societe Generale in 2006 as a Risk Manager.

Laurent is highly involved in the FinTech ecosystem. He is also Co-Chairman of the ALFI Working Group Blockchain & Crypto Currencies and Member of the FinTech & Digital Executive Committee.

Jean-François MAZURE
Head of Cash Clearing Services, Global Transaction Banking

Jean-François Mazure has been Head of Cash Clearing Services at Societe Generale since September 2017.

After 22 years of experience within the corporate banking industry, Jean-François has a very good understanding of inter-bank activities.

A graduate of the ESCEM Tours business school and the University of Ottowa, Jean-François joins Societe Generale in 1993. He holds several managerial positions in the French retail network, primarily working with SME and large corporate clients. In 2011, he was appointed Senior Banker for a portfolio of key agribusiness corporate clients, mainly in the French cooperative sector. In November 2015, he became Co-Head of Cash Clearing Services, one of the four global business lines within Societe Generale's Global Transaction & Payment Services.

Olivier MIET
Head of Sales & Global Network Management, Cash Clearing Services, Global Transaction Banking

Olivier Miet joined the Cash Clearing Services team as Global Head of Sales and Network Management in 2013. He is responsible for the business line's sales teams in France and abroad, and is also in charge of the network management.

Olivier Miet first joined Societe Generale in 1994 as Marketing Manager for the French retail banking network. He then became Market Manager within the Strategy & Marketing department, before becoming Head of Marketing at UIB (Tunisian subsidiary). From 2006, he handled the management of Corporate clients within the Courbevoie regional head office, and became Head of Corporates at Banque de Polynésie in 2009.

Yvan MIROCHNIKOFF
Head of Innovation & Digital Transformation – Societe Generale Securities Services

After the development of a start-up and European research programmes related to e-Learning, Yvan Mirochnikoff joined Societe Generale as a senior consultant, then coordinated internet development and supervised SwiftNet and other projects for international retail banks. He has held many positions (senior auditor, COO, IT head of Architecture, Infrastructures & Security) for retail banking and financial services worldwide. Yvan currently supervises digital transformation for Securities Services; reshaping customer experience and transforming operating models, through various innovative initiatives.

Yvan Mirochnikoff is an Aeronautics engineer, holds a Masters in Business Administration from the University Paris I – Sorbonne (IAE), and a Masters in Multimedia and Telecommunications. Since 2000, he has been Associated Professor in Paris-East University, where he manages the Master in Digital Economy, having created E-Commerce filiere.

Julien MOLEZ
Group Data & AI Innovation Leader

Since 2019, Julien Molez is Group Data & AI Innovation Leader at Societe Generale within the Group's Innovation Department.

He joined Societe Generale in 2014 where he contributed to the development of the in-house consulting team (SG Consulting) as an associate director in the leadership team.

From 2007 to 2013, Julien has contributed to the creation and development of different management consulting firms specialising in financial services on the Paris marketplace.

From 2001 to 2006, he was a technical IT leader working on CRM solutions for the financial industry within IBM Global Business Services and also as a freelance.

Julien is a graduate of Ecole Centrale de Paris.

Sarbjit PANESAR
Global Head of Business Development, Asset Managers – Societe Generale Securities Services

Sarj Panesar started his career in the asset management industry and has held a number of management positions in fund administration, control and client services. He joined the securities services industry in 2000 when he was appointed Relationship Manager at JP Morgan moving into Business Development in 2004 covering fund managers, central banks, pension funds and corporates. In 2007, he went on to Brown Brothers Harriman as Senior Relationship Manager, developing and managing strategies for insurance companies, fund managers and banks. In July 2014, he joined SS&C Globe Op as Director for Sales for the insurance segment.

Frantz TEISSÈDRE
Head of Interbank Relationships, Global Transaction Banking

Frantz Teissèdre was appointed Head of Societe Generale's Interbank Relationships Department in 2014.

After graduating in ESCP-EAP Master Degree in Finance and Marketing, Frantz joined Societe Generale in 1996 as a financial controller of the International Department.

In 1998, he was appointed Financial Analyst at Societe Generale Corporate & Investment Banking in the insurance and banking sector.

In 2002 he moved to Fiditalia SpA, one of Societe Generale's largest financial services companies. He was then in charge of commercial development.

In 2008, he was appointed Head of Fiditalia National Partnerships and Communication Division and was subsequently nominated member of Fiditalia's executive committee.

In 2012, he joined the Groups' Global Transaction and Payment Services Division as Deputy Head of the Interbank Relationships Department.

Laurent VIELLARD
Head of Client Strategic Marketing, Societe Generale Securities Services

After various experiences at Altus Finance, KPMG and ABN AMRO, Laurent Viellard joined SGSS in 2006 where he held the position of Head of Custody and Trustee Services for France and then Head of Client Services for SGSS. Laurent graduated from École Supérieure de Gestion and HEC Paris (EMBA).

Valérie VILLAFRANCA
Head of Group KYC Transformation Project

Valérie Villafranca joined Societe Generale in 2018. She was previously Head of the Boston Consulting Group risk management practice for the WESA region (Western Europe, South America and Africa).

Valérie has worked for a number of global banks on risk and compliance topics over the past 25 years. She has a broad experience of regulations, governance, policies, measurement, methodologies, organisations and infrastructure. She has worked over the years on different risk types ranging from market, credit, ALM & liquidity, operational, model, carbon to AML/FT or ABC.

She is a Chartered Financial Analyst and holds a Master's degree, finance from the Université Paris-Dauphine.

Aurélien VIRY
Head of Payments & Cash Management, Global Transaction Banking

Aurélien Viry has been Head of Payments & Cash Management for Societe Generale since December 2016. He is in charge of developing the global cash management business line activities within Societe Generale Group.

He joined Societe Generale's General Inspection department in 1990 and was appointed Deputy Head for the Group's subsidiary in Seoul in 1996. In 1999, he became COO for the North Asian region. In 2001 he was appointed COO of Societe Generale Securities Services for Asia. In 2003, he returned to France to join the Global Equities and Derivatives Department as Head of the Middle Office. In 2005, he was appointed General Manager for GENEFIM, the Group's real estate leasing subsidiary. In 2011, he joined Komercni Banka, the Group's subsidiary in the Czech Republic, as a Member of the management committee in charge of Risk.

Aurélien holds degrees in Business Administration from ESCP and in Accounting and Finance.

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