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IMPACT NOTE

NOVEMBER 2015

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Sibos 2015: Looking Into the Future With 20/20 Vision

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INTRODUCTION

Singapore played host to SWIFT's second-largest Sibos of all time and its largest in the Asian region with 8,212 registered delegates in Singapore. The standout topic of conversation throughout the week at the Sands Expo and Convention Centre was undoubtedly blockchain, but many other topics placed high on the agenda, including recurring themes from recent years such as cybersecurity, Know Your Customer (KYC) and sanctions compliance, and the evolution of global market infrastructures. Many of these topics reflect SWIFT's new five-year strategy, which was unveiled by the executive team on the first day of the conference.

This year's conference followed the familiar structure of streams dedicated to SWIFT's various community areas, including securities, payments, market infrastructures, compliance, technology, and standards. An interesting development this year was the prominence of the Innotribe stream, which seemed to be the buzz of the exhibition hall, likely due to financial technology or "fintech" innovation's high profile in the current market. Given the location, the conference also featured a series of big-issue debates focused on the development of the Association of Southeast Asian Nations (ASEAN) and the rise of the Chinese currency as a global force.

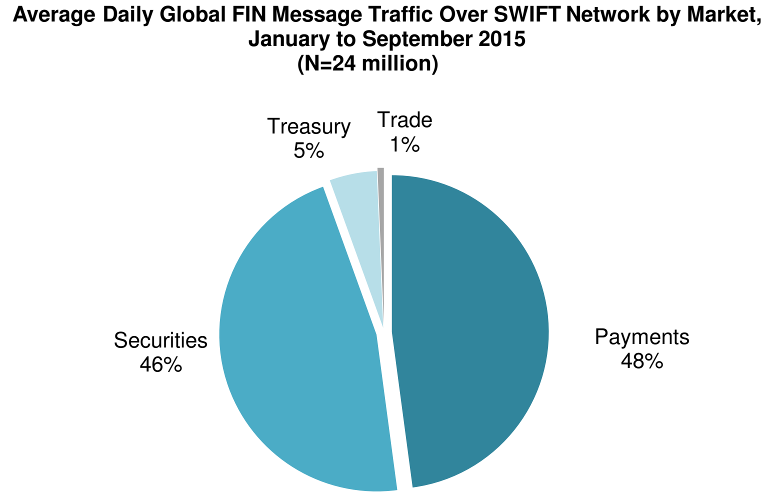
This report rounds up the key discussion topics from the event and evaluates how each of these fits into SWIFT's new 2020 strategic program.

SWIFT TRAFFIC STATS

In line with SWIFT2015's strategic focus on growing its FIN and InterAct traffic since 2010, the network operator expects that this traffic will have increased by 53% for FIN and 48% for InterAct by the end of 2015. During this period of growth, SWIFT has also engaged in a series of infrastructure investments to improve its messaging network's architecture, such as the distributed architecture project and the FIN renewal project, which represents a retirement of the legacy technology platform in favor of a newer, more open platform and is due to be fully completed by year-end 2016.

Figure 1 shows the average daily FIN message traffic by market sent across the SWIFT network between January and the end of September 2015. In comparison to figures from the same period in 2014, total message traffic has increased 10% overall. This growth has been driven by the increased volume of payments, securities, and treasury transactions, which have increased by 8%, 12%, and 11%, respectively. The average daily volume of trade messages, on the other hand, has declined by 4% over the same period. Traffic distribution has not changed significantly from 2014; securities messages account for 1% more of traffic, and payments traffic accounts for 1% less. Though marginal, this is exactly the same shift as that of the previous year, which indicates that securities is gradually and slowly increasing its overall share of annual FIN messaging traffic.

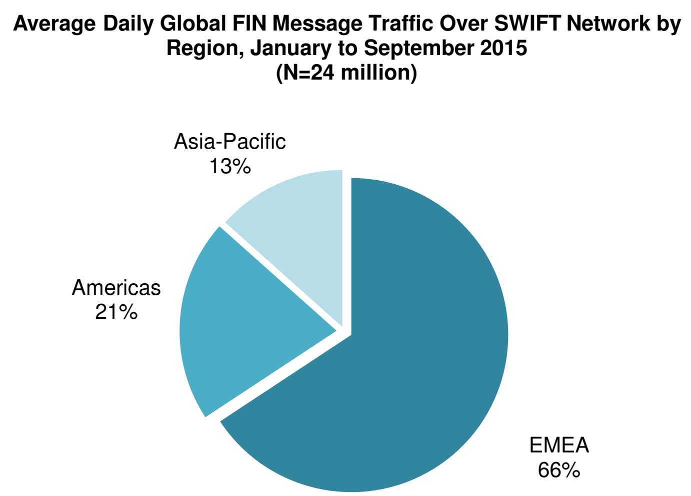
Figure 1: Breakdown of Average Daily FIN Message Traffic Over SWIFT Network



Source: SWIFT

Much like market breakdown, the regional breakdown of FIN message traffic over the SWIFT network between January and the end of September 2015 has not changed markedly on the previous year's breakdown (Figure 2). The Europe, Middle East, and Africa (EMEA) region continues to contribute the largest proportion of messages in terms of overall message traffic, but it has ceded 1% to the Asia-Pacific region from the previous year's figures.

Figure 2: Breakdown of Regional Average Daily FIN Message Traffic Over SWIFT Network



Source: SWIFT

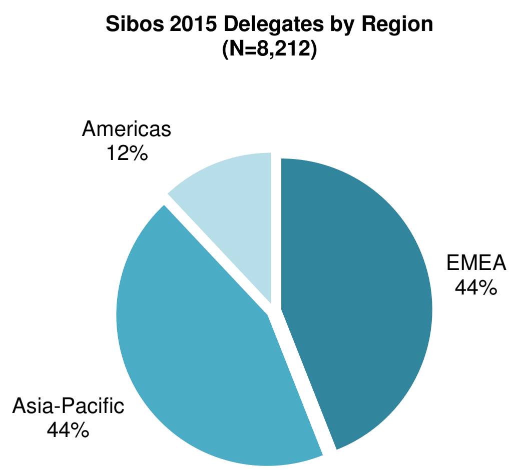
Unsurprisingly, InterAct message traffic has grown much faster than SWIFT's legacy FIN messages, with all business areas increasing by 21% on the previous year's figures to a daily average of 2.7 million messages by the end of September 2015. SWIFT attributes recent growth in message traffic to the introduction of the Target2-Securities (T2S) platform in Europe, which it says is contributing around 36% of the growth overall.

FileAct traffic, on the other hand, has declined 0.4% on the same period in 2014, with an average daily volume of 12.4 million. The growth trajectory for FileAct traffic over the last five years has been high at around 254%, and, again, SWIFT attributes the growth in securities market infrastructure traffic to the T2S messaging on the network.

A FEW STATS ON SIBOS DELEGATES

This year's record turnout included delegates representing 143 different nationalities and a relatively balanced proportion of regional attendees (Figure 3), with delegates from the Asia-Pacific region equaling the number from EMEA. Given the location, it is unsurprising that attendees hailing from the Americas were down on last year's event in Boston, from 38% to 12%.

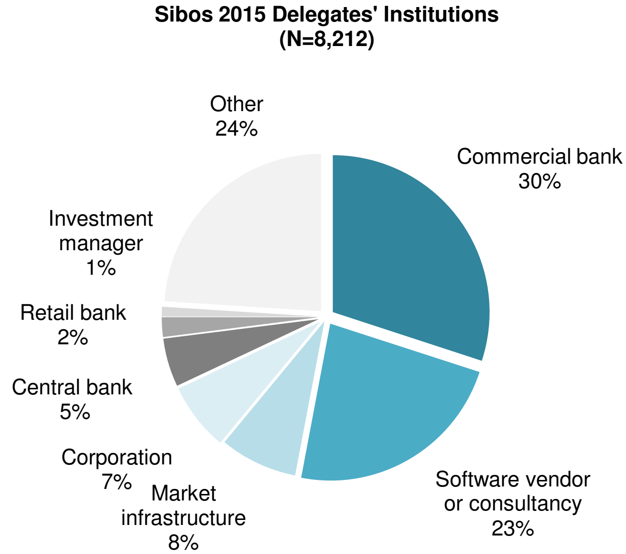
Figure 3: Sibos Delegates by Region



Source: SWIFT

Figure 4 shows the delegate breakdown by type of financial institution and indicates that commercial banks and vendors continue to represent over half of the Sibos population. Market infrastructures and corporations remain at 8% and 7%, respectively, the same proportion as at last year's conference. The percentage of asset management attendees decreased from last year's high of 7% to 1%, likely a reflection of the regional dynamics and the lack of a dedicated stream this year. There was a 1% increase on 2014 figures in the number of central bank attendees to 5%, which, given the relatively small population of these entities globally, highlights these regulation-setters' increased interest in the event overall.

Figure 4: Sibos Delegates by Type of Financial Institution



Source: SWIFT

2020: HINDSIGHT AND FORESIGHT

This year's Sibos provided SWIFT the opportunity to articulate its plans for the next five years and gave delegates a review of the concluding SWIFT2015 strategy. The growth in the network's use was a headline item discussed during the opening plenary by chief executive officer Gottfried Leibbrandt as proof of the success of SWIFT2015's "deepening the core" strategy. He highlighted that 45% of Fortune Global 500 corporations are now connected to the SWIFT network—the corporate demographic has been a key focus of the concluding five-year strategy and will form a significant part of SWIFT2020.

CORE DEEPENED

The launch of cloud-based connectivity option Alliance Lite2 in 2012, following on from the program's initial launch in 2008, has helped banks, corporations, and investment managers get direct connectivity to the SWIFT network. More than 1,500 customers use one of SWIFT's cloud connectivity solutions. Alliance Lite2 provides a lighter footprint and rapid setup typical of cloud connectivity and enables access to SWIFT services, such as SWIFT reference data and Sanctions Screening services. At the other end of the corporate spectrum, the Alliance Messaging Hub focuses on supporting higher-volume clients. It launched in Asia in 2014 and has since picked up some big names in the region, including India's ICICI Bank.

As well as targeting corporations, the deepening of SWIFT's core activities included targeting market infrastructures, and 239 of these entities are currently connected to the network, including foreign exchange backbone CLS. The other market infrastructures on the network comprise 79 high-value payments systems, 29 low-value payments systems, 48 central counterparties (CCPs), and 82 central securities depositories (CSDs). SWIFT's strategy to increase this community's connectivity to the network included the establishment of a dedicated team in 2012 and the launch of services such as the Market Infrastructure Resiliency Service (MIRS), which provides a generic real-time gross settlement system backup for disaster recovery purposes.

Another flagship market infrastructure development that will, no doubt, lend itself to the 2020 strategy is SWIFT's planned launch of a new real-time domestic payments system for the Australian market by 2017. The National Payments Platform (NPP) will be designed, built, and operated by SWIFT and technology partner Fiserv and is the result of a 12-year contract, signed at the end of 2014. If certain technology components can be reused for other markets (a likely assumption) and the project is a success, this could be the first of many similar projects in other countries across the globe.

CORE EXPANDED

The last few years have seen compliance and KYC dominate the conference floor, and Sibos 2015 was no different. This reflects SWIFT's previous strategic focus of expanding its core services into areas beyond financial messaging, such as KYC and sanctions screening. The launch of the KYC Registry at the end of 2014, with the initial intent of focusing on correspondent banking and the subsequent additional target of fund distributors, was a significant milestone for the industry network operator. Conference delegates were informed that the service has since been taken up by around 1,500 financial institutions that pay a fee to access KYC information about other firms but contribute and validate their data for free.

SWIFT's Sanctions Screening and recently launched Sanctions Testing solutions offer banks a hosted screening service and a testing facility for their in-house sanctions filters and systems, respectively. The screening service has picked up around 380 clients since its launch, and SWIFT has this year introduced a new peer assessment service to the portfolio to enable banks to understand how their practices compare to those of their peers in the market, especially those with a similar risk profile and geographic footprint.

Other important core-expanding services that formed a part of the previous 2015 strategy and will be continued under the 2020 one include payments reference-data products under the SWIFTRef banner and business-intelligence-focused offering for the securities market, Watch for Securities. Both of these services received dedicated sessions in the SWIFT Forum and were highlighted by the executive team during the SWIFT2020 update.

TOTAL COST OF OWNERSHIP REDUCED

One of the 2015 strategy's core targets was the reduction of SWIFT's messaging prices by 50% between 2010 and 2015, and it achieved this goal by 2014 and will reduce it by a further 6% (bringing the total reduction to 56%) by the end of this year. Rebating clients a percentage of their spending has added to this effort as has SWIFT's focus on encouraging volume of scale via a fixed-fee program, first introduced in 2008. Unsurprisingly, SWIFT2020 includes a commitment to reduce messaging prices by between 30% to 45% as well as a targeted program for price reductions in other service areas.

TRANSFORMATION

Transformation and innovation were definite buzzwords during the event, and much was made of SWIFT's technology investments in core services, such as FIN messaging, and its focus on cyber-resilience over the last five years and beyond. It could easily be said that transformation is the driving force behind the 2020 strategy, as it is SWIFT's intent to extend its reach into many other potential avenues of service provision; hence, it decided to place Innotribe on the exhibition floor next to the SWIFT stand rather than in a separate hall.

WHAT NOW?

Piyush Gupta, CEO of Singaporean bank DBS and opening plenary keynote speaker, propounded the benefits of SWIFT's position in the market to facilitate greater collaboration. If transformation and innovation are two tenets of the 2020 strategy, collaboration is another. Setting market practices, championing standards, and acting as a forum for industry debate have long been a focus for SWIFT, and the next five years will continue to see the industry network operator's efforts to this end. SWIFT execs cited the phrase "real-world change" several times during Sibos week as the mantra for encouraging collaboration among customers, partners, and startups (which have taken a much more central role overall).

SWIFT has put the theme of “coopetition,” first mentioned by previous CEO Lazaro Campos, on the back burner for now, though the theme underlies a lot of the network operator’s services and technology initiatives that have recently been launched and are in the pipeline. There is no doubt that SWIFT is entering even more spaces that will bring it into competition with some of its key partners in the market, but this was not addressed in as high-profile a way as it was during previous conferences. The new strategy seems to be more about understanding and facing off new market entrants rather than incumbent providers, and about SWIFT acting as an “innovative incumbent,” as coined by the exec team during Sibos week. The potential for disruption by new technologies and approaches to the market was much discussed, especially in the context of distributed ledger technology. SWIFT’s response has been to establish a more formalized approach to monitoring innovation, including investing further funds into its Innotribe and SWIFT Institute research areas.

At a high level, the SWIFT2020 strategy carries on the themes of the previous five years but has been narrowed to focus on three main areas of potential growth:

- **Extending core messaging services for payments and securities:** This is very much business as usual for SWIFT and has been a part of its DNA since its inception. As markets continue to evolve, SWIFT is also keen to work with banks to consider new ways of rejuvenating the correspondent banking model. Emerging markets in particular will likely continue contributing to the network’s growth over the next five years.
- **Engagement with market infrastructures:** This seems to be much more of an opportunity for future growth, given the need for markets to move closer to real-time support and newer technologies. SWIFT’s level of success in this endeavor will be integral to its noncore growth over the next five years, and much depends on the Australian NPP project acting as a flagship case study.
- **Rapid expansion of financial crime compliance:** This is a slightly tougher nut to crack for SWIFT, as there are numerous contenders, particularly in KYC compliance. SWIFT faces no significant challenger in the area of correspondent banking, but the funds distribution community is a more challenging area overall.

These growth areas map nicely to the main challenges, identified by DBS’ Gupta, which the financial services industry is facing in 2015 and beyond:

- **Increasing regulation**: Compliance, KYC, and sanctions screening sit nicely in this bucket.
- **Technology change**: Real-time payments, market infrastructure technology services, and even Innotribe and its startup challenge fit into this bracket.
- **The threat of cybercrime**: MIRS and setting industry standards around cybersecurity fit into this realm.

The underlying desire to grow the network's reach is therefore a remaining tenet of the previous "core" element of SWIFT's ongoing strategy, but innovation and technology refresh have now taken a front seat. On the innovation front, business intelligence solutions and services are also in the new strategy's scope, and Sibos week included discussions about SWIFT's planned on-premises tool to monitor transactions and intraday liquidity, dubbed SWIFTScope.

In terms of growing the core, some communities will remain a challenge for SWIFT to get onto the network, such as the asset management community. Standards adoption will also continue to lag in certain markets, such as ISO 20022 adoption for corporate actions messaging, but the addition of further services and solutions for existing customers should help in supporting SWIFT's overall market position. The network's ongoing global expansion will be continued under the SWIFT2020 banner, with the Asia-Pacific region, Latin America, the Middle East, and Africa all on the radar and under the remit of specific regional heads.

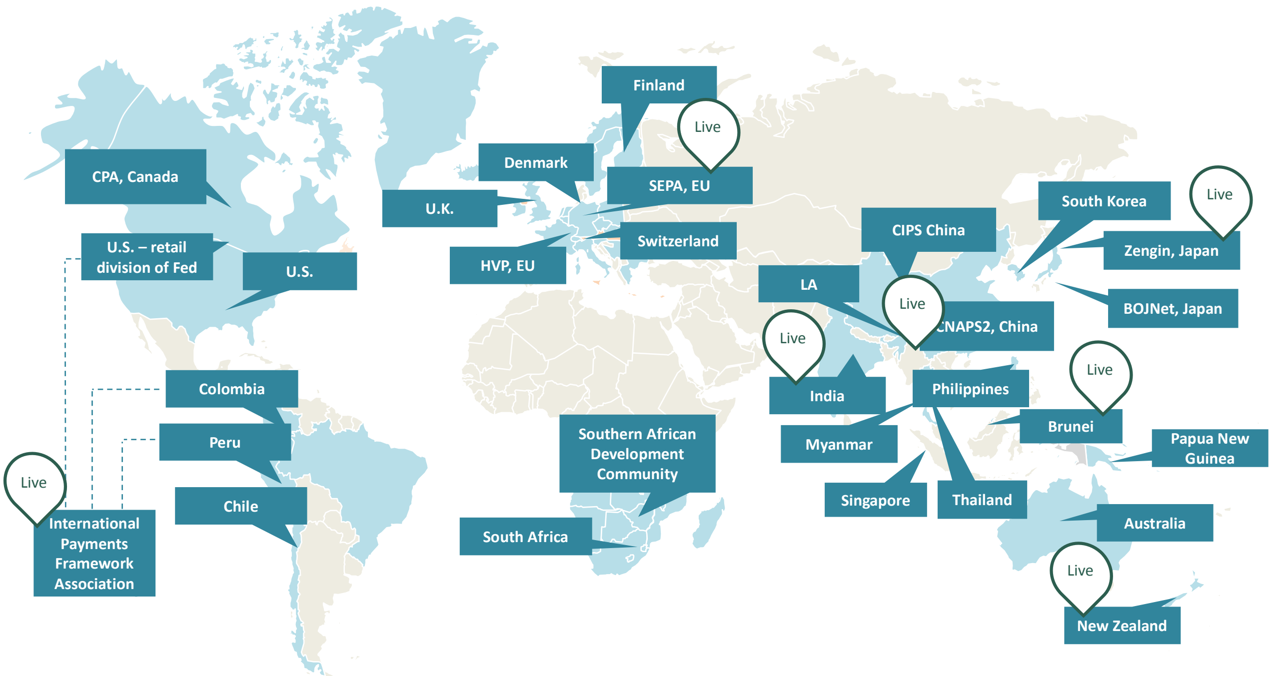
KEEPING STANDARDS RELEVANT

Standards harmonization has been an ongoing theme for Sibos over the years, and 2015 was no exception, with the Standards Forum once again holding its own on the exhibition floor. DBS' Gupta also addressed standardization challenges in his keynote, noting that a format and a rulebook, including specific implementation guidelines and how they map to current market practices, are needed to effectively introduce a new standard. SWIFT's head of standards, Stephen Lindsay, also opened the Standards Forum by admitting that for any implementation to be successful, a high degree of coordination is required—a role that SWIFT is eager to retain.

Given the hype around fintech's potential, there was some debate about whether technology may remove the requirement for standardization in the future, but it was agreed by most that this is a long way off. In the meantime, practical challenges around data and regulatory reporting were high profile during the conference, not least of which was trade reporting under the European Market Infrastructure Regulation (EMIR) for securities market participants. The lack of alignment across market infrastructures and prescriptive formats for reporting were cited as the root cause of firms' and regulators' many data headaches (but more on this later).

Once again, Standards Forum discussions revolved around the adoption (or lack of adoption, in some cases) of the ISO 20022 standard. Figure 5 shows ISO 20022's global implementation level in the payments universe, where it has made the most progress overall (comparative to other market segments). A handful of countries, such as Colombia, Russia, and India, have implemented the standard at the national level, while several others, including the United States, Canada, Australia, Switzerland, and Japan, have plans for national implementation. It should be noted that some are implementing ISO 20022 through cross-jurisdictional projects, such as the Single Euro Payments Area (SEPA) and the International Payments Framework Association, to ease straight-through processing and the automation of operational flows for cross-border payments. For SEPA, 28 European Union countries and three European Economic Area countries are adopting ISO 20022 both for their local payments as well as cross-border payments in euro within the eurozone.

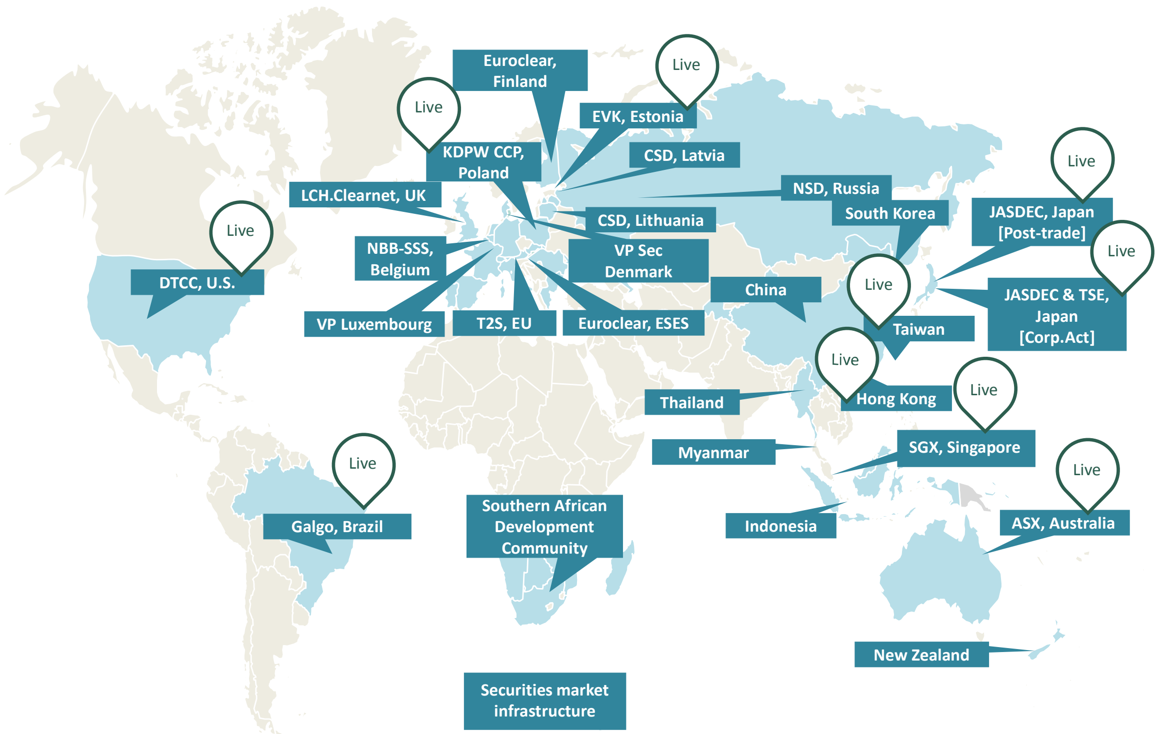
Figure 5: Implementation of ISO 20022 for Payments



Source: SWIFT

Similar to ISO 20022 for payments, ISO 20022 for securities has only been implemented at the national level in a small number of countries, such as the United States, Poland, Singapore, Australia, Japan, and Brazil (Figure 6). More widespread adoption of the standard has come as a result of cross-jurisdictional initiatives, such as the European Central Bank's (ECB's) phased rollout of T2S (only phase one has been completed thus far) and SWIFT for Funds. Implemented in 2005, SWIFT for Funds has led to the use of ISO 20022 for messaging in the funds space in 28 different countries (albeit at a lower level overall because it is reliant on firm-level adoption).

Figure 6: Implementation of ISO 20022 for Securities



Source: SWIFT

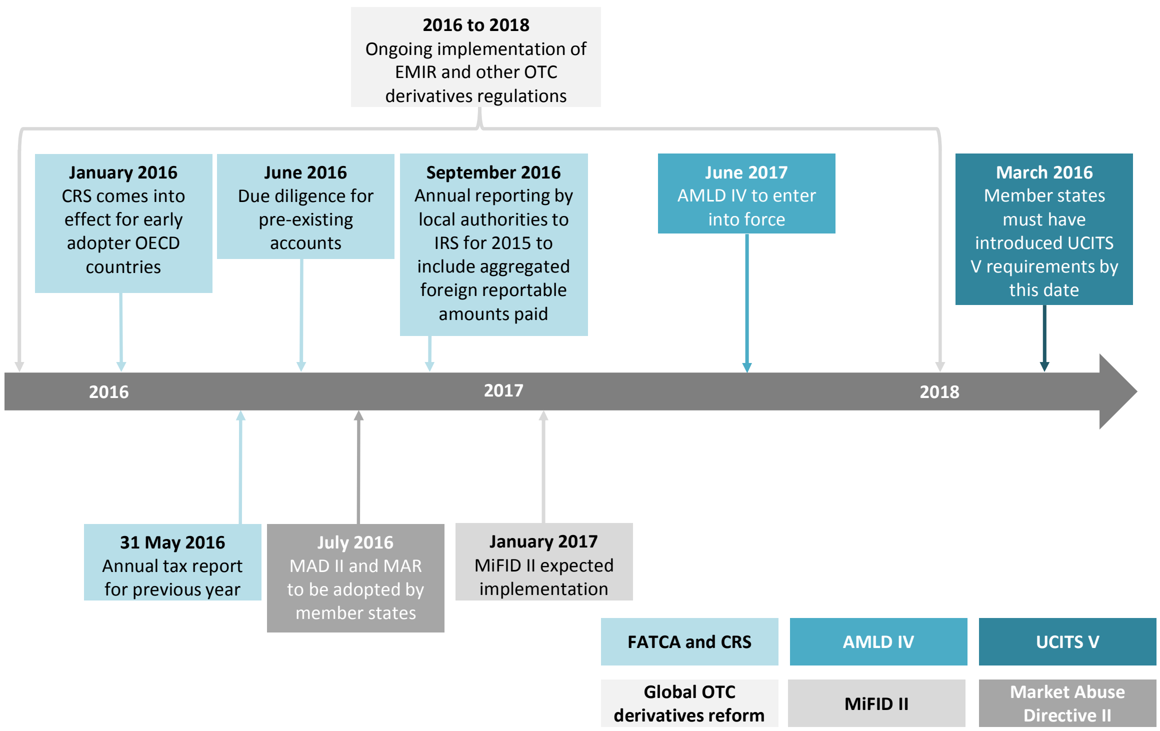
COMPLIANCE AND KYC

Sibos 2015 performed a hat trick for those hoping to hear about KYC challenges and SWIFT's utility play in this space, with the topic headlining the compliance forum for the third consecutive year. It was also referenced in the opening plenary when DBS' Gupta highlighted that firms active in the local Singaporean market have paid significant fines to the Monetary Authority of Singapore (MAS) over the last couple of years. This active pursuit of compliance infractions is set to continue as regulators pay greater attention to what he termed as banks' "egregious misconduct."

This story is certainly common across the globe, with an increasing number of fines meted out to banks, including the six banks fined a record US$6 billion by the U.K.'s Financial Conduct Authority (FCA) for foreign exchange market manipulation in May 2015. Of course, financial penalties are not the only negative impact of these infractions; reputational damage can be significant, including affecting the share price of the financial institution in question.

Looking at KYC and client data, a whole host of incoming regulatory requirements will impact this functional area over the next three years (Figure 7). The Anti-Money Laundering Directive IV (AMLD IV) is one of the more significant regulations, as it requires a more risk-based approach to anti-money laundering. Firms must determine the level of risk a client poses before applying the appropriate level of due diligence and identify ultimate beneficial ownership details. Certain pieces of tax legislation also include direct client classification and segmentation requirements, such as the Foreign Account Tax Compliance Act (FATCA), which requires firms to identify clients that the U.S. Internal Revenue Service considers eligible to pay tax in the United States. Internationally, the Common Reporting Standards (CRS) are due to introduce a new multi-jurisdictional tax information-reporting regime, which will be based on tax residency rather than citizenship.[1]

Figure 7: Incoming Regulations to Impact KYC and Client Onboarding



Source: Aite Group

KYC is also a concern for financial institutions for reasons beyond compliance requirements. Thin margins and high operational costs in a volume-sensitive business have meant that financial institutions are evolving from largely product-based revenue streams to fee-based revenue streams, which necessarily entails a joined-up, cross-silo product marketing approach. Concurrently, there is increased industry focus on fostering client stickiness, which has resulted in a desire to better understand clients' risk appetites and product preferences. Creating a single view of a client is therefore a business imperative for new-client acquisition and existing-client retention, and this process needs to be initiated during onboarding (which can itself prove a sticking point due to slow and duplicative processes). This single view also enables firms to accurately classify and categorize clients for regulatory reporting purposes. Knowing client or customer preferences and risk appetites is therefore an imperative.

1. See Aite Group's report *Client Life Cycle Management and KYC: Things Can Only Get Better*, April 2015.

Though SWIFT's initial focus for its financial crime compliance portfolio was the correspondent banking universe, Sibos 2015 made clear that the funds distribution sector is also in its scope. A dedicated session on the challenge of sanctions screening and KYC in the securities markets highlighted the struggles faced by firms attempting to identify beneficial owners, a task that will get much more complex in Europe under the requirements of AMLD IV. Euroclear's head of group compliance and ethics, Olivier Goffard, noted during the session that though only around 20 Russian firms are on most sanctions lists, these sanctioned firms hold at least a 50% stake in potentially thousands of firms.

The complex chain of intermediaries involved in the securities markets exacerbates the due diligence challenge, as does the lack of a consolidated global sanctions list; each jurisdiction has its own version. James Freis, chief compliance officer at Germany's Deutsche Boerse, noted that, as with any other chain, the securities business is only as strong as its weakest link.

THE SPECTER OF CYBERCRIME

Not too long ago, cyberrisk was classed as a subdivision of operational risk. Firms built firewalls, installed antivirus software, and assumed that this would be enough to protect their systems and data from unauthorized entities. They may have been right to assume this—hackers were unstructured, isolated, and poorly funded. This is no longer the case. Cybercriminals have become more organized and, as processing power has become cheaper and more accessible, they are also better equipped than ever. Firms must now defend against coordinated attacks from multiple sources, and these attacks are forever becoming more sophisticated and more frequent. It was no surprise then to see cybersecurity once again at the top of the Sibos agenda in Singapore.

A key message conveyed by all speakers during this year's cybersecurity sessions was the absolute need for collaboration between financial institutions when it comes to dealing with cyberattacks. "Joining forces on cyberintelligence" panelists were surprised to hear that, although members of the audience would be willing to share information about cyberthreats with executive management, regulators, and law enforcement, very few said they would be willing to share threat information with their peers. There are clear reasons for this—firms fear that disclosing cyberbreaches with competitors and counterparts could cause reputational damage. The industry is at a point, however, where it must accept that cyberbreaches will happen, and firms should focus their attention on managing cyberrisk as well as mitigating it.

Two key elements of managing cyberrisk are detection and recovery. David Finn, executive director of Microsoft's Digital Crimes Unit, noted that the median number of days before an organization is aware that it has been attacked is 243—ample time to cause widespread damage. So what can firms do to reduce this time frame? Given that cybercriminals have a tendency to attack numerous targets at the same time, one option would be for firms to communicate with each other more. By sharing threat information once one has been detected, firms can notify their peers to be wary of specific threats and attacks. By acting collaboratively, firms can actively reduce the time spent detecting threats, thus allowing them to respond in a more timely fashion and reduce a breach's impact.

The tools to facilitate threat-sharing are already available—the Depository Trust and Clearing Corporation (DTCC) worked with the Financial Services Information Sharing and Analysis Center (FS-ISAC) to develop Soltra Edge, a bilateral threat-sharing solution, which was launched in September 2014. Firms run an instance of the Soltra Edge software on their systems, and through the use of standardized message protocols known as Standard Threat Information eXpressions (STIX) and a standardized manner of delivering those messages known as Trusted Automated eXchange of Indicator Information (TAXII), threat information is shared with their peers. At Sibos, DTCC announced plans to launch Soltra Network, a hub-and-spoke-type network that allows firms to anonymously submit threat information in a multilateral fashion. This increases the automation of threat information flows and allows the context of threat data to be analyzed more holistically.

There are other means for firms to reduce the likelihood of a major cyberbreach. Speakers in the Sibos sessions suggested that firms should try to maintain a high state of cyber hygiene because legacy systems tend to be a key vulnerability exploited by hackers. Coen Voormeulen, director of the cash and payments system division at De Nederlansche Bank, added that many successful cyberattacks start with people clicking on emails they shouldn't be clicking on, so individuals' awareness within the organization is also important. Furthermore, firms need to think beyond their internal controls, particularly when business processes are outsourced to third parties.

Another effective way for firms to improve their defense against and response to cyberattacks is by conducting cyberattack simulations. An example of such an exercise is the Securities Industry and Financial Markets Association's Quantum Dawn, which provides a test environment for a systemic cyberattack. This allows firms to practice their responses individually and collectively, and identify potential weaknesses within their organizations and networks. Two cyberattack simulation workshops were also held at Sibos on a slightly smaller scale; the audience was divided into small groups and tasked with responding to simulated cyberevents.

INNOVATION TAKES CENTER STAGE

In his 2014 Innotribe closing remarks, nexxworks' founding partner Peter Hinssen made it clear that the topics discussed at Innotribe were of such importance that the event organizers needed to find a way to move the stream away from the sidelines and into the core of the conference. A year later in Singapore, the Innotribe stand was in the exhibition hall proper, and the first full panel session, "New kids on the block(chain) platform," was so well-attended that not only was the stand itself full to capacity but the overflow seating area on the adjacent SWIFT stand was standing room only too. The next session "The future of money: a burning platform?" was moved to a larger venue as a result of its popularity in recent years. Perhaps the most telling statistic of the heightened interest in Innotribe was that more people attended it during the first two days of Sibos 2015 than during the entirety of Sibos 2014.

SWIFT launched Innotribe in 2009 as a stream dedicated to identifying emerging financial services innovation trends and discussing how these trends might impact the industry going forward. It has since evolved beyond a week-long conference stream to become an ongoing forum that houses debate and idea-sharing between a community of investors, financial institution representatives, and startups throughout the year. Despite the gradual growth of its scope and outreach, however, Innotribe previously remained on the periphery of Sibos year after year, consistently located outside the main conference hall and limited in terms of media coverage and underattended by delegates.

Moving Innotribe to the exhibition floor was not the only demonstration of innovation's importance to the SWIFT community this year; it is also an integral part of the SWIFT2020 strategy and was a topic of conversation across the many forums and sessions throughout Sibos. In his opening plenary speech, DBS' Gupta urged industry incumbents to view new technologies and strategies as opportunities for transformation rather than threats to existing market practices. Elsewhere, the Standards Forum looked at how ISO 20022 enables innovation in the Asia-Pacific region, while the Markets Infrastructure Forum considered how real-time payments can provide a platform to facilitate innovation.

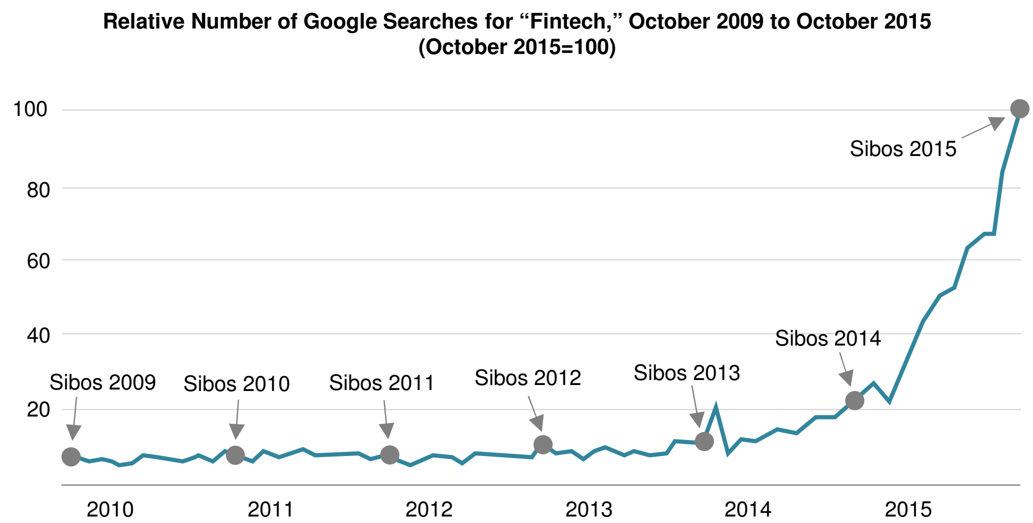
This reflects the overall interest in innovation and fintech in the financial services community. Once engaged in a fintech discussion, it is only a matter of time before someone mentions "innovation" and "disruption." These two concepts are often conflated, leading to the conclusion that anything innovative has to be revolutionary or game-changing. It is important to appreciate that this is not always the case. Disruptive innovation is something that changes the business model, the underlying players, or the incumbent technology of a particular market segment. Innovation means adopting a new approach to a current process or developing a new product line, not necessarily inspiring a revolution.[2] SWIFT is interested in the gradual approach to innovation as well as monitoring any potentially disruptive entrants from the startup universe.

Figure 8 shows an index for "fintech" searches via Google's Internet search engine since the end of 2013, indicating that searches have quadrupled between Sibos 2014 and Sibos 2015. Given the current industry focus on innovation, it is no surprise to see it embedded into the core of the SWIFT2020 strategy. In his Innotribe opening keynote, SWIFT's head of markets management,

2. See Aite Group's report *Innovation in Capital Markets: Not Just a Dog and Pony Show*, October 2015.

the SWIFT Institute, and Innotribe, Fabian Vandenreydt, explained that innovation is part of the organization's day-to-day business activities rather than an afterthought.

Figure 8: Google Trends Statistics for Searches Containing the Term "Fintech"



Source: Google, Aite Group

SINGAPORE AS AN INNOVATION HUB

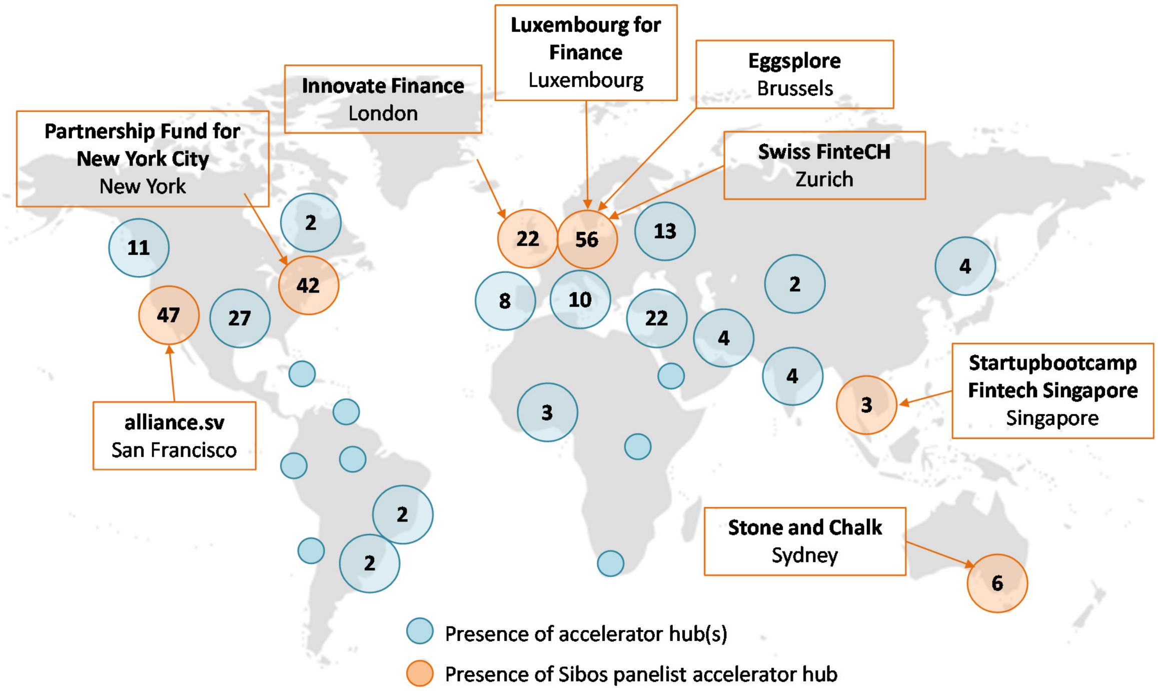
It is fitting that Singapore was the Sibos venue when innovation moved to center stage. It may not have the startup heritage of Silicon Valley or boast the same level of access to financial services talent as London or New York, but Singapore is actively pushing to position itself as a global hub for fintech and innovation. Singapore has a proven track record as a global financial center and is looking to capitalize on the current innovation boom through various public and private-sector initiatives. For example, the National University of Singapore has introduced government-backed programs, including the creation of startup incubators and the introduction of year-long internships for its students at startups located in established innovation hotbeds, such as Silicon Valley, Tel Aviv, and Stockholm.

Furthermore, in 2015, domestic regulator MAS created a Fintech and Innovation Group and appointed a chief innovation officer to ensure that it understands the dynamics of incoming technology changes and can set regulations accordingly. Similar to the United Kingdom's FCA, MAS hopes that a proactive approach to innovation and fintech will ultimately reduce uncertainty and bring business to the country.

The case for Singapore as a center for innovation was presented by MAS chief innovation officer Sopnendu Mohanty and cofounder of accelerator program Startupbootcamp FinTech Markus Gnirck in an Innotribe session entitled "Why banks need fintech hubs." The session consisted of fintech hubs from Brussels, London, Luxembourg, New York, Silicon Valley, Singapore, Sydney, and Zurich pitching themselves to the predominantly financial institution audience. Figure 9 shows the location of the startup hubs represented in the panel in relation to the 301 technology accelerator hubs registered with global startup ecosystem tracker StartupBlink as of

October 2015. It should be noted that not all hubs are registered with StartupBlink, and some of the registered hubs are not solely focused on fintech.

Figure 9: Fintech Accelerator Map



Source: StartupBlink, Aite Group

The panelists' pitches focused on the advantages of each given location and hub for fostering innovation, with the following recurring themes:

- Local and national governments are keen to support innovation programs and offer grants due to the hubs' job creation potential.
- Startup hubs work closely with regulators to ensure startups are not hampered by regulations and so that regulators can stay on top of technology developments.
- Startup hubs create a network for innovators, financial institutions, venture capital firms, regulators, and corporations to speak practically about working together.
- The proximity of startup hubs to pools of technology talent is important, but so too is proximity to potential financial institution clients.
- External testing environments that are created in startup hubs are difficult to replicate within the organizational structure of a financial institution.
- To be effective, it is important for hubs to work together as a network rather than compete with each other (though there was a degree of competition on show during the event).

UNLOCKING THE BLOCKCHAIN

The startup hub session was one of several at this year's Sibos to emphasize collaboration. In the "New kids on the block(chain) platform" session, UBS chief information officer Oliver Bussmann highlighted the need for collaboration and open standards. Bussmann alluded to the necessity of existing initiatives, such as the R3 blockchain consortium, which gives banks insight as to what their peers are doing as well as encourages regulators' engagement. In the case of blockchain, this has allowed industry participants to approach the regulators with a test case and then work together on building a liability structure.

The financial services industry is inherently driven by competition and margins, so although financial institutions may be working together in certain areas, such as via the R3 consortium, it is certain that behind closed doors most firms are investing heavily to gain a competitive advantage from this nascent technology.[3] Chain.com's CEO, Adam Ludwin, pointed out that the biggest challenge he has experienced when working with financial institutions is their reluctance to reach out to their peers. To some extent, he added, there is a prisoner's dilemma, in that everyone would benefit from full collaboration but there is also a potential strategic advantage for those that do not share ideas and instead capture the market.

For all the hype that surrounded blockchain at this year's Sibos, the panelists during the dedicated session did a relatively good job of reiterating that blockchain is at the top of the hype cycle. This is similar to what happened in previous years with topics such as mobile and big data. To this end, a degree of expectation management is required. Leda Glyptis, head of Bank of New York Mellon's EMEA innovation center, noted that one problem with the industry's perception of blockchain is that it is often viewed from a blank-page perspective. It tends to be portrayed in a manner that suggests it will replace all existing infrastructure overnight, but it is more likely that the industry will see a gradual evolution of existing infrastructure and systems (if the pilot programs in play are successful). So, while firms should be wary of what is happening in the space, there will not be a sudden overhaul of what is already in place.

FEAR, BUBBLE, TALENT, TROUBLE

Opportunity for some is invariably a threat for others. A good portion of those who attended the blockchain session will have done so because they wanted to know how much of a threat it poses to their businesses rather than to learn about its potential for growth. This is reflective of a wider trend for innovation to cause unease within some of the market's more established players. Internally, innovation teams can alter business processes and impact budget allocation, while innovative competition from an external perspective can lead to a reduction in market share and a fall in revenue.

Financial institutions' sense of vulnerability in part also stems from the difficulty they face when it comes to recruiting top technology talent. This sentiment was voiced in several innovation-focused sessions and gives further weight to the argument that financial institutions should increase their interaction with external fintech hubs. One Sibos commentator suggested that

3. See Aite Group's report *Demystifying Blockchain in Capital Markets: Innovation or Disruption?*, September 2015.

banks have a tendency to fear technology but should worry less about disruption and recognize that innovation is positive.

Innotribe's core mission is around creating an environment for banks and technology firms to work together rather than against each other. Collaboration of that kind should assist financial institutions when it comes to understanding genuine threats and opportunities, both internally and externally, which allows for a more efficient allocation of resources. It is telling that the Technology Forum session "Joining forces on cyberintelligence" was nowhere near as heavily attended as the blockchain session, despite the fact that cyberattacks represent a more immediate and tangible threat to firms across the industry. Moreover, bank representatives who are tackling the issue of cybersecurity are likely to be present in greater numbers at Sibos than those involved in more generic innovation efforts.

Notwithstanding the buzz around disruption and fintech, several speakers in Singapore cautioned the delegation that the fintech landscape is not too dissimilar from the dot-com bubble that came to the fore in the late '90s before bursting in 2000. Leibbrandt predicted during his Innotribe session that the number of startup entrants will contract over the next five years or so, but innovation that drives core-system redesign, rather than a core-system bolt-on supplemented by middleware, will have the most staying power.

ARTIFICIAL INTELLIGENCE

Artificial intelligence and its impact on financial services was another hot topic for discussion during this year's Innotribe. Despite a slightly dystopian end to Innotribe, when Andrew Keen, author of "The Internet Is Not the Answer," questioned the role of human beings in a world dominated by intelligent devices, the outlook regarding artificial intelligence's role in the industry was generally positive.

Artificial intelligence is typically an area of innovation that has received most attention from the retail and wealth spaces due to the emergence and rapid growth of technology such as robo-advisors. Aite Group estimates robo-advisor wealth management firms' assets under management were around US$8.4 billion in July 2015, up from US$5 billion at the end of 2014 and US$2 billion at the end of 2013.[4] Institutional use cases for artificial intelligence technology are also being explored and implemented. Kensho, for example, combines big data, natural language capabilities, and machine learning to assist investment decision-making.

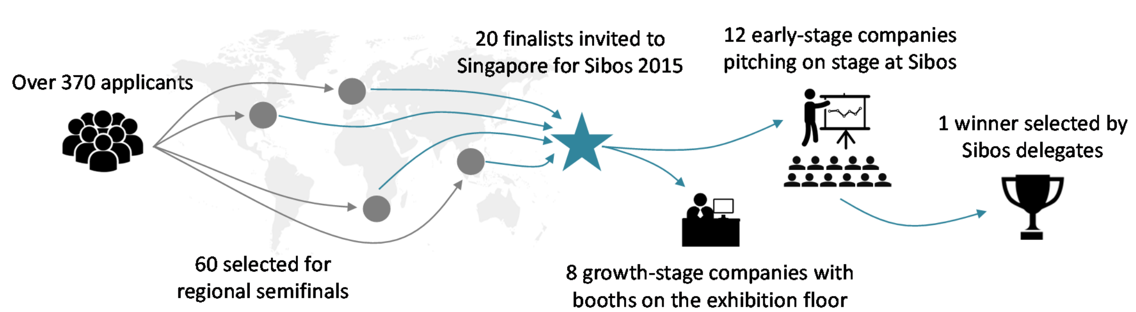
4. See Aite Group's report *Digital Wealth Management Market Update: A Mosaic of Models Emerges*, March 2015.

INNOTRIBE STARTUP CHALLENGE

Launched in 2011, the Innotribe Startup Challenge is a core component of SWIFT's innovation program. The annual startup competition sees both early stage and growth-stage companies pitch for the opportunity to present their business cases to the Sibos delegation. The competition gives startups exposure to executives and allows for industry feedback in what, for many, is a crucial stage of the business development cycle. By participating in the voting process, financial institutions are able to interact with the startup community and identify emerging technology trends, threats, and opportunities.

In 2015, the Startup Challenge received over 370 applications from across the globe, which were reviewed by a panel of 500 senior innovation executives at global financial institutions, venture capital firms, and angel investors (Figure 10). Of the 370 applicants, 60 firms progressed to the regional semifinals, which took place in London, Cape Town, Singapore, and New York. Of those, 20 were invited to the finals at Sibos in Singapore—eight growth-stage companies were given booth space to exhibit on the Innotribe stand, and 12 early stage companies were granted the opportunity to present their ideas on stage in the Startup Challenge Finale. A total of 308 delegates attended the 2015 finale and voted blockchain startup Hyperledger as the winner, netting the startup a US$50,000 prize.

Figure 10: Innotribe Startup Challenge in Numbers



Source: Aite Group

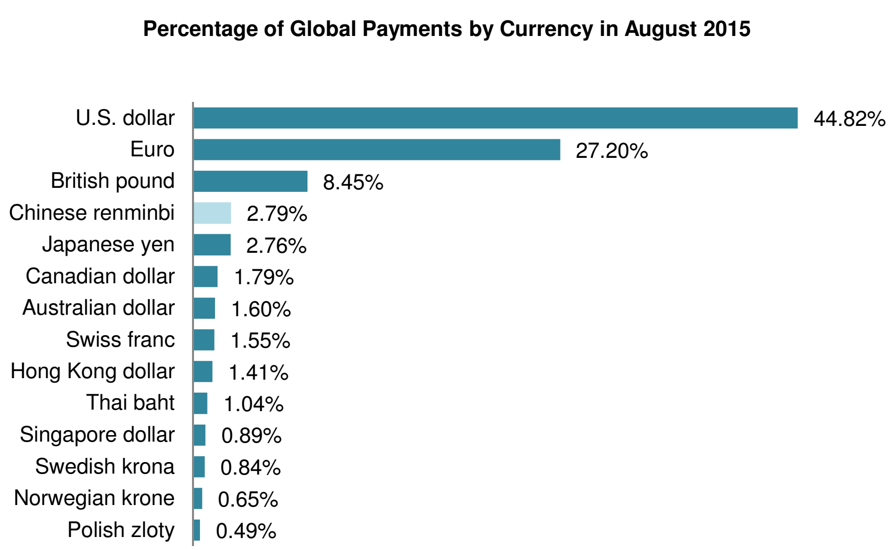
THE ASEAN CENTURY?

The big-issue Sibos debates that focused on Asia and the day of sessions dedicated to the ASEAN region were well attended, and DBS' Gupta contended that the continent could represent the "battleground for the future" of the financial services industry. He highlighted the potential growth of the Asian share of the United States' gross domestic product (GDP) from 40% in 2010 to an estimated 120% by 2020. Moreover, more than half of the world's population hails from the continent, and it has an "attractive demographic profile" because the average age is 28 and younger populations create what Gupta calls "dynamism" in financial services. He noted that "digital natives" proliferate in the region, and these individuals are more willing to adopt new technologies than those in many Western markets. Gradual urbanization and infrastructure improvements across the region are also creating opportunities for firms to enter the emerging ASEAN markets in particular.

RENMINBI ON A GLOBAL STAGE

Of course, all is not rosy for the Asian financial markets; the Chinese market slowdown and ongoing volatility of its economy could mean a hard landing for many. Even if there is the potential for future growth, there are a lot of challenges to get there, not least of which is the internationalization of the Chinese currency. In fact, SWIFT dedicated a big-issue debate to the development of the renminbi and highlighted the currency's growth to the fourth most used currency for payments (according to SWIFT's RMB Tracker; Figure 11).

Figure 11: Global Payments by Currency in August 2015



Source: SWIFT

The internationalization of the renminbi can be divided into a three-step process, beginning with its use as a global trade and payments currency, then its use as a global investment currency, and finally its use as a global reserve currency—but China remains tentative about reaching that final stage.[5] The currency has certainly made progress within the realm of trade finance, payments, and investment, especially given the domestic government's gradual liberalization process. It will be a long road, however, and whether further significant progress depends on the currency's full convertibility is still a question.

SWIFT indicates that the renminbi's dominance in the Asia-Pacific region has increased overall, and it is now the region's second most used currency for trade finance. It is also the number one currency for the intraregional payments with China and Hong Kong. SWIFT's RMB Tracker data indicates that more than 1,700 financial institutions made worldwide payments in the currency in August 2015, representing a 14% increase compared to 2014.

Although these statistics are a clear indicator of the propensity of firms worldwide to use the renminbi as a trade currency, the renminbi can still make plenty of progress in this department. In 2013, China overtook the United States to become the world's largest trading nation, but the U.S. dollar still holds a significantly larger share of trade finance than the renminbi does. The industrial economy of China has also slowed from double-digit growth to single digits in 2015, and numerous policy missteps have been made as the country moves from an administered economy to a market-driven economy.

Sibos panelists remained bullish about the currency's long-term prospects, but delegates to the renminbi session were less certain about its position in the market, with 41% indicating in an audience poll that they believe it is not yet a major currency (47% indicated that they feel it has reached this status, and the remainder were unsure). Citi's regional head for treasury and trade solutions in the Asia-Pacific region, Amol Gupte, on the other hand, stated that the renminbi is an incredibly relevant and powerful currency in the market and it will be even more so in the future, indicating that this is "just the start of the journey" for the country and the currency. He cited renminbi usage for trading in the ASEAN region and beyond as the reasoning behind his statement, though he added that its usage as an investment currency and a reserve currency is somewhat lagging.

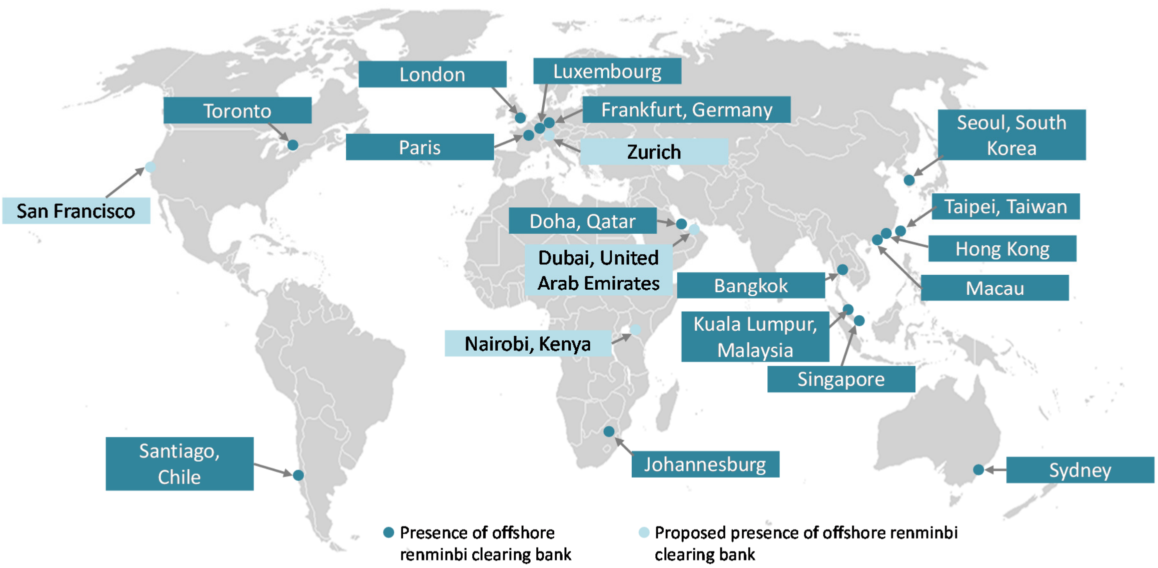
Andrew Sheng, fellow at the Asia Global Institute, noted that there are remaining political and technical barriers to renminbi being added to the International Monetary Fund's (IMF's) Special Drawing Rights (SDR) reserve asset basket. Currently, the IMF does not regard the renminbi as an official reserve currency because of the government controls on it (although in practice this has not prevented central banks from reporting it under their official reserves). If the renminbi were to be included in the SDR, not only would all central banks of all IMF member countries (which are involuntarily exposed to the SDR) be automatically exposed to the renminbi, but it would also be officially internationally recognized as a global reserve currency.

Sheng noted that the acceptance of the currency into the SDR is primarily based on the IMF's judgment of whether renminbi is "widely used" and "freely tradeable." The addition of offshore clearing hubs across the globe will help boost its use (Figure 12), but the issue of how tradeable

5. See Aite Group's report *Internationalization of the Renminbi: Weaving a Web for the Redback*, September 2014.

the renminbi is judged to be is based on a "whole tick-list" of technical requirements. He indicated that the Chinese authorities will be working to meet these requirements by the IMF's September 2016 deadline to reach the position of official reserve currency.

Figure 12: Offshore RMB Clearing Hubs Across the Globe



Source: Aite Group

LOOKING BEYOND CHINA

Though the rest of the globe tends to look at China and India as the benchmarks for Asian progress, the last day of the conference also focused on the ASEAN countries, which are collectively the seventh biggest economy in the world. The progress toward greater integration of the region and its recovery after the 1998 financial crisis was highlighted by DBS' Gupta, who stated that commodity exporters, such as Indonesia, may be suffering in the current financial climate and may face "headwinds" in the future, but the others in the region will prosper.

ASEAN was first formed in 1967 by Indonesia, Malaysia, the Philippines, Singapore, and Thailand, and was later extended to encompass Brunei, Cambodia, Laos, Myanmar, and Vietnam. It was created with the goal of encouraging cooperation and support across the region, and the nations adopted an official charter in 2008 to establish the grounds for a single free-trade area. The region's cross-border efforts have largely focused on increasing trade flows, but there has been a supporting program of work related to financial services liberalization, banking rules, and processes harmonization. The move to establish harmonized processes for cross-border debt market transactions across the region, under the auspices of the ASEAN+3 Bond Market Forum, is one such program.

Singapore's OCBC Bank CEO Samuel Tsien noted during his session that greater ASEAN integration has meant increased competition and collaboration, which have both been healthy for the domestic markets. He highlighted Myanmar as a relatively new entrant to the group and stated that, as one of the nine nondomestic banks in the country, OCBC's focus has been on training and educating the local market participants to foster growth and opportunities.

In keeping with the general focus on innovation throughout Sibos, Asia's position as a hub for technology development and as the home of a large number of "digital natives" was also a frequent topic of conversation during the various sessions. DBS' Gupta noted that 50% of the world's Internet population is located in Asia, and Indonesia is the number one user of Twitter globally. He highlighted Asian e-commerce platform Alibaba as a global leader in terms of consumer transaction volume and China's Alipay as the biggest payments company in the world. The dominance of the region in driving change in the retail banking space, including the adoption of voice and facial recognition for KYC in China, could indicate that other financial services sectors may also be able to leapfrog developments in the rest of the world. Ignore Asia at your peril, warned many conference panelists, and it seems they might be right.

BANKING SESSIONS

While payments in all shapes and forms were the inevitable initial topic of conversation on the show floor, real interest could be seen in delegates' eyes when discussions moved to topics centered on regulatory compliance, credit scoring, and the potential impact of blockchain on corporate business.

REGULATORY COMPLIANCE AND STANDARDS

Regulators and market overseers are conscious of standardization's benefits and are pushing financial institutions, industry associations, and corporate practitioners to realize the advantage of clearly identifying the data elements required for regulatory reporting by using standard definitions and market practices. The discussions are now leading to specific actions in certain jurisdictions; for example, organizations such as the ECB and the Russian Corporate Payments Market Practice Group have published information requirements with specific reference to ISO 20022 data definitions.

One of the Standards Forum sessions in particular focused on how the ISO 20022 messaging standard may help regulators standardize requirements and enable broader alignment across the industry. Panelists discussed how it could also help reporting parties reduce their reporting workload in the longer term. The panel discussion included representatives from the ECB, the Russian National SWIFT Association, and Deutsche Bank Asia, and they discussed how they have respectively implemented the standard and what value and benefits they have achieved thus far. First and foremost, the panelists discussed what implementation took in terms of due diligence and organization; the focus was to explain to attendees how to "do it right" and avoid the pitfalls.

An example of how the ISO 20022 standard is used to comply with a specific regulatory regime is the development of new financial repository items for the Money Market Statistical Reporting regime. The ECB has issued a regulation to achieve a better understanding and timely surveillance of money markets' functioning in general and of banks' funding in different segments in particular. The purpose is to provide better and timelier information on the monetary policy transmission mechanism as well as to provide improved information on market expectation on policy rates' future trajectory. The solution will provide more information to market participants on the money market's function to allow a more informed choice among alternative reference rates.

Taking into account the large data volume and the daily frequency of the data collection, the aim of the initiative has been to establish full automation of the data flows between the reporting credit institutions, national central banks (NCBs) where applicable, and the ECB. In this regard, it is intended to result in full standardization of the underlying taxonomy and data-transmission format based on the ISO 20022 standard.

To facilitate the reporting of daily transaction-level data, the solution was developed to support a set of four ISO 20022 message formats: a secured report, an unsecured report, a foreign exchange swaps report, and an overnight index swaps report. Each reporting agent is to use the appropriate standardized ISO message accordingly. The information flow will be from the reporting credit institutions (i.e., the reporting agents) to the relevant NCBs or the ECB. It is likely that data will also be exchanged between NCBs and the ECB using the same data-transmission format.

Another presented example of practical usage of the ISO 20022 standard to facilitate regulatory compliance came from a Russian ISO 20022 initiative related to cross-border transactions on currency control reporting. The Bank of Russia's requirement is for corporations to submit supporting documents for foreign currency transactions to servicing banks aligned with domestic regulations. The strategic decision was to invest in an ISO 20022-based set of messages for the corporation-to-bank space with the intent to create a unified technology platform for both banks and corporations. The initiative was driven by the large corporations and large international banks, and all agreed not to adopt any common standard other than the one internationally accepted by ISO. Collaboration with SWIFT was essential for the positive outcome of the project, according to panelists.

CREDIT-SCORING DEVELOPMENTS

A bank's traditional role is lending, and loans make up a significant portion of a bank's assets. Commercial and industrial (C&I) loans are generally short-term loans made by commercial banks to a business or corporation and are a good proxy of financial institutions' level of confidence in their corporate counterparts. Lending is not an easy task for banks because it can result in nonperforming loans (NPLs), or defaulting borrowers. Consequently, when banks do not have sufficient information to build a borrower's reliable risk profile, they prefer not to lend at all. In C&I lending, this decision not only affects the banks' opportunities to grow the business but also negatively affects small- and midsize-enterprise (SME) borrowers, which are not risk-rated.

Conversations at Sibos revolved around what a bank can do to improve its SME credit-underwriting process and assess the risk profiles of companies too small to be rated in traditional credit-scoring systems (e.g., Fitch, Moody's). Substantial new SME financing opportunities include extracting alternative evaluation criteria from nonfinancial data. There are emerging-vendor solutions that banks could use to minimize or remove major factors that cause SME C&I nonperforming loans.

Poorly managed credit risk is certainly one of the most concerning causes of nonperforming loans, and SME credit risk is more challenging to assess than that of larger businesses. Banks' appetite to lend to small businesses has diminished as a result of deteriorating credit quality caused by the 2008 economic downturn. Bank representatives admitted they must now make a significant change in their credit-rating approach to support SMEs at a level that is more proportionate to each SME's trading activity. Although this contrasts with traditional forms of bank finance, which are primarily dependent on the SME's balance-sheet strength, banks are cognizant they must improve loan origination quality and accept lower-ticket loans or suffer an additional negative impact on their lending business from corporations deciding to reduce.

The market today presents myriad nonbank players that operate in the peer-to-peer lending space, many of which were attending Sibos. These players act as intermediaries that match borrowing individuals and SMEs with lending investors (either institutional investors or individuals looking for advantageous yield). The borrower's creditworthiness is assessed based on the relationship it has with the anchor buyer and on the buyer's solvency. Usually, an anchor buyer is a large multinational enterprise with a strong balance sheet and an A+ credit rating. Peer-to-peer intermediaries set their risk on the anchor buyer.

Aite Group confirmed during conversations with Sibos bank delegates that the SME lending environment is shifting from loan risk priced on the anchor buyer's creditworthiness to loans assigned using innovative credit-scoring techniques based on the borrowing company's operational performance. These techniques will be supplemented by fast credit-underwriting processes that use multiple financial supply chain data sources plus unstructured social media data.

These players extract applicants' business data from credit card companies and sentiment data from blog posts, including the following:

- Credit proposals
- Credit bureau analysis
- Tax authorities
- Merchant accounts
- Court filings
- Loan review documentation
- Ratings agency data
- Internal credit ratings
- Bankruptcy records
- Ratings justifications
- U.S. Securities and Exchange Commission filings
- Collateral appraisals
- Trade publications
- Covenant compliance records
- Government statistical data
- Loan committee notes
- Social networking sites
- E-commerce marketplaces
- Collateral lien perfection records
- Regulatory filings

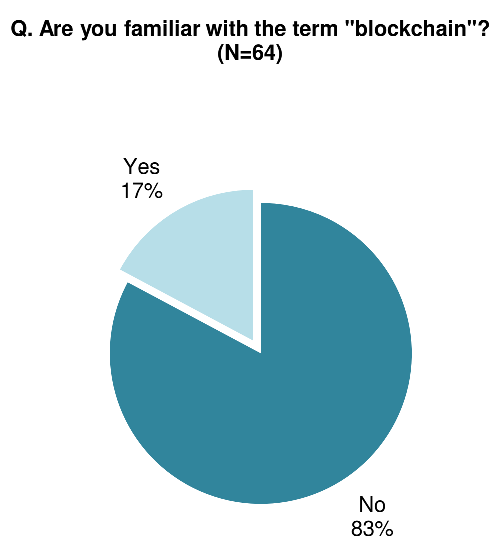
- Loan officer comments
- Financial markets data

All data sources are then combined to determine whether a borrower's decline in revenue is the result of a temporary supply chain problem or a sustained decline in customers' perception of the company's product.

BLOCKCHAIN: THE (MISSING) CORPORATE PERSPECTIVE

While there is no doubt that blockchain was center stage at the event, delegates raised some concern about the level of hype that could potentially result in a gap between banks and fintech on one side and the corporate world on the other. Aite Group analysts showed the results (Figure 13) of a simple survey that asked corporate representatives how familiar they were with the term "blockchain." The lack of corporate awareness could result in a missed opportunity for banks to use the data they have to improve client service. While this might be something of a generalization, Aite Group analysts find that the bigger the bank, the lower the customer service levels perceived by the corporate customer.

Figure 13: Blockchain Still Unknown Among Corporate Executives



Source: Aite Group survey of 64 corporate executives

The majority of respondents (83%) come from corporate treasury and operations departments (i.e., procurement, logistics, and production). These practitioners are a good proxy to understand a company's technology needs. So if they are not aware of blockchain, chances are that neither is their company, which means that banks will have a hard time promoting blockchain (and turning it into a business opportunity) unless they first generate awareness and a solid business case for corporate-client adoption.

Another point to consider from the corporate perspective is that there is so much data and information being collected every day that people in corporate departments have too much data to elaborate. Their ability to understand and manage data is slipping away, and the younger talent coming into the industry will not have the bandwidth or understanding to work with the massive volume and quickness of inbound data.

Lastly, while there is a good deal of discussion in the industry on the use of blockchain for expediting real-time payments, there are considerable hurdles to adoption for business-to-business transactions. Blockchain technology may speed the process of recognizing that a transaction has been made between two parties, but remittance details, which are critical to these transactions, would require additional steps to reassociate and reconcile. Additionally, this would create yet another location for the supplier (receiver) to monitor for incoming payments, while the desire is for an integrated receivables process that consolidates all payments and associated remittances for more efficient, effective cash application.

SECURITIES SESSIONS

Though compliance has been an ongoing theme for the securities sessions over the last few years (and 2015 saw a continuation of this theme), this year the subject of infrastructure and technology change dominated the conference floor. How to cope with the threat of new technologies (stand up once again, blockchain) and support legacy architectures was the order of the day for market infrastructures and financial institutions alike. These two communities are also increasingly being thrown into competition with each other due to the regulator- and central-bank-driven shake-up of the securities supply chain in Europe. With so much change from so many corners, how can firms fight back?

DON'T BE KILLED BY THE TRAIN YOU SEE COMING

The Market Infrastructure Forum included a session dedicated to the tricky issue of innovating while acting as a systemically important financial market utility (SIFMU). Over half of the delegates attending the session indicated in an audience poll that they felt market infrastructures are behind the curve in terms of innovation. Panelists addressed the vote head-on by highlighting SIFMU's resilience in withstanding the financial crises of recent years, and Michael Bodson, DTCC CEO, noted that CSDs' capabilities to weather the storms proved their well-placed investment in technology and risk management. Panelists agreed that infrastructures' requirement to remain stable means they must continuously monitor potential disruptors, technology-based or otherwise.

The distinction between disruptive innovation and gradual innovation was also drawn during the debate, and Euroclear's CEO Tim Howell said that most innovations are, in fact, visible in the financial market for some time. He warned market participants and CSD peers not to get "killed by the train you see coming" by ignoring technology and business developments happening across the industry. He highlighted Euroclear's blockchain investigations as a good example of how the international CSD is keeping an eye on the potential competition.

Emerging-market SIFMUs face a range of other innovation challenges, added Korea Securities Depository (KSD) chairman and CEO Jaehoon Yoo. These CSDs' local focus and reliance on other infrastructure partners, such as stock exchanges, means they often have a rigid governance structure, which is not conducive to technology innovation. KSD has, however, been innovative in its approach to business challenges (an often overlooked aspect of innovation due to all of the fintech buzz). It worked with the Korean government to introduce a single registry for crowdfunding platforms to monitor these entities and protect local investors.

G.V. Nageswara Rao, managing director and CEO of India's National Securities Depository, added that his CSD has a dedicated group that monitors innovation in other areas of the world and that internal innovation tends to happen when the firm is attempting to solve client problems. The CSD has established a number of innovative services, such as a centralized KYC registry for the local market (another popular Sibos topic) and sending account statements to clients via mobile applications.

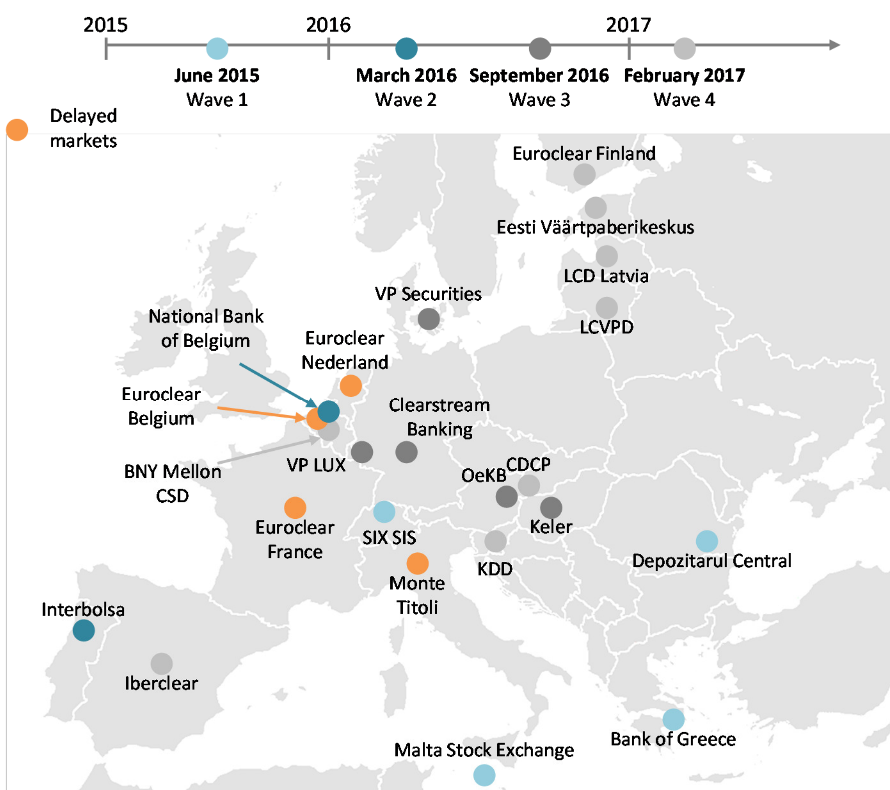
The parting shot from the panel? Howell reminded delegates that in spite of the hype around blockchain, they should bear in mind that the central ledger model isn't actually broken.

T2S: ANOTHER SLOW-ROLLING TRAIN

T2S has already had an impact on SWIFT's network traffic due to the 2015 completion of the rollout's first phase (albeit with a two-month delay until September for Italy), and it is expected that the next few phases will result in an even greater uptick in messaging volume and adoption of ISO 20022. T2S' intent is to settle almost all heavily traded securities circulating in Europe against the euro and other European currencies (those from countries that have signed up to participate) using standardized communication protocols and harmonized market practices on the T2S platform. The ECB has staggered the 23 CSDs that will migrate to the platform into four waves, beginning with the already passed first wave on June 22, 2015 and ending with the final wave on February 6, 2017 (Figure 14).

Though it was not mentioned during Sibos, Euroclear announced in late October that it will be delaying the migration of its Euroclear Settlement of Euronext-zone Securities (ESES) markets, which was originally scheduled for March 28, 2016, by an as yet undetermined length of time. Much like the largest CSD in wave one, Italy's Monte Titoli, the Euroclear CSDs require more time to prepare for the move. Pushing the Dutch, Belgian, and French CSDs back to coincide with wave three could have a significant impact due to the increased operational risk of so many large markets moving onto the platform together.

Figure 14: T2S Timeline, Factoring in Recently Announced Delays



Source: Aite Group

Regardless of the delays, T2S will have a significant impact on the custodian and CSD universe. Some CSDs, particularly those at the smaller end of the scale that previously have held national monopolies, will struggle to cope with the new competitive pressures without the steady income of settlement revenue. The topic of potential extinction was once again reprised from the previous year during the Market Infrastructures Forum, and panelists discussing “A future for CSDs?” agreed that T2S and the Central Securities Depositories Regulation (CSDR) are combining to create opportunities for a “very different industry” to emerge. Though the participants on the panel agreed that all players in the market will remain and may need to team up via partnership models, not everyone was convinced by this positive spin on things. To this end, one attendee noted that these developments are more likely to create opportunities for banks to buy up CSDs and vice versa.

ECB executive board member Yves Mersch indicated during his dedicated Sibos session that the central bank views T2S as a platform on which to build the European Commission’s Capital Markets Union. T2S will provide the seamless and harmonized flow of funds and assets across borders to support the union’s ethos of cross-border risk-sharing and the creation of deeper and more liquid markets, he said. The ECB is also planning on harmonizing the messaging standards for T2S and payments platform Target2. Currently, T2S mandates the use of ISO 20022 messages, but this is not the case for payments.

The potential extension of T2S to other regions and markets was also mooted during Sibos (though it really depends on Europe’s successful implementation first). During a panel on capital markets harmonization, Roland Kipper, divisional head, group markets operations at Commerzbank, suggested the global adoption of T2S should be considered, especially its expansion to Asia. Not all panelists were convinced, however, and Euroclear’s head of product management, Jo Van de Velde, said the fragmentation of Asia’s markets would stand in the way of a T2S introduction and that such a move would “not achieve a lot” in terms of liquidity flows because of the lack of a single currency across Asia.

No doubt, Sibos 2016 will involve a lot of navel gazing about T2S, and it will be interesting to see if its migration is further delayed in the interim. Will the markets have completed wave three by the time Geneva swings around, or will future sessions involve a postmortem for what went wrong?

COLLATERAL TRANSPORT

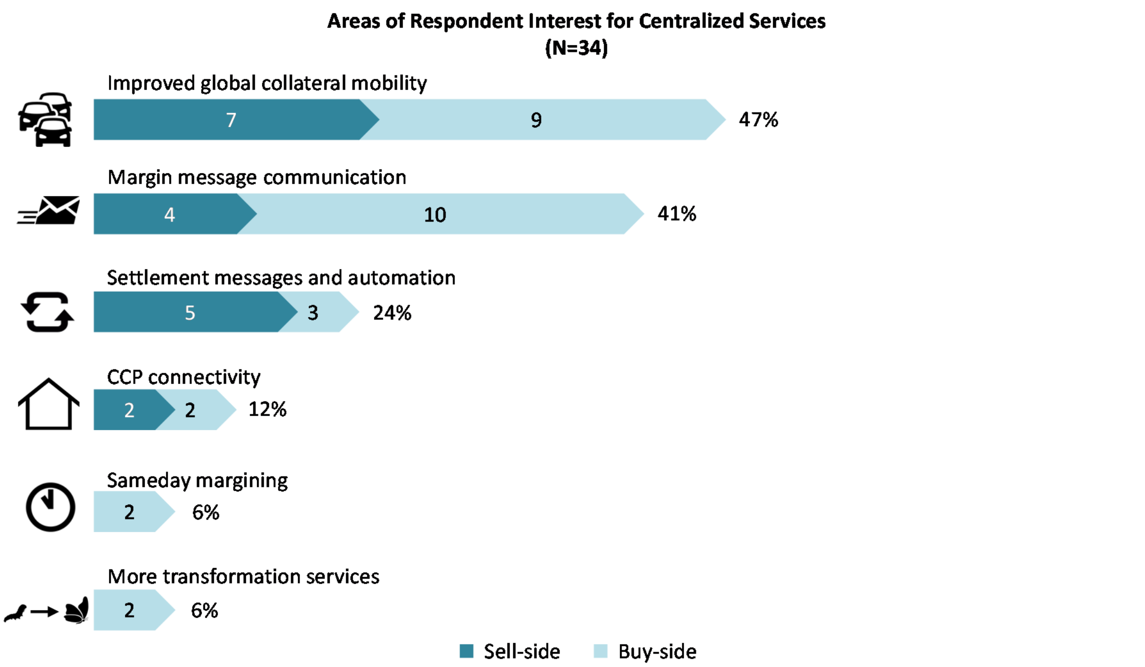
At Sibos 2013, collateral management discussions were largely focused around the prospect of a collateral shortfall. These fears have since been quelled—representatives of LCH.Clearnet and Euroclear highlighted that the two organizations collectively hold around US$70 trillion in high-quality liquid assets—enough to prevent a crisis, for now. Discussions at Sibos 2014 revolved around accessing and mobilizing these collateral assets, particularly through the use of collateral transformation. In 2015, the debate evolved into how this can be achieved in a timely and cost-effective manner.

Automating a complex, fragmented, and unstandardized function is no mean feat. Firstly, firms need to create a single global view of collateral inventory on a real-time basis because tracking collateral assets across regional and business-line silos leads to high operational costs and risks.

Even so, the session "Breaking the silos: Building a global assets inventory to optimize collateral management" made it evident that even firms that have single views of collateral inventory are still struggling to mobilize assets efficiently. Panelists highlighted that, irrespective of whether firms have a high level of automation internally, the lack of industry standards for data formats, margin calculations, and settlement procedures means many manual processes are still required. A prime example of this was provided by Gerard Smith, director of collateral services at LCH.Clearnet, who pointed out that collateral transfers at the CCP were performed by fax as recently as three years ago.

The focus on collateral management over the last few years has generated new opportunities for service providers. LCH.Clearnet and SWIFT have made efforts to standardize the collateral transfer and settlement process, while increased adoption of AcadiaSoft's MarginSphere has reduced firms' reliance on email-based communications for margin messaging. Sibos 2015 also marked the one-year anniversary of DTCC and Euroclear's collateral management joint venture, GlobalCollateral, which plans to provide a transatlantic link between European markets and the United States for collateral assets. Aite Group research in Q2 and Q3 2015 found that there is interest for certain aspects of collateral management to be handled centrally, particularly with regard to collateral mobility (Figure 15).

Figure 15: Areas of Interest for Centralized Services



Source: Aite Group's interviews with 34 firms, Q2 and Q3 2015

Despite these developments, cross-jurisdictional variations in regulatory requirements are still proving to be a headache for a number of firms. Alison King, senior vice president of derivatives at SGX, noted the difficulties that firms face in Asia due to regulatory fragmentation. Balance-sheet restrictions have also led to clearing members in certain regions only providing clearing services to a limited number of clients. King added that to this end, Tier-2 Asian banks are struggling to find U.S.- and U.K.-based clearing brokers to take them on as clients.

The regulations still seem to have had limited impact on the buy-side, however. Guillaume Heraud, Societe Generale's global head of business development, financial institutions, and brokers, said that he still meets buy-side firms that are not fully aware on which regulations they need to concentrate. Much is still to be done in terms of buy-side education and interaction.

COMPLIANCE COMPLAINTS

The lack of international regulators' coordination was once again a bone of contention discussed by panelists and delegates alike at Sibos 2015. Firms feel that the international regulatory framework is not flexible enough to accommodate local market nuances. As such, these discrepancies should be reduced before attempting to introduce global legislation. Stephanie Marelle, head of clearing and custody in Hong Kong for BNP Paribas Securities Services, noted during the capital markets harmonization session that the alignment of post-trade infrastructure is a more effective means to provide harmonization than is regulation. Market practices across jurisdictions will naturally align as the volume of cross-border activity increases and as firms look to reduce inefficiencies, she contended.

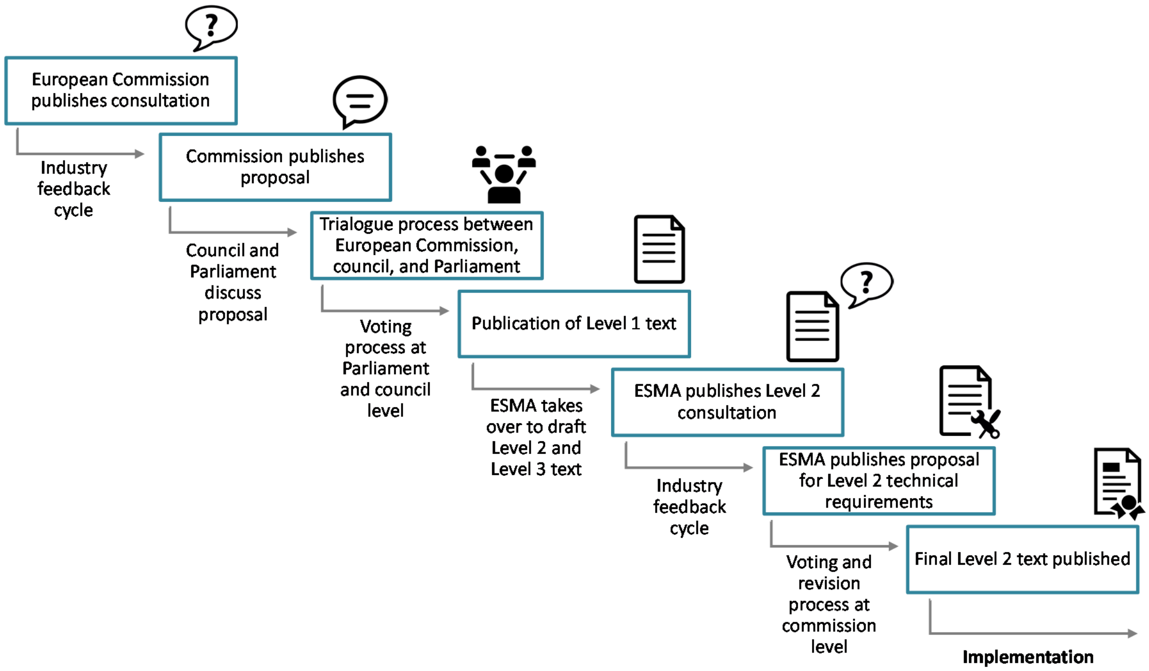
The complexity of the European regulatory drafting process was also the subject of much international discussion on the exhibition floor. One non-European delegate noted that it is almost impossible to understand where in the process a regulatory draft is and how the technical standards being drawn up by the European Securities and Markets Authority (ESMA) fit into the picture.

Figure 16 provides a simplified view of the European regulation drafting process, which generally begins with the publication of a commission consultation paper to get industry feedback over a defined period (often three months). This culminates in the publication of a commission proposal that is subsequently discussed by the European Council and the European Parliament. The Council is able to reject, approve, or make amendments to the proposal, and the Parliament must ratify or reject the proposal. The discussions are facilitated by the trialogue process, which involves informal tripartite meetings between the three European bodies. All of this work results in the publication of the Level 1 text (the legislative act under the Lamfalussy process[6]) in the official journal of the European Union.

ESMA is responsible for drafting the Level 2 proposal and, following feedback from the industry and Europe-level regulatory bodies, the final text. The Level 2 text supplements the legislative act and contains implementing measures and technical requirements for aspects such as regulatory reporting.

6. The Lamfalussy process is an approach to the development of financial services industry regulations used by the European Union. Originally developed in March 2001, the process is named after the chair of the EU advisory committee that created it, Alexandre Lamfalussy. It is composed of four levels, each focusing on a specific stage of the implementation of legislation.

Figure 16: European Regulatory Drafting Process



Source: Aite Group

Although many in the industry are quick to express their discontent when it comes to regulation, some are still able to point out the benefits. According to SWIFT's Leibbrandt, the industry is now entering a regulatory wave that focuses on data, and there are clear risk management benefits to be realized by implementing a robust data management strategy. Furthermore, many firms' buy-side clients have been demanding accurate and timely data since the financial crisis, so in that sense firms could potentially be able to deliver greater value to their customers. Given the industry's views on the way regulators handled trade reporting data, however, it is likely that few of the pessimists will be swayed into adopting a positive outlook in the long term.

CORPORATE ACTIONS REVISITED

Sibos just wouldn't be the same without a corporate actions debate and an update on market infrastructures' efforts and successes in specific countries to increase the standardization of the data formats and messaging used in the event-announcement process. This year, Russia's National Securities Depository (NSD) dominated proceedings with a progress report on its corporate actions reform program, which it kicked off in 2013. NSD achieved a milestone in summer 2015 with the approval of reform provisions into Russian federal law, which will take effect in July 2016. The regulation sets the groundwork for the centralized processing of corporate events and for a CSD-provided corporate announcement information center using ISO 20022.

Singapore, Australia, and Japan have also all implemented corporate-action automation initiatives focused on adopting the ISO 20022 messaging standard. Australia's stock exchange went live at the end of 2013 with a project to move issuers from providing unstructured

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corporate actions data to mandatory adoption of ISO 20022 formats. The Japan Securities Depository Center and Tokyo Stock Exchange introduced support for ISO 20022-based issuer messages in June 2014, and SGX partnered with a number of banks in 2014 to implement an ISO 20022-based service for issuer announcements in the Singaporean market.

CONCLUSION

If a dollar was paid every time a delegate, panelist, or speaker mentioned blockchain during Sibos 2015, there would be quite a large sum of money on the table. Without a doubt, it was the dominant topic of conversation on the exhibition floor and during the conference, sometimes regardless of the session's intended subject. Anyone that wasn't aware of distributed ledger technology before Sibos certainly was after it. How much actual impact it will have on the securities and payments markets in the next 12 months is clearly up in the air, however.

On the wholesale banking front, Sibos highlighted the following:

- **Regulatory compliance**: Standards implementation brings value and benefits, but it requires good diligence and organization among all involved parties: banks, companies, technology providers, and regulatory bodies.
- **Credit rating**: Banks must make a significant change in their credit-rating approach to support SMEs at a level that is more proportionate to each SME's trading activity. Banks must look at innovative technology solutions to improve the quality of risk scoring. Algorithms and scoring techniques enable banks to look at companies' alternative sources of income or collateral.
- **The corporate perspective on blockchain**: As with any innovation that impacts business relationships, corporations expect banks and technology providers to build small but very profitable use cases/pilot projects for all the industry to see and evaluate. Only then will it be possible to make the next step to collect money and scale up in a snowball effect.

On the securities markets front, Sibos highlighted the following:

- **"Utilities" go from strength to strength (but adoption is a work in progress).** Sibos saw a plethora of these entities being launched, elaborated upon, and debated—KYC utilities, reference data utilities, securities processing utilities, collateral utilities, and the list goes on. The concept of economy of scale is the underlying strength of any "utility" or shared service, but reaching sufficient scale is also one of the greatest challenges for such a service. Ensuring firms are confident in the security and reliability of a multitenant architecture is another key area for any such effort. For SWIFT, the idea of an industry-led effort is both a strength and a challenge—if the industry is in charge of the utility's direction, the logic is that it will better match its requirements. Gaining consensus across a group of firms, however small, is no mean feat, even in the noncompetitive realm of KYC and entity data.
- **Innovation in capital markets is a hot topic, but no one really knows where they are in comparison to their peers.** Innotribe sessions may have been dominated by banking topics, but there were many interested delegates hailing from the securities sector. There are plenty of initiatives and startup technologies that could impact the securities industry (blockchain is only one of them, believe it or not), which means that the various hubs, accelerator programs, and even the Innotribe competitions

will be of interest to those firms keen to invest in fintech. That is, of course, if it doesn't prove to be an investment bubble before the next conference.

- **Data standardization and regulatory reporting have become very closely tied.** Whether it is the Basel Committee's risk-data aggregation guidelines or the reporting of derivatives data under EMIR, many regulatory-focused efforts require investment in data management. The need for greater collaboration across regulators and the industry is very important: on the part of regulators, to monitor systemic risk and markets, and on the part of the industry and regulators, to operate efficiently. Expect this topic to run on and on.
- **The market is going to be keeping a close eye on T2S.** Wave one of the rollout has already had an impact on SWIFT's network traffic, but what will the recently announced delay to the ESES markets mean for waves two and three? The next 12 months should ensure that the pan-European settlement system is a topic for discussion during Sibos 2016. Industry feedback about the benefits of the platform has been rather muted. Will any more be convinced by the time Geneva rolls around?
- **The next five years will see SWIFT focus on many more services beyond messaging.** The network operator's concluding five-year strategy has seen it extend its focus to other areas of the securities business. SWIFT2020 will see this focus increase and expand, especially as SWIFT brings its core messaging services to emerging markets.

RELATED AITE GROUP RESEARCH

Innovation in Capital Markets: Not Just a Dog and Pony Show, October 2015.

Demystifying Blockchain in Capital Markets: Innovation or Disruption?, September 2015.

Client Life Cycle Management and KYC: Things Can Only Get Better, April 2015.

Sibos 2014: Deliberations on the Digital Age, October 2014.

Internationalization of the Renminbi: Weaving a Web for the Redback, September 2014.

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