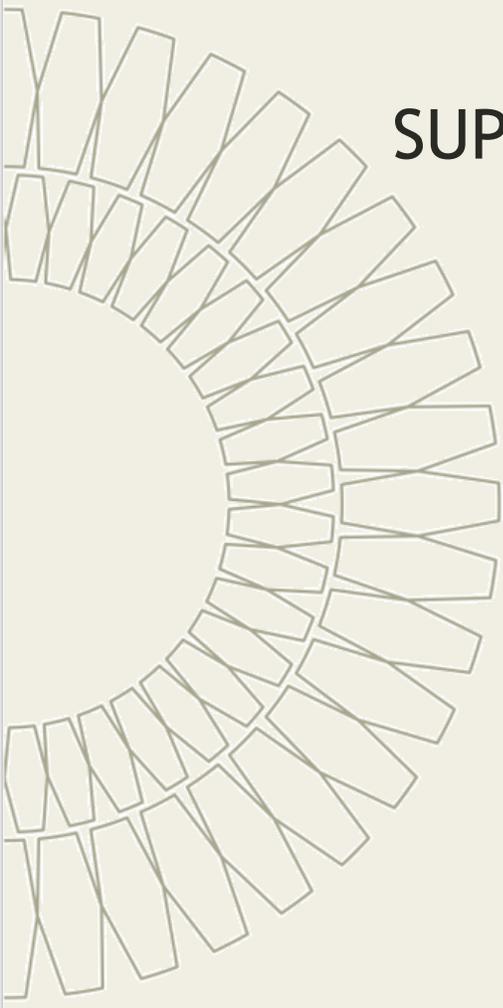




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ASSOCIATION OF SUPERVISORS OF BANKS OF THE AMERICAS

BANKING REGULATION AND SUPERVISION EXPECTATIONS IN THE AMERICAS



MEXICO CITY, MEXICO

2018

BANKING REGULATION AND SUPERVISION EXPECTATIONS
FOR 2018 IN THE AMERICAS

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TERMS AND ABBREVIATIONS USED

Risk weighted assets	RWA
Alliance for Financial Inclusion	AFI
Anti-Money Laundering and Counter Financing of Terrorism	AML/CFT
Association of Banking Supervisors in the Americas	ASBA or Association
Basel Committee on Banking Supervision	BCBS
Survey on Banking Regulation and Supervision Expectations for 2018 in the Americas	Survey
International Monetary Fund	IMF
Financial Inclusion in Latin America and the Caribbean	FILAC
Associate Members	MAS or Members
U.S. Federal Reserve	FED

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I. INTRODUCTION

During 2018, the financial regulation and supervision entities in the region will continue facing challenges already identified during previous years. As a matter of fact, in spite that the Basel III reform package has been finalized, given the features of local markets, a sizable proportion of countries in the region are within the Basel I and II framework, which raises the importance of continuing with the discussion on the effective and timely adoption of international standards. Likewise, just like the previous year, de-risking still affects different countries along the continent, impacting mainly countries in Central America and the Caribbean. Finally, due to the features of markets in the region, different indicators point again to credit risk as a high priority issue among Associate Members.

At the same time, new topics and challenges appear along the region. Implementation of a proportional regulation and supervision framework will constitute one of the central topics for discussion in the Americas. Likewise, the quick development of new technologies brings with it potential benefits as well as new challenges and risks for markets in the region. The risks of cyber-security, protection of personal data and legal validity of biometric data are some of the relevant topics around the use of technology in the provision of financial products and services.

In this context, the ASBA publishes the third edition of the Survey on Banking Regulation and Supervision Expectations in the Americas, addressed to financial regulators and supervisors as well as to all that have an interest in the development of the financial market in the Americas. The survey considers several topics of interest to regulators and supervisions in the region, making aggregate use of the responses received from them covering issues related to the main risks, changes in variables relevant for the financial stability, financial system indicators, important events, and regional discussion priorities.

The document is organized as follows: The second section presents aggregate results of the responses received on each of the topics considered. The third section provides closing remarks synthesizing information extracted from the different sections in the survey. Finally, a methodological annex on the survey description and some considerations regarding the processing of the responses, is included.

II. RESULTS

1. RELEVANT EVENTS

The analysis of the Survey’s responses regarding different events that might have impact on the financial system is presented in this section. The following chart presents the interannual change through connecting lines. If an event does not have a line, it means that such event was not included in the 2017 edition.¹

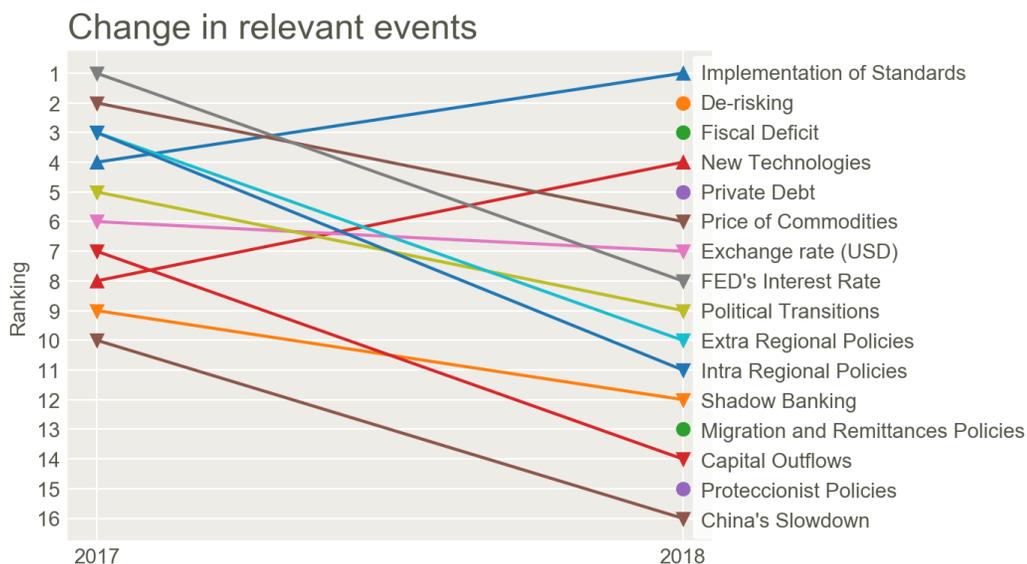


FIGURE 1. RELEVANT EVENTS

In 2017, the implementation of standards is the fourth issue in order of importance, below changes in the FED’s interest rate, commodities’ prices and political changes. This year, the implementation of international standards is in the first place in order of importance. There are two factors that might explain the importance that the implementation of standards will have on the stability and soundness of the systems in the region. First, the elaboration of reforms within the Basel III framework, derived from the 2008 crisis, has been finalized, giving rise to the global implementation phase. Second, in the 2017 survey, a great share of the Members reported that they were in the implementation process of the standards.

Another issue that climbed on the importance scale is that of new technologies. In 2017 this issue was ranked in the eighth place while it occupies the fourth place in importance order this year, or the second place if we consider only the topics included last year. New technologies are widening their presence in different areas within the financial sector. Different regulation and classification initiatives reflect the importance of this issue within regulators and supervisors.

¹ It is important to clarify that the 2017 survey had a different format, due to which the way of ranking events is different. This happens in different questions; nonetheless, for the terms of this work we just compare the final ranking. For more information, please refer to the report on expectations for 2017: <http://www.asbasupervision.com/es/bibl/i-publicaciones-asba/i-2-otros-reportes/1490-orep22>

De-risking and fiscal deficit occupy the second and third place respectively. Both events were included for the first time in the 2018 edition. In the first place, de-risking continues affecting different regions in the Americas, particularly the Caribbean and Central America. The challenge is to determine which solutions are appropriate to face de-risking in each particular jurisdiction. In the second place, fiscal deficits in several countries in the region also represent an issue that is necessary to oversight. Additionally, private debt appears for the first time in this edition, occupying the fifth place in relevance.

On the other hand, countries have decreased their concern related to the price of commodities. This could be due to an increase in the fuel price during the last months, which is expected to stabilize in the medium term at \$54 dollars per barrel.² This price is higher than the post-crisis levels in the energy prices, but still lower than the pre-crisis levels.

The concern about the changes in the Federal Reserve of the United States (FED) interest rate moved, from being the most important event during last year, to the eighth place this year. The FED increased, for the third time during the year, its reference rate in December 2017.³ Probably, markets have assimilated the short and medium-term impacts, which can explain why the increases in the reference rate do not represent such a significant concern in spite of its materialization.

² IMF, “World Economic Outlook Update”, January 22, 2018.

³ Bloomberg, “Fed Raises Rates, Eyes Three 2018 Hikes as Yellen Era Nears End”, 13 December 2017:
<https://www.bloomberg.com/news/articles/2017-12-13/fed-raises-rates-while-sticking-to-three-hike-outlook-for-2018>

2. THE FINANCIAL SYSTEM FEATURES

The analysis of the Survey’s responses about different features of the financial system is presented this section. Figure 2 represents the frequency with which expectations about each feature were selected. The responses that did not reflect an opinion are shown in white color in the chart.

According to the Members’ replies, 88% of the participants expect the number of access channels to financial systems to increase. Likewise, 85% expect the number of users of the financial system to increase.

Also, most of the participants expect total deposits, total equity and total loans in the banking system to increase.

The expectation of increase on the above variables might be explained by the development and growth of products and services based on technology (fintech). Fast growth in technological innovation might have a greater number of users and an increase in the access channels to the systems as a consequence.

On a different note, the expected increases in equity, loans and the commercial, and real estate portfolios reflect an increase in the size of the financial sector. It must be considered that, according to FMI data, household-debt to GDP ratio is smaller in Emerging Market Economies compared to Advanced Economies (20% in EMEs and 65% in AEs in 2016).⁴ Something similar occurs with corporate non-financial debt. Therefore, it is necessary to oversee the markets’ evolution since the increase in the demand for loans and debt might increase credit risk.

Finally, participants do not have major expectations for change on: assets controlled by local entities / total assets (TA); general operating costs; assets controlled by foreign entities /AT; number of financial entities; government assets / TA; and banks entry costs.

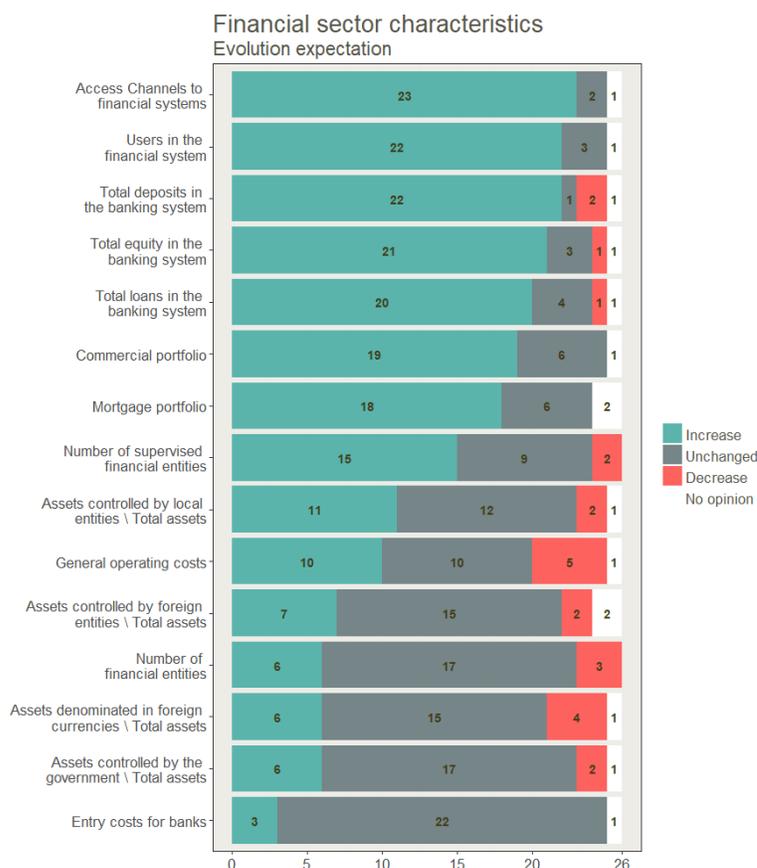


FIGURE 2. THE FINANCIAL SYSTEM FEATURES

⁴ IMF, “Global Financial Stability Report”, October 2017.

3. FINANCIAL INDICATORS

The analysis of the Survey’s responses regarding different indicators of the financial system is presented in this section. Figure 3 shows the number of participants considering that the indicator mentioned will increase, decrease or stay the same during 2018. The ten more dynamic indicators were included in the figure, remaining indicators can be consulted in the Methodological Annex.

Almost all participants expected that financial system’s total assets will increase, while two participants think there will be a decrease and another two state that the level of total assets during 2018 will not change. The expectation of increase in total assets could be due partly to the fact that the Associate Members also expect a growth in loans for the real estate sector, as well as of the system’s total equity (Figure 2). Besides, the development, penetration and investments in fintech could also be one of the causes for this expected increase.

The second indicator, in terms of expectation for increase, belongs to residential real estate loans. Moreover, half of the participants expect that commercial real estate loans and real estate prices will increase.

At least half of the members expect increases in past due loans, the amount of capital / risk weighted assets (RWA), Tier 1 capital / RWA and household debt to GDP. In this regard, the expected increase in past due loans might be caused by a sustained growth in household debt and that of the real estate sector during the last years in the region.⁵ It is relevant to note the need to greater oversight and prudential action on the credit portfolio in order to watch over a sound credit growth,

and to provide better coverage to the past due portfolio. Additionally, from a more optimistic perspective, almost all of the Associate Members consider that their regulatory capital levels will increase or stay equal. It is worth noting that regulatory capital levels are above the minimum requirements of the Basel standards, currently.⁶

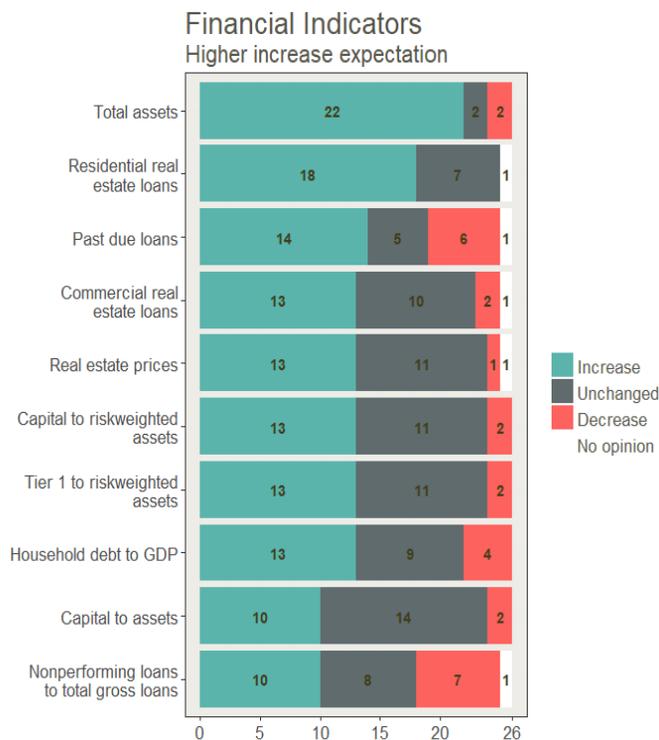


FIGURE 3. FINANCIAL INDICATORS

⁵ BBC, “The 10 countries in Latin America where individuals are more indebted” <http://www.bbc.com/mundo/noticias-41571745>

⁶ ASBA, “Report on Financial Stability in the Americas 2017”.

4. BUSINESS LINES AND ACTIVITIES

The analysis of the Survey’s responses regarding the business lines and activities that are expected to be affected during 2018 is presented in this section. A business line was considered to be negatively affected if at least one of its activities is expected to be. For each business line, Figure 4 shows the number of participants that expect it to be negatively affected. Figure 5 shows the eight specific activities within each business line that generate greater concern. The colors indicate to which business line each activity belongs.

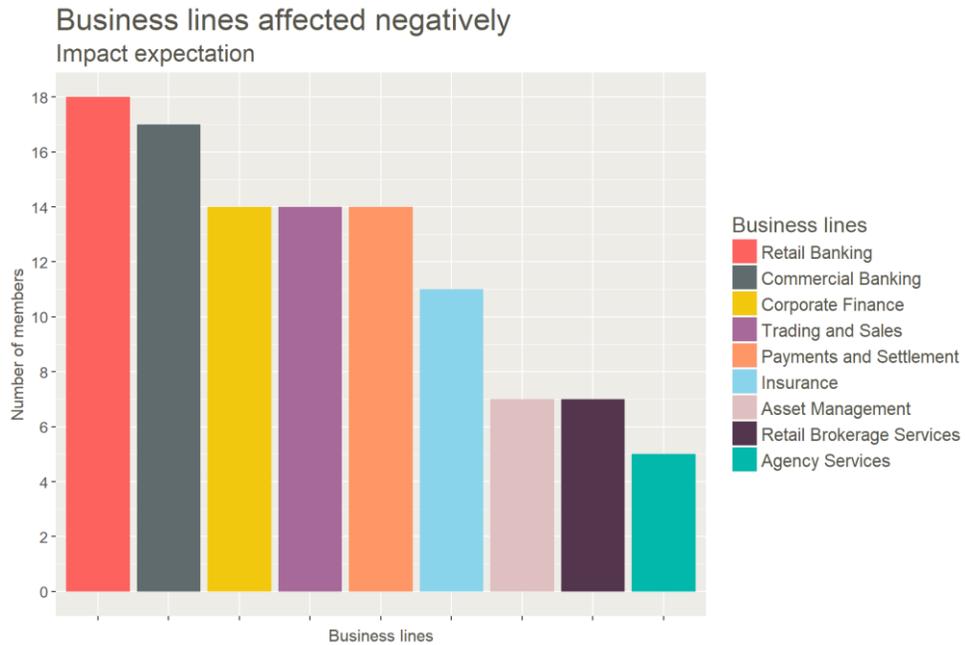


FIGURE 4. NEGATIVELY IMPACTED BUSINESS LINES

From results, the business lines that generate concern to the greatest number of Associate Members are retail banking and commercial banking. Corporate finance, trading and sales, and payments and settlements also worry more than half of the members that participated in this exercise. Insurance generates concern in eleven of the sixteen participants. On another area, assets management and retail brokerage services are in the focus of seven members. Finally, agency services are the concern of only five participants.

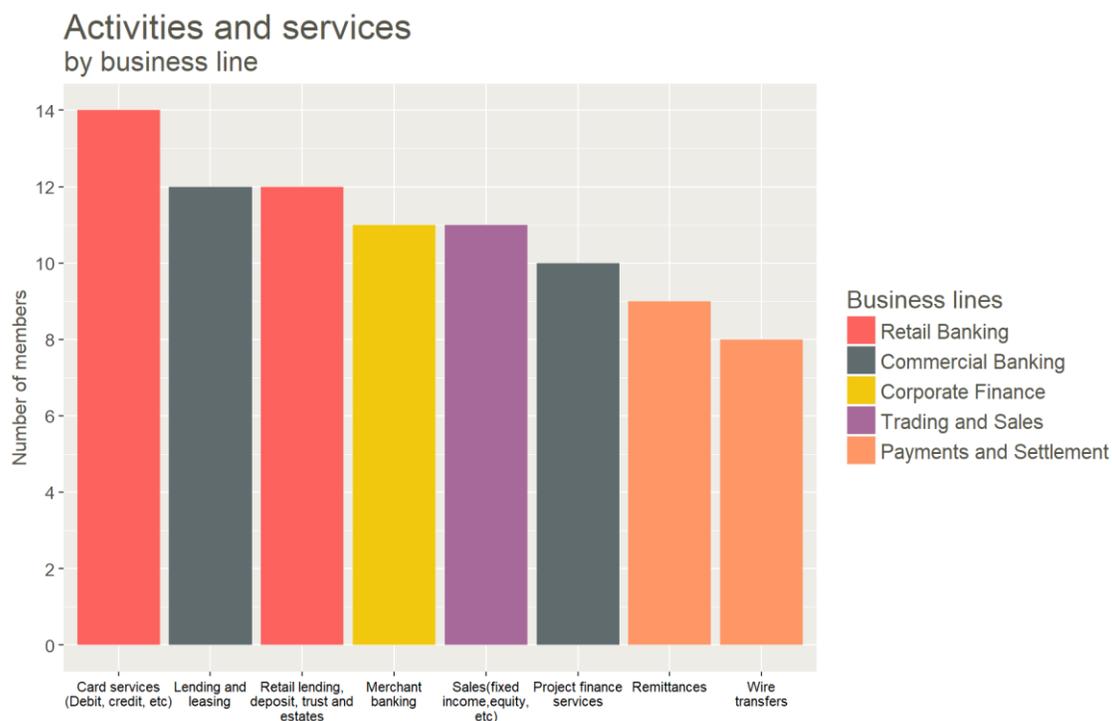


FIGURE 5 NEGATIVELY AFFECTED ACTIVITIES AND SERVICES

About the interests in specific activities, it can be noted that the three activities generating greater concern are: card services; lending and leasing for commercial banking; and retail lending, deposit, trust and estates. Following these we have merchant banking; securities sales; and project financing services. Most of the activities affected point to a possible deterioration of credit for households as well as for the corporate sector. The later, along with the expected increase in loans and credits in the financial system (Figure 3), reveals the importance of oversight credit risk management in the Americas.

In the other hand, remittances and wire transfers are business lines that worry some members, mainly from the Caribbean and Central America. This fact may reflect the impact of de-risking in these sub-regions of the continent. In this sense, changes in key actors' policies regarding cross-border payment and settlements may lead to concerns and regional tensions, contributing for a greater impairment on correspondent banking relationships.

Encompassing results in this section, the region must be aware of three fundamental issues: Evolution of retail portfolio, evolution of commercial portfolio and corporate finance both domestic and international, and finally, the payment and settlement systems, mainly cross-border, which in other words can be translated into the oversight of correspondent banking relationships development and restructuring.

5. TECHNOLOGICAL INNOVATION

It is undisputed that the financial services industry based on technology has rapidly developed during the last years. It is estimated that the fintech industry received a global investment of risk capital of approximately USD 13 billion during 2017.⁷ This survey considered twenty-two fintech products and services. To address the degree of actual incidence of different fintech products, services and support technology, two heatmaps were elaborated. Figure 6 shows the degree of incidence of products and services, while Figure 7 shows the degree of incidence of support technologies according to the members’ responses. In both maps, each box shows a combination of one product or service and one country. In each case, a darker color denotes a greater incidence degree perception. For example, the robo-advice is not present in Argentina (blank square), while mobile banking has a high incidence in this country (dark square).

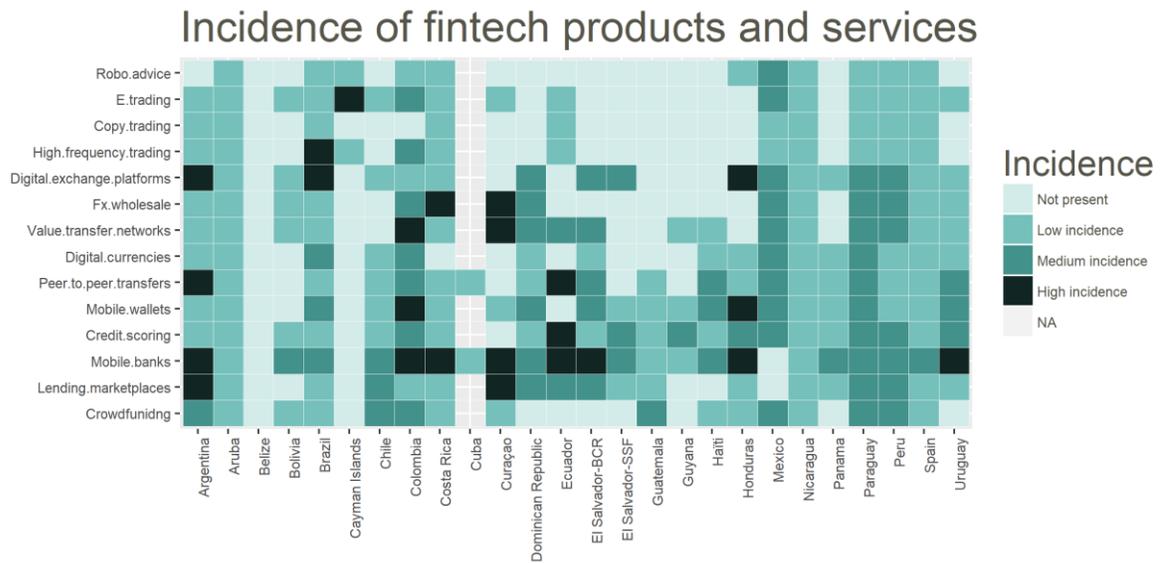


FIGURE 6. INCIDENCE OF PRODUCTS AND SERVICES

⁷ KPMG, “The pulse of Fintech Q4”, 2017, <https://home.kpmg.com/xx/en/home/insights/2018/02/pulse-of-fintech-q4-2017.html>

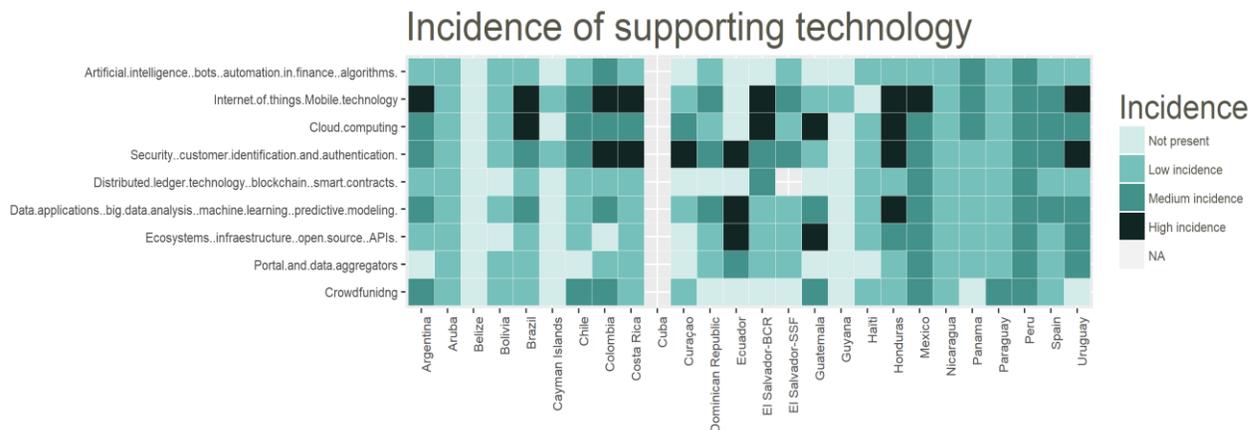


FIGURE 7. INCIDENCE OF SUPPORT TECHNOLOGY

Mobile banking is the service with the highest incidence in the greatest number of countries: Argentina, Colombia, Costa Rica, Curacao, Ecuador, El Salvador, Honduras, and Uruguay. Other products and services with high incidence in more than one country in the region are digital exchange platforms, foreign exchange wholesale market, value transfer networks, P2P transfers, mobile banks, and lending marketplaces.

A similar analysis on support technology shows that mobile technology, cloud computing, security technology, data applications and ecosystems have high incidence in at least two countries in the region.

A different reading enables us to note that countries like Argentina, Brazil, Colombia, Curacao, Ecuador, and Honduras have high incidence of two or more fintechs. On the other hand, there are countries such as Belize, Guyana and the Cayman Islands that report to have very few fintech products and services. Likewise, there are countries which have detected a vast variety of fintech, but with a moderate incidence, such as Paraguay, Peru and México. The above reflects the heterogeneity existing in the region.

About the expectations on support technology, again we can note a great heterogeneity. Some countries with a high incidence of support technologies are: Argentina, Brazil, Colombia, Costa Rica, Curacao, Ecuador, El Salvador, Guatemala, Honduras, México and Uruguay. On the other hand, countries like Belize, the Cayman Islands and Guyana have a low presence of support technologies.

The information submitted in the heatmaps may not be accurate, being of a subjective nature. For example, most of the associate members perceive mobile banking as the service with the greatest incidence in the markets of the region. By contrast, Mexican authorities think that mobile banking services are not present in their jurisdiction; nonetheless, most of the forty-nine institutions of multiple banking registered at the National Banking and Securities Commission offer a mobile application to their clients, and even one of these institutions offers its services exclusively through its digital and mobile platforms. In any case, the heatmaps can be understood as a general overview related to each country’s relative criteria.

To enquire over the changes that may exist during the current year, Figure 8 shows the first nine products and services ranked according to the number of participants that expect an incidence increase.

In the first place, most of the participants coincide in that mobile banking will increase its incidence in the market. Consistent with the above, the financial technology company Latinia conducted a study on mobile banking and social networks in 2017 in which it analyzed 100 of the 250 greater banks in Latin America, covering most of the subregions.⁸

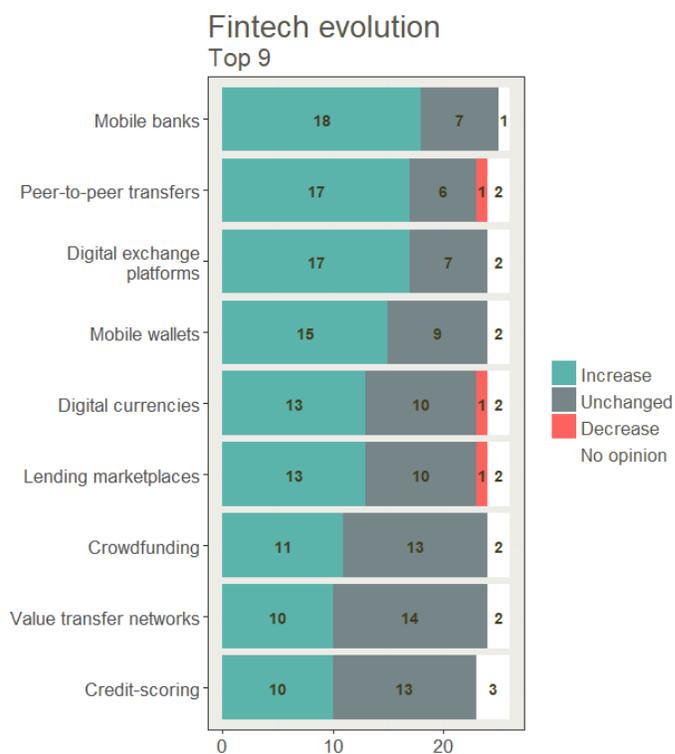


FIGURE 8. FINTECH EVOLUTION EXPECTATIONS

According to the study, the incidence of mobile services provided by the banks has grown annually during the last four years. The mobile services offered by the banks and that whose incidence has increased the most during the last years are apps for smartphones (55% vs 96% of the banks in 2013 and 2017, respectively) and banking SMS (56% vs 84% of the banks in 2013 and 2017, respectively). It is reasonable to suppose that, besides the greater banks, also the smaller banks will eventually increase the adoption of mobile technologies for service provision during the forthcoming years.

In the second place of incidence increase expectations, there are P2P transfer and digital platforms for commerce. It is estimated that around 75% of P2P transfers are sent to developing countries,⁹ so this technology is of particular relevance in remittances delivery towards the region, which has reached its maximum volume in 2017. An incidence increase in P2P transfer platforms could rise money laundering and

terrorism financing risks. Since these platforms are not regulated, they represent an attractive channel for criminal use.

Besides to the above services, on the one hand fifteen members coincide in that the mobile wallets will increase their incidence next year. On the other hand, half of those surveyed think that the incidence of digital currencies and lending marketplaces will also increase, while the other half thinks that it will not change or will decrease.

Finally, more than half of the members coincide in that the incidence of crowdfunding services, securities transfer and credit ranking will not change during next year; however, some regions concur in that there will be an increase in the presence and incidence of these services, particularly in the Andean Region and the Southern Cone.

⁸ "Latinia Intelligencia", 9a edition, Latinia, July 2017, http://www.latinia.com/static/Latinia_Intelligencia_2017.pdf

⁹ Business Wire, "Western Union digital services are already active in 40 countries", May 2017.

6. RISKS

The analysis of the Survey’s responses regarding twelve risks of the financial system is presented in this section. Figure 9 shows the perceived importance and probability of materialization of these risks. The horizontal axis shows the ranking of the probability of materialization of risks, where 1 represents the most probable risk. Analogously, the horizontal axis shows the risk importance ranking, being 1 the most important. Each dot in the chart belongs to a risk, indicating its order in importance and probability of materialization. For example, market risk occupies place six in materialization and importance. On the other hand, Figure 10 shows the change in the risks, as per its perceived materialization probability, from 2017 to 2018.

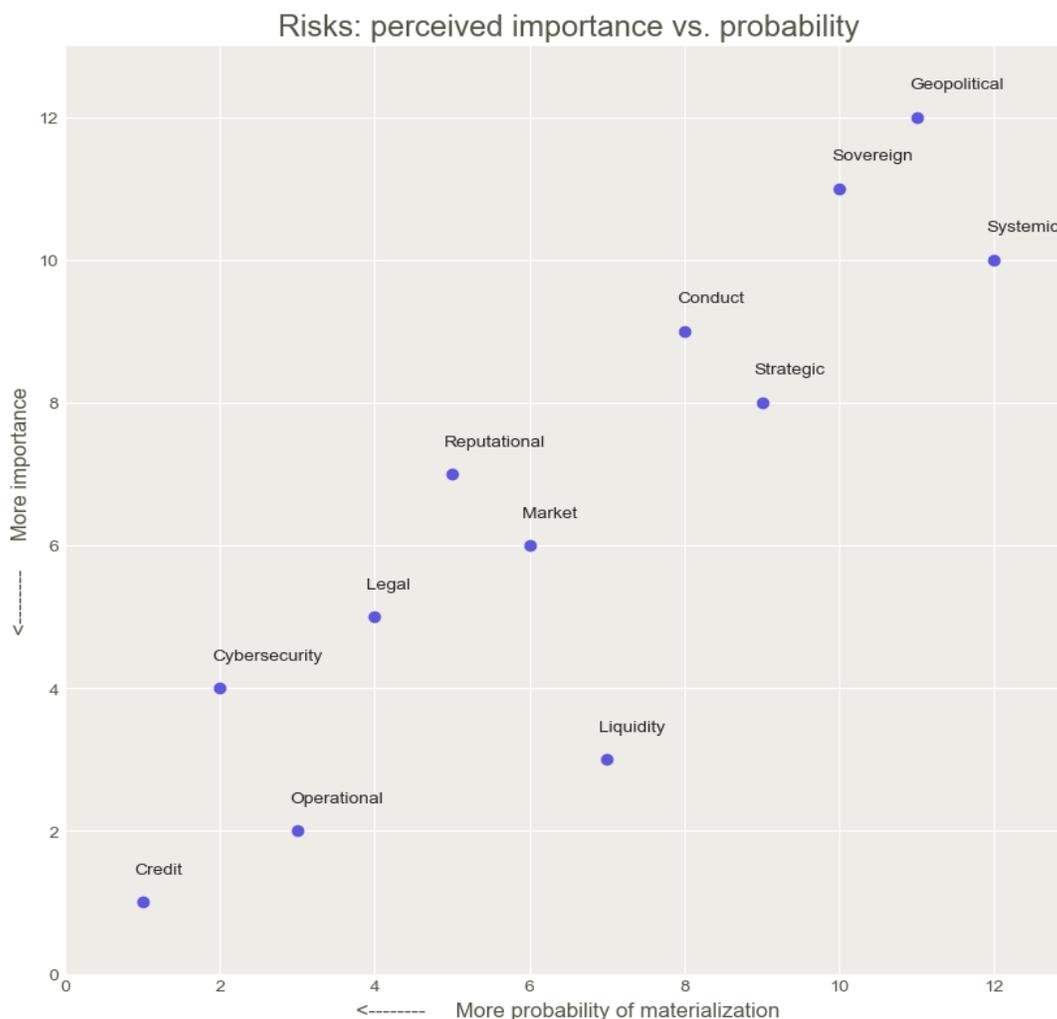


FIGURE 9. RISKS: IMPORTANCE VS. PROBABILITY

On the one hand, results indicate that the four risks with the greatest materialization probability are: credit risk, cyber-security risk, operational risk, legal risk and liquidity risk, in that order. Participants consider that the political, systemic, sovereign and strategic risks are the risks with less probability of materialization during the year.

On the other hand, the five first positions regarding their importance belong to the credit risk, operational risk, liquidity risk and cyber-security risk and legal risk. Combining both metrics, we can observe that the four risks with a greater perceived probability are within the five risks considered as the most important.

The concern for credit risk goes in line with the business lines and activities that the Members expect to be affected (Figure 4 and 5). Simultaneously, an increase in loans and in the past-due portfolio (Figure 2 and 3) is expected. According to FELABAN data, by June 2017, in general, the region experienced a year-to-year contraction in the loan portfolio, although the supply increased in some countries during that period. However, the aggregate figure of the past-due portfolio grew by 9% between March 2016 and the same month in 2017, though it had decreased by around 5% between 2015 and 2016.¹⁰

Operational risk is also in the focus of supervisors this year. The importance of this risk can be due to its relationship with cyber-security and legal risks. Operational risk is related with that of cyber-security since the Basel framework allows to include the cyber-security risk as part of operational risk.¹¹ In addition, operational mistakes can represent important costs for the banks and the system. For example, human mistakes or insufficient technical skills in the requirement compliance process AML/CFT can be one of the causes for de-risking.

Legal risk is the fourth in the probability of materialization ranking. This concern is accentuated particularly at the Central America and Caribbean regions, which have faced some problems to maintain and generate corresponding banking relationships during the last years. Thus, de-risking continues being an important problem for 2018.

With regard to risks considered as less important, in spite of the electoral processes that will take place in different countries in the region during the current and the next two years, members do not expect that the geopolitical risk will have a relevant role during 2018.

Finally, it is important to highlight that the only drastic change, on what concerns probability ranking, belongs to cyber-security risk, which occupied the eighth place in 2017 and moved to the second place in the current year (Figure 10) The remainder of risks moved three places at the most.

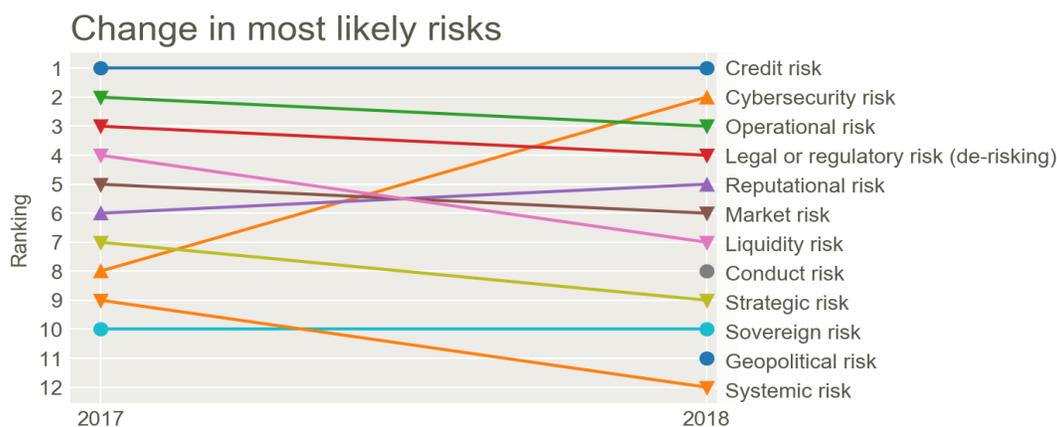


FIGURE 10. CHANGE IN MOST LIKELY RISKS

¹⁰ FELABAN., “Economic and banking quarterly report”, August 2017.

http://www.felaban.net/archivos_publicaciones/archivo20170907144603PM.pdf

¹¹ Definition of the Basel framework: “Loss Risk direct or indirect result of internal inadequate or failed processes, people and systems, or due to external events “.

7. TOPICS FOR REGIONAL DISCUSSION

The analysis of the Survey’s responses regarding nineteen topics of interest for regional discussion is presented in this section. Some of these topics were explored also in the 2017 edition. Likewise, there are two topics that were included in the 2017 edition but were not included this time: treatment of provisions and developments of markets and vulnerabilities. The reason is that priority was given to topics that appeared in different discussion fora during 2017. Figure 11 shows the topics ranked according to priority in 2017 as well as in 2018. Lines show the change from one year to the other. An element that appears in 2018 as a dot without a line indicates a new issue for the current edition.

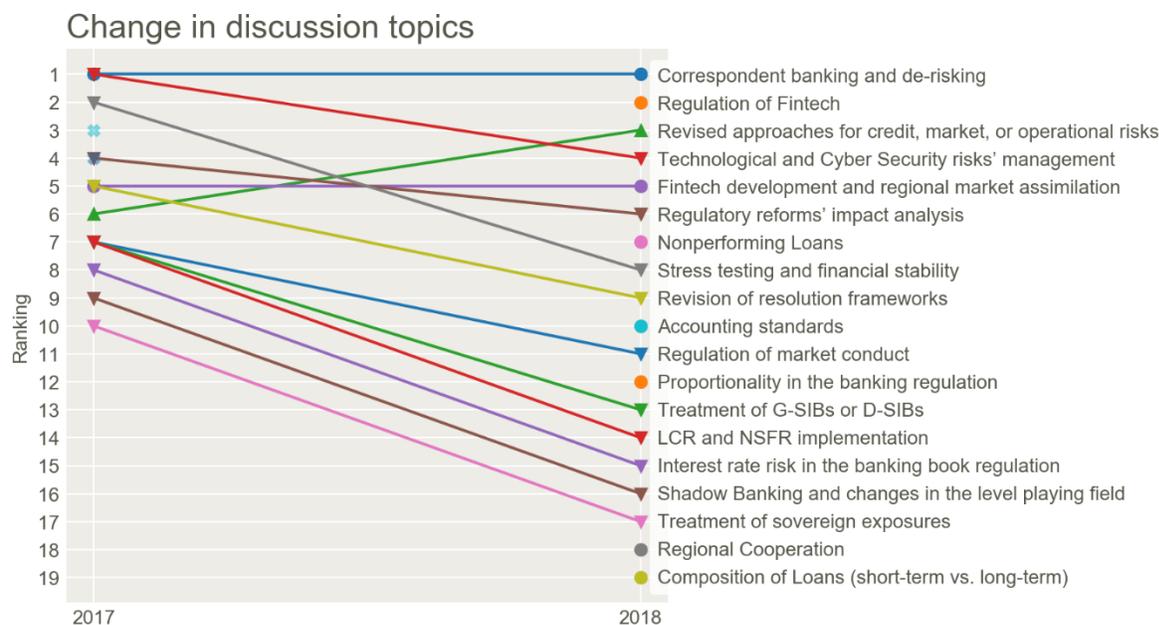


FIGURE 11. DISCUSSION TOPICS

Figure 11 allows making two types of analysis. First, it allows us to evaluate which are the important discussion topics for 2018. In the second place, it enables to detect changes in preferences and priorities of the Members, and identify topics that had not been detected previously that might represent an area of opportunity for the Association. Particularly, three of the first topics are related with the use of technology for the provision of financial products and services.

The most important topics for the current debate are correspondent banking and de-risking; the review of credit, market or operational risk management; technological and cyber security risks; and the fintech development, their regulation and assimilation. All the priority topics point in one direction: the financial ecosystem is changing and it is necessary to have risk management and security frameworks consistent with the financial system evolution.

From a time analysis, it can be noted that correspondent banking and de-risking hold the first place by order of priority. In spite this risk concerns mainly the Caribbean and Central America, the region coincides in that the problem persists and is necessary to find, propose and implement solutions.

Technology and cyber-security risks shared the first place together with correspondent banking and de-risking during 2017, but moved to the fourth place in 2018. However, this does not mean that the use of technology for the provision of financial services is leaving the priority list since the second place is occupied by regulation for the fintech.

In contrast, topics related with stress tests and their impact on financial stability occupied the second place during 2017, while during 2018 do not represent a topic of regional priority, according with the results and methodology used.

The increasing importance of credit, market and operational risks management matches with what was detected along the document. The expectations on financial indicators, business lines that could be affected, the risk materialization probability, and the risk impacts reflect the importance of taking the due precautions and to cooperate regionally to avoid the materialization and impact of credit risk, particularly.

Finally, regional cooperation appears in the second last place. Participants consider coordination among different jurisdictions less important than the remainder of topics; nonetheless, cooperation is fundamental in the task of harmonizing, as much as possible, the regional playing field in different topics, avoiding duplication of efforts and facilitating the flow of technical and operational knowledge.

III. CONCLUDING REMARKS

Different topics of interest and concern along the region were detected this year. Factors such as changes in the price of commodities and in the FED interest rate have moved from being the most concerning events for regulators and supervisors. In their place, de-risking, implementation of international standards, fiscal deficit in different countries across the region, and the boom and expansion of new technologies are the events with the greatest impact expected. While these topics reflect only the expectations, there are certain recurring topics along the responses that are worth mentioning.

De-risking, aside from occupying the second place in terms of relevant events, occupies the first place as a topic to be debated during 2018 in the region. De-risking has significantly affected correspondent banking and hence the global settlement system. De-risking consequences include socio-economic damage in affected countries, a reduction in commerce financing, lesser financial inclusion, and pressures for a greater use of non-regulated services.¹² In Figure 5 (activities that are expected to be affected) merchant banking, remittances and international transfers stand out. These three activities are part of the services provided by correspondent banking.

In the other hand, legal risk and reputational risk occupy the fourth and fifth place according its probability for materialization. It is worth noting that both risks are related to de-risking. In the first case, legal risk reflects the inability of banks to complain with some regulations, particularly regarding AML/CFT. In the second case, a great share of CBRs, particularly in the Caribbean and Central America, have been negatively affected by a reputational impairment caused mainly because the materialization of legal risk. In this sense, the ASBA is actively working , in a joint effort with the Inter-American Development Bank and the Caribbean Development Bank, is supporting the Caribbean region in seeking for practical solutions to the de-risking problem, through the conducting of in-depth risk assessments, facilitating training at the public and private levels, and supporting the region's activities to build trust to attract and retain banking relationships abroad.

Growth expectations in the access channels to the financial system and of the number of costumers is strongly influenced by fintech growth, and generates a concern among members. In fact, credit risk occupies the first place in importance, as well as in materialization probability. While the region has sufficient capital buffers to absorb expected losses,¹³ several factors suggest a possible deterioration of the credit portfolio, as is reflected in the expectation of increase in the past-due portfolio. It is also advisable to oversee the performance of the real estate sector during the year to detect risk factors. It is important to give it the proper follow up and to improve detection and risk management frameworks. Members are aware of this situation, since risk management occupies the third place in the discussion topics for 2018.

Fintech and cyber-security are also significant topics for supervisors. New technologies occupy the fourth place in the rank of relevant events. Besides, three of the five principal discussion topics are related to the new technologies: fintech regulation; technological and cyber security risks; and the fintech development and their assimilation in the markets. While the presence of these products and services is very heterogeneous in the region, members coincide in that it is an important topic. Some of the fintech products and services more prominent in the region are mobile banking, digital exchange platforms, foreign exchange wholesale, P2P transfers, and the lending marketplaces. Moreover, an increase in the provision of these services is expected during 2018, with exception of foreign exchange

¹² ASBA, "A General Overview of De-risking: Causes, effects and solutions", 2017.

¹³ ABSA, "Report: Financial Stability in the Americas", 2017.

markets. Concerns regarding new technologies are reflected in the cyber security risk. This risk occupies the second place on what concerns the materialization probability and the fourth according to importance.

The worries over cyber security risk could be the result of the proliferation of products and services supported by the new technologies along the Americas, and of a greater awareness of the risks that technological development brings. Besides, the use of the support tools and technologies has considerably increased. During 2017, both the private as well as the public sector have changed their agenda direction, pointing to cyber-security issues.¹⁴ During 2016, the consulting firm Accenture conducted a survey comprising 2000 enterprises of 12 industries including banking and the financial sector; the most interesting data reveals that, in spite that 78% of the executives surveyed trust their cyber security strategies, of all the cybernetic attacks received, 85% were considered serious transgressions and close to 36% of these transgressions were successful.¹⁵ Although it is a relatively new risk, it is imperative to develop frameworks for its management and mitigation.

In addition, responses to the survey suggest an optimistic position towards financial inclusion in the region; nonetheless, fintech development does not necessarily imply an improvement in inclusion, due to which it is necessary to separate these topics in the agenda and make them complementary. One of the initiatives existing in this line is the Initiative for Financial Inclusion in Latin America and the Caribbean (FILAC, for its English acronyms) from the Alliance for Financial Inclusion (AFI).¹⁶

Standards implementation appears as the most important event for 2018. The increase in the importance of this item could be due to the finalization on the Basel III reforms. This has allowed moving the global agenda to the discussion of additional topics. In the case of the region, this will enable regulators to think in the adoption and adaptation of a regulatory framework reflecting the needs of each market. Particularly, the discussion on standards implementation should be guided thinking on the markets' risks and profiles in order to guarantee a proportional adoption allowing a sound development.

Proportionality belongs to a set of topics that, from the responses, do not occupy the center of the attention but that, in the ASBA's opinion, should be discussed and attended during the current year. Other topics in this group are regulation of market behavior and regional cooperation.

On what concerns regional cooperation, it is necessary to deal with the topics of core interest due to its nature. Correspondent banking implies the interaction among multiple jurisdictions. In principle, fintech services can be provided regardless of geographic location of the parties involved. Furthermore, regulatory and behavior frameworks should be discussed along the region to ensure consistency and common principles.

2018 will be a year with new and past challenges. After the finalization of the Basel reforms, the region should seek their gradual and proportional implementation. The development of the regulatory framework should consider the new debate topics identified in this report aside from incorporating those that the Association considers as essential.

¹⁴ World Economic Forum "The Global Risks Report 2018" <https://www.weforum.org/reports/the-global-risks-report-2018>

¹⁵ Accenture. "Building Confidence", 2017. https://www.accenture.com/t20170419T051104Z_w_us-en/acnmedia/PDF-49/Accenture-Building-Confidence-Solving-Bankings-Cybersecurity-Conundrum-Info.pdf#zoom=50

¹⁶ AFI, "Financial Inclusion Initiative for Latin America and the Caribbean", https://www.afi-global.org/sites/default/files/publications/2017-08/AFI_fact%20sheet_17_FILAC_AW_digital.pdf

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V. METHODOLOGICAL ANNEX

1. THE SURVEY

In October 2017, the Association of Banking Supervisors in the Americas distributed among its Associate Members the Survey on Banking Regulation and Supervision Expectations for 2018 (Survey). The survey's objective is to know the banking supervisors' perception on the impact of topics of global and regional conjuncture over the financial systems in the region for 2018.

The two first editions of the survey covered topics on the supervisors' expectations with regard to different topics of the financial system, as well as topics on the standards implementation. In this third edition, these topics were separated in two surveys: the Survey on Banking Regulation and Supervision in the Americas, and the Survey on Implementation of Regulatory and Supervision Standards. The separation's goal is to identify in a more granular way the topics relevant to the Association's members. This edition comprises seven topics: important events, financial sector features, financial indicators, business lines and activities, technological innovation and topics for regional discussion.

In "important events", with the aim of identifying the events that may have greater repercussion during 2018, a list of sixteen topics in macroeconomic, geopolitical and regulatory topics was submitted to the participants. The request was that the participants rank the events submitted according to its relevance starting from 1 (not important) to 5 (most important). The participants were also requested to add other events they consider relevant for the region.

The section "features of the financial sector" presents fifteen variables describing general aspects of the financial system. For each of the indicators, the participants were requested to select if they expect such indicator to decrease, stay equal, or increase during 2018. Participants could as well indicate additional variables they considered relevant.

Just like in the previous section, in "financial indicators" participants were asked to share their change expectations about a series of variables. This section included variables related to capital sufficiency, assets quality, income and profitability, liquidity, households, and real estate markets. As in the previous cases, it was possible to include additional indicators that participants considered relevant. In total, nineteen indicators were included in this section.

In the "risks" section, participants were consulted on their opinion regarding twelve risks for the financial system. Specifically, participants indicated the probability of materialization of each risk for 2018 according to four possible categories: null, low, medium and high. Additionally, participants were requested to rank the risks submitted from 1 (most important) to 12 (less important). Finally, participants were requested to include any relevant additional risk.

In "business lines and activities" a list of thirty-three activities grouped in nine business lines was submitted to the participants. The participants indicated the activities they consider will be negatively affected during 2018 and that will require special attention. Additionally, participants were requested to add some activity or business line that might require special attention.

In "technological innovation", participants ranked the presence of twenty-two products and services related to technological innovation in: not present, low incidence, moderate incidence, and high incidence. Participants were also allowed to include some product or service existing in their country. Likewise, they were requested to indicate if there is any product or service, not currently offered, that is expected to start operating during 2018. Subsequently, for each one of the twenty-two products and services participants indicated if they expected that the incidence degree of the service to increase, decrease or stay equal during 2018.

Finally, in “regional topics”, a list of nineteen topics was submitted to the participants. Participants selected eight topics and ranked them according to their relevance level for regional discussion during 2018. Participants had the possibility of adding other topics they considered relevant for discussion in the regional agenda.

The Survey was distributed among the 41 Associate Members (MAS) of the ASBA.¹⁷ At the termination of the survey completion period, responses from 26 members were received,¹⁸ corresponding to 63% of participation. The ASBA is divided in 6 regions, due to which at the time of aggregating the results there could be some biases towards the regions with the greater number of responses.¹⁹

2. RELEVANT EVENTS

Sixteen events were submitted in the survey:

- I. Implementation of international standards for financial regulation
- II. Slowdown in China’s economic activity
- III. Fiscal deficit in your country
- IV. Private sector overindebtedness in your country
- V. Intra regional changes in economic and financial policies in relevant economies
- VI. Extra regional changes in economic and financial policies in relevant economies
- VII. Increase in the interest rate by the U.S. Federal Reserve
- VIII. Capital outflows from emerging markets
- IX. Political transitions
- X. Irruption of new technologies
- XI. Development of the shadow financial market
- XII. Volatility in the price of commodities
- XIII. Volatility in local exchange rates versus the US Dollar
- XIV. De-risking
- XV. Protectionist policies around the world
- XVI. Migration and remittances policy changes in the US

Each participant ranked each event according to its importance order from 1 (not important) to 5 (most important). Later, for each event we obtained a simple average to identify the average level of importance of each topic. Finally, we ranked the topics according to their average importance from the most to the least important.

3. FINANCIAL SECTOR FEATURES

Fifteen features of the financial system were submitted in the survey:

- I. Number of financial entities
- II. Number of supervised financial entities
- III. Users in the financial system
- IV. Access Channels to financial systems

¹⁷ At the time of survey distribution, ASBA had 41 Associate Members and Collaborators distributed in 36 countries. At the time of publication of the report, the Association has 42 Associate Members and Collaborators distributed in 37 countries.

¹⁸ Members that replied are: Argentina, Aruba, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Curacao, Ecuador, El Salvador (BCR), El Salvador (SSF), Spain, Guatemala, Guyana, Haití, Honduras, Cayman Islands, México (CNBV), Nicaragua (CONAMI), Panamá, Paraguay, Peru, Dominican Republic, and Uruguay.

¹⁹ The regions in which ASBA is divided with their corresponding responses received are North America: 1, Central: 8, Caribbean, 7, Andean Region: 4, Southern Cone: 5, and Non-Regional: 1.

- V. Total equity in the banking system
- VI. Total deposits in the banking system
- VII. Total loans in the banking system
- VIII. Assets controlled by the government \ Total assets
- IX. Assets controlled by foreign entities \ Total assets
- X. Assets controlled by local entities \ Total assets
- XI. Assets denominated in foreign currencies \ Total assets
- XII. Entry costs for banks
- XIII. General operating costs
- XIV. Mortgage portfolio
- XV. Commercial portfolio

For each feature, participants indicated if they expected an increase, a decrease or no change in the level of the feature. For each feature, we considered the frequency of each one of the changes.

4. FINANCIAL INDICATORS

Nineteen indicators of the financial system grouped in six categories were submitted in the survey, according to the ranking focus of the International Monetary Fund (IMF): capital sufficiency, assets quality, income and profitability, liquidity, households, and real estate market.²⁰

Capital Sufficiency

- I. Total assets
- II. Capital to risk-weighted assets
- III. Tier 1 to risk-weighted assets
- IV. Nonperforming loans net of provisions
- V. Capital to assets
- VI. Customer deposits to total loans

Assets quality

- VII. Nonperforming loans to total gross loans
- VIII. Past due loans

Income and profitability

- IX. Return on Assets (ROA)
- X. Return on Equity (ROE)
- XI. Interest margin to gross income

Liquidity

- XII. Liquid assets to total assets
- XIII. Liquid assets to short-term liabilities
- XIV. Short-term liabilities

Households

- XV. Household debt to GDP

²⁰ IMF. "Financial Soundness Indicators: Compilation Guide" <http://www.imf.org/external/pubs/ft/fsi/guide/2006/pdf/fsiFT.pdf>

XVI. Household debt service and principal payments to income

Real Estate Market

- XVII. Real estate prices
- XVIII. Residential real estate loans
- XIX. Commercial real estate loans

For each indicator, participants selected if they expect an increase, a decrease or no change during 2018. For each indicator, the frequency for each change category was considered.

5. BUSINESS LINES AND ACTIVITIES

The survey submitted a list of thirty-three activities and services of the financial system grouped, according with the guidelines of the Basel Banking Supervision Committee (BCBS),²¹ in nine business lines:

Corporate finance

- I. Corporate Finance (Mergers and Acquisitions, Underwriting, Privatizations, Securitization, debt)
- II. Government Finance
- III. Advisory services
- IV. Merchant Banking (International large corporations' loans, trade, underwriting)

Trading and sales

- V. Sales (Fixed Income, equity, foreign exchanges, commodities, credit, funding)
- VI. Market Making Services*
- VII. Proprietary trading services
- VIII. Trade Finance Services (stock, derivatives, etc.)

Retail banking

- IX. Retail lending, deposit, trust and estates
- X. Private lending, deposits, trust and estates, investment advice
- XI. Card services (Debit, credit, etc.)

Commercial banking

- XII. Project Finance Services
- XIII. Export Services
- XIV. Trade Finance Services (international commerce; e.g., letters of credit)
- XV. Factoring
- XVI. Lending and leasing

Payments and settlements

- XVII. Payment Services
- XVIII. Collection Services
- XIX. Domestic Fund Transfers
- XX. Wire Transfers

²¹ BCBS, "Consultative Document: Operational Risk" <https://www.bis.org/publ/bcbcsca07.pdf>

- XXI. Clearing and Settlements
- XXII. Remittances

Agency Services

- XXIII. Custody services (escrows, depository receipts, securities)
- XXIV. Corporate agency services (check clearing, payment of interest and dividends and stock purchase and redemption)
- XXV. Corporate trust services

Asset management

- XXVI. Discretionary fund management (Pooled, segregated, retail, institutional, closed, open, private equity)
- XXVII. Non-Discretionary (Pooled, segregated, retail, institutional, closed, open)

Retail brokerage services

- XXVIII. Retail brokerage Services

Insurance

- XXIX. Life insurance
- XXX. Health Insurance
- XXXI. Reinsurance
- XXXII. Property and Casualty
- XXXIII. Advisory Services

Participants indicated which activities they consider will be negatively affected during 2018. For each participant we considered a business line that will be negatively affected if it is expected that at least one of its activities will be.

6. TECHNOLOGICAL INNOVATION

In the survey a list of twenty-two fintech products or services grouped according with the BCBS²² ranking in five categories, was submitted:

Credit, deposit, and capital-raising services

- I. Crowdfundng
- II. Lending marketplaces
- III. Mobile banks
- IV. Credit-scoring

Payments, compensations and settlements - Retail

- V. Mobile wallets
- VI. Peer-to-peer transfers
- VII. Digital currencies

²² BCBS, “Consultative Document: Sound Practices: Implications of fintech developments for banks and bank supervisors”, <https://www.bis.org/bcbs/publ/d415.pdf>

Payments, compensations and settlements - Wholesale

- VIII. Value transfer networks
- IX. Fx wholesale
- X. Digital exchange platforms

Investment management services

- XI. High-frequency trading
- XII. Copy-trading
- XIII. E-trading
- XIV. Robo-advice

Market support services

- XV. Portal and data aggregators
- XVI. Ecosystems (infrastructure, open source, APIs)
- XVII. Data applications (big data analysis, machine learning, predictive modeling)
- XVIII. Distributed ledger technology (blockchain, smart contracts)
- XIX. Security (customer identification and authentication)
- XX. Cloud-computing
- XXI. Internet of things/Mobile technology
- XXII. Artificial intelligence (bots, automation in finance, algorithms)

For each product or service, participants responded two consultations. First, participants ranked the incidence level of the service or product in “not present,” “low incidence,” “moderate incidence,” or “high incidence.” Secondly, participants indicated if the change expectation for each product corresponds to a “decrease,” “no change,” or “increase”.

7. RISKS

In the survey a list of twelve risks was submitted to the participants:

- I. Credit risk
- II. Liquidity risk
- III. Market risk
- IV. Operational risk
- V. Systemic risk
- VI. Reputational risk
- VII. Legal/regulatory risk
- VIII. Cyber-security risk
- IX. Sovereign risk
- X. Strategic Risk
- XI. Conduct Risk
- XII. Geopolitical Risk

In the first place, participants ranked each risk based on its materialization probability in “null probability,” “low probability,” “medium probability,” and “high probability.” From these responses, a score of 0 to 3 was given to each probability (null = 0, high = 3). Later the score of each response was added. Finally, based on the aggregated score, risks were ranked from 1 (most probable) to 12 (less probable).

In the second place, we requested participants to rank risks according to its importance from 1 (most important) to 12 (less important). Thus, we averaged the initial ranking of each risk. Later, with the averages obtained, we rearranged risks. Finally, the risk with the least value was assigned the final ranking 1 (most important), while the risk with a greater value was assigned ranking 12 (less important).

8. TOPICS FOR REGIONAL DISCUSSION

19 potential topics for regional discussion were presented in the survey:

- I. Revised approaches for credit, market, or operational risks
- II. Interest rate risk in the banking book regulation
- III. Treatment of sovereign exposures
- IV. Accounting standards
- V. Nonperforming Loans
- VI. Regulatory reforms' impact analysis and their alignment with international standards
- VII. Treatment of domestic or globally systemically important financial institutions
- VIII. Liquidity Coverage and Net Stable Funding Ratios' implementation
- IX. Stress testing and financial stability
- X. Revision of resolution frameworks
- XI. Correspondent banking and de-risking
- XII. Shadow Banking and changes in the level playing field
- XIII. Regulation of market conduct
- XIV. Proportionality in the banking regulation
- XV. Regional Cooperation
- XVI. Composition of Loans (short-term vs. long-term)
- XVII. Fintech development and regional market assimilation
- XVIII. Technological and Cyber Security risks' management
- XIX. Regulation of Fintech

Each participant selected eight of the nineteen topics and ranked them from 1 (most important) to 8 (less important). From the ranking assigned, we established a score dividing the unit between the assigned rankings; that is, an issue put in the fourth place the score assigned $\frac{1}{4}$. Thus, the topics not mentioned obtained a 0 score. Later, for each topic all scores were added. Finally, the topics were ranked in such a way that the topic with the highest score was assigned the greatest regional discussion priority (1) y and the topic with the least total score was assigned the lowest priority (19).