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World Bank Group Global Market Survey: Digital Technology and the Future of Finance

Fintech and the Future of Finance Flagship Technical Note

WORLD BANK GROUP

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This note is part of a series of technical notes developed for the "Fintech and the Future of Finance" report, a joint effort by the World Bank and the International Financial Corporation.

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Acronyms

AML/CFT	Anti-money laundering/Combating the financing of terrorism
API	Application programming interface
ATM	Automated teller machine
B2B	Business to business
B2B2C	Business to business to customer
B2C	Business to customer
BFA	Bali Fintech Agenda
CDD	Customer due diligence
EAP	East Asia and the Pacific
ECA	Europe and Central Asia
eKYC	Electronic KYC
EMDEs	Emerging market and developing economies
EU	European Union
FATF	Financial Actions Task Force
FIG	Financial Institutions Group of IFC
FSP	Financial services provider
GFS 2019	2019 IMF-World Bank global fintech survey
IFC	International Finance Corporation
IMF	International Monetary Fund
IT	Information technology
KYC	Know your Customer
LAC	Latin America and the Caribbean
MENA	Middle East and North Africa
MSME	Micro, Small, and Medium-sized enterprises
NBFI	Non-bank financial institution
OECD	Organization for Economic Cooperation and Development
PSD2	Payments Systems Directive 2 of the European Union
SAR	South Asia Region
SSA	Sub-Saharan Africa
SME	Small and medium-sized enterprises
WB	World Bank
WBG	World Bank Group

Executive Summary

Digital technologies have made an indelible impact on the provision of financial services by new entrants and incumbents alike. The World Bank Group conducted a global survey on fintech and digital transformation of a range of financial market participants. The survey sought to capture market perceptions of the impact of fintech and digital technology on:

- Market developments, including the impact, risks, and benefits of fintech and digital transformation.
- Evolution of consumer behavior, including consumer relationships with traditional and new financial service providers, and use of physical locations.
- Competition and market structure, including the perceived risk of losing customers, risks to profitability, potential to reduce costs, market concentration, competition, and outsourcing.
- Corporate strategy, including priorities at the board level, strategic fintech activities being undertaken, challenges to digital transformation, and impact of COVID-19 on strategic priorities.
- Regulatory environment, including enabling environment for innovation for incumbents and new entrants, and whether regulatory framework and guidance are fit for purpose in key product areas.

During the period of May 2020 to February 2021, 330 market participants from 109 countries responded. These included traditional banks, payments/remittance service providers, fintech firms, insurance companies,[1] non-banking companies, tech companies, telecom companies, industry associations, and other financial market players from countries in all six World Bank Group regions. The survey was updated to include questions on the impacts of the COVID-19 pandemic.

Consistent with other surveys conducted by the World Bank Group, IMF, and the Cambridge Center for Alternative Finance (CCAF), fintech and digital transformation, was expected to increase in importance, accelerated by the pandemic. This trend was largely welcomed by respondents[2] and seen as positive for financial services businesses. Key strategic priorities for firms included digitization of customer acquisition and account opening, creating new digital products, and transforming internal processes. More than 80 percent of respondents felt that the COVID-19 pandemic increased the need for fintech and digital transformation and made digitization in customer channels, product adaptation, and internal processes a strategic priority. There were differing expectations, often by type of respondent, on channels and customer preferences. Reduced entry barriers were expected to increase competition, yet except for NBFIs, most respondents expected markets to become more concentrated. Respondents were concerned about operational and cyber risks increasing as a result of fintech and digital transformation. The regulatory framework and guidance for fintech and digital transformation innovation could be improved, particularly with respect to remote onboarding and account opening, use of agents or third-party channels, and automation of new products.

This paper is organized as follows: Section 1 provides background on the survey's objective. Section 2 summarizes the demographics of survey respondents. Section 3 presents survey findings, organized according to the key topics covered by the questionnaire, from digitization trends to evolving customer needs to provider views on risk and regulation.

1. This has been used as a generic term for insurers of all types
2. Unless specified otherwise, the term 'respondent' refers to the institutions that chose to respond to the specific question or questions being discussed.

Section 4 synthesizes this analysis and highlights six key themes that emerge:

1. **Digital transformation of financial services was pervasive, strategically imperative, and was accelerated by the COVID-19 pandemic.** 82 percent of all respondents across all types of institutions expected an increase in the digital proportion of key activities. Fintech and digital transformation were a strategic priority at the board level for 82 percent of respondents. More than 70 percent of respondents indicated that the pandemic increased the need for digital transformation across customer channels, internal processes, and product adaption. Respondents expected digitization to deliver significant benefits to customers and the firms themselves.
2. **The future combines physical and digital aspects—"phygital."** Digitization does not spell the end of physical infrastructure for financial services. Half of banks and remittance operators, and 60 percent of MFIs and NBFIs, as well as payments operators, expected business to be conducted largely through physical locations in the next five years. Banks expected to continue serving customers through branches and proprietary digital channels, while other providers looked to more diverse channels and partners.
3. **Customer relationships are changing, and incumbents and new entrants perceived customer relationship preferences very differently.** Who will "own" the consumer relationship is in flux, as is how the customer will be served. There were strong expectations that new types of providers—neo-banks, fintech firms, big tech firms, platforms, and aggregators—will dominate customer relationships. Even as banks continued to expect customers to have a single core relationship for their financial services, only 34 percent expected that to be with traditional banks.
4. **Banks and fintech firms did not see each other as competitors.** Respondents tended to see the greatest competitive threat coming from institutions that are similar to them. Banks mostly saw other banks and neo-banks as a bigger competitive threat than other fintech players. Fintech firms expected to compete with other new types of players such as big tech firms, platforms, or aggregators. While there may be distinct customer segments, given the broader ambitions of neo-banks, fintech firms, and incumbents, they cannot all be correct about what the majority of customers prefer.
5. **Most financial services will be more competitive, but also more concentrated.** 48 percent of respondents believed that competition will increase and barriers to entry will lower to a great degree while another 40 percent believed that this will happen to a moderate degree. Except for NBFIs, most respondents expected markets to also become more concentrated. This is consistent with a bifurcated market in which lower barriers to entry increases competition for smaller players or in specific segments such as those where NBFIs mainly operate, while economies of scale and network effects drive consolidation among large multi-product institutions such as big banks, larger fintech firms, and big tech firms.
6. **Regulatory and supervisory barriers to innovation need attention.** While the regulatory stance with respect to enabling innovation was seen as "about right" by a majority of respondents, in 9 out of 12 specific areas the regulatory framework and guidance was seen as lacking (that is, less than 60 percent of respondents agreed that it is fit for purpose).

1. Background and Objectives of the Survey

This report documents the main findings of the Word Bank Group Survey on Digital Transformation and the Future of Finance. The survey was conducted between May 2020 and January 2021 and focused on the digital transformation of financial services and its impact on financial markets and regulatory environments across the world. The survey covered a wide range of market participants, with a focus on those from Emerging Market and Developing Economies (EMDEs).

This survey of market participants complemented earlier surveys of the official sector by the World Bank Group, IMF, and Cambridge Center for Alternative Finance. As a follow-up to the IMF-WBG Bali Fintech Agenda,[3] the IMF and the WBG undertook a global fintech survey (GFS 2019) of central banks, finance ministries, and regulatory agencies, which underpinned the stock-taking paper "Fintech: The Experience So Far" published by the IMF and the World Bank in 2019. GFS 2019 collected insights from 96 official-sector respondents worldwide related to fintech developments in their respective jurisdictions. It found that the official sector broadly expected fintech to increase competition, particularly in payments, and to further financial inclusion for both households and MSMEs. The results suggested the need to modify regulatory approaches and legal frameworks. The WBG-CCAF survey of regulators from 111 jurisdictions on alternative finance (WBG-CCAF 2019) corroborated regulators' support for technology-driven finance and their plans to further develop regulatory frameworks covering P2P, equity crowdfunding, and initial coin offerings. Purpose-built regulations for these new sectors often impose more obligations than existing regulations. The CCAF-WB 2020 Global COVID-19 FinTech Regulatory Rapid Assessment Study reported regulators' observations that due to accelerated adoption of fintech products and services during the pandemic, particularly in emerging markets, fintech regulation was a priority, along with concerns about rising cybersecurity, operational, and consumer protection risks. This survey largely confirmed the observations of regulators and market participants from previous surveys, reinforcing the competition and inclusion aspects of fintech and the need to continue to address emerging risks, adapt regulatory frameworks, and reduce barriers to innovation.

This survey covered five clusters of issues:

- **Market developments.** How have fintech and digital transformation in financial and non-financial businesses affected respondents' businesses? What were the potential benefits and risks?
- **Corporate strategies.**[4] How important was the need for digital transformation of institutions, and how had Covid-19 affected these priorities? What were the major challenges to digital transformation? What strategic fintech activities were respondents engaged in?
- **Consumer behavior.** How will consumer needs and behaviors evolve in the medium term?
- **Competition and market structure.** What was the impact of digital transformation on product markets in the financial sector? Who did respondents view as major competitors?
- **Regulatory environment.** How conducive was the domestic regulatory landscape for innovation by incumbents and new entrants? What were the main improvements and constraints to fintech innovation? Was regulatory guidance by regulators fit for purpose?

3. The Bali Fintech Agenda laid out a conceptual framework of high-level issues for consideration by national authorities and the international community with respect to fintech and its impact on financial systems.
4. Fintech firms and tech companies were not asked these set of questions, given the digitally transformed nature of their businesses.

Questions solicited the views of respondents on the conditions prevailing at the time of the survey, and on how they believed markets and institutions will evolve in the medium term (over the next five years). Additionally, as a part of the demographic question section, the survey asked respondents to comment on the level of digitization in customer origination and customer activities at present, and the expected level of digitization in the next five years.

The survey was sent to a cohort of market participants composed of:

- Institutions referred by national financial sector regulators
- Clients of the International Finance Corporation's (IFC) Financial Institutions Group (FIG)
- Members of the SME Finance Forum, an independent global membership organization housed at IFC.

Responses were received from 330 institutions, representing an overall response rate of 27.5 percent across 109 countries. Individual responses were anonymized.

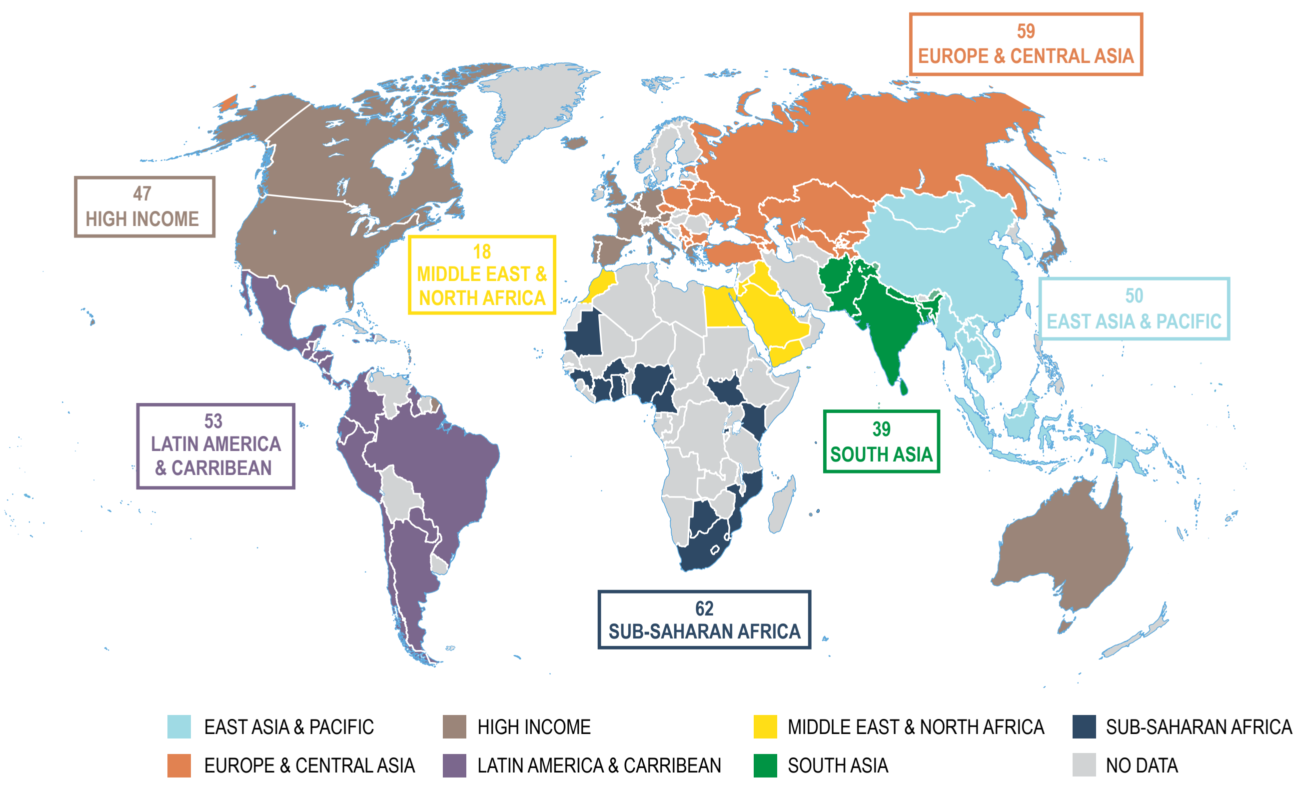
2. Demography of Survey Participants

The survey participants were headquartered in 109 countries across all six WBG regions: East Asia and the Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), Middle East and North Africa (MENA), South Asia Region (SAR), and Sub Saharan Africa (SSA),[5] as shown in figure 1 below.

Responding institutions included traditional banks,[6] payments/remittance service providers, fintech firms, insurance companies, non-banking companies, tech companies, telecom companies, industry associations, and other financial market players. In the analysis, institutions were divided into the following categories:

- Large traditional banks (more than one million customers)
- Small and medium traditional banks (less than one million customers)
- Microfinance institutions (MFIs) (includes entities that operate primarily in the microfinance sector, including those that are regulated as banks or NBFIs)

Figure 1. Survey participants by region



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

5. Countries that are in the high-income category are classified separately in this regional classification.
6. Unless expressly specified otherwise, references to “banks” do not include neo, challenger, or digital banks.

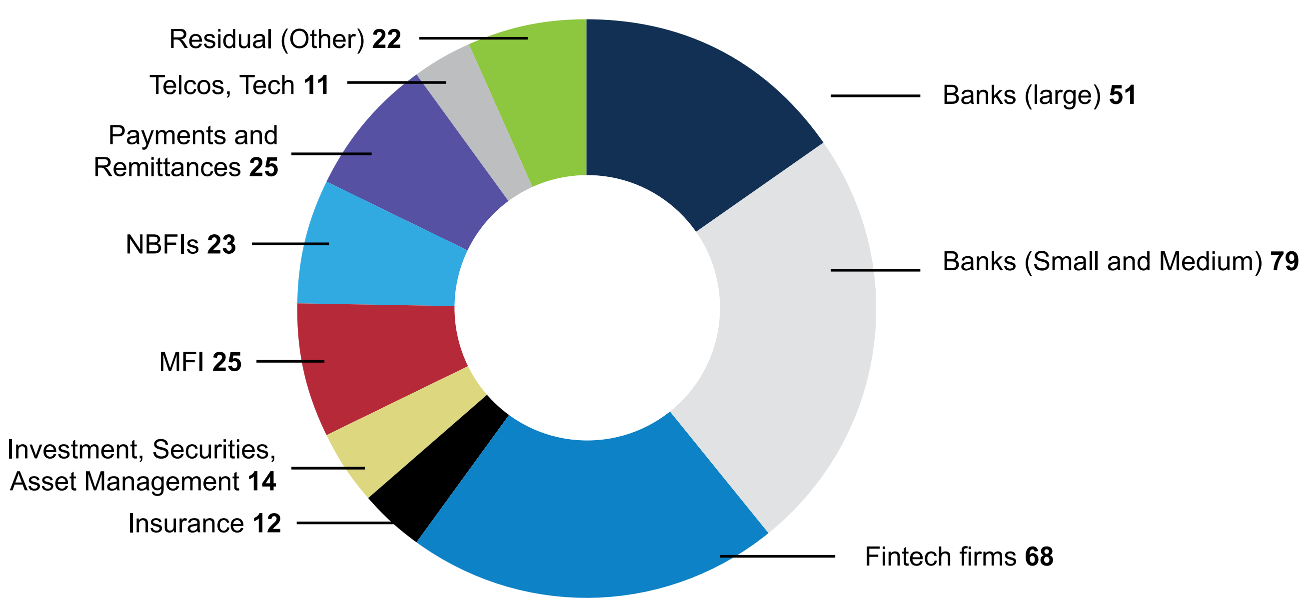
- Insurance companies
- Fintech firms
- Payments/remittance service providers
- Investment/security/asset-management companies
- Other NBFIs and specialized mono-liners
- Telecom and tech companies (including big tech firms)
- Other financial sector players (including industry associations).

Survey participants that identified as 'fintech firms' focused on a range of areas, but the predominant areas were domestic payments, alternative finance/marketplace finance, and bank-like services (neo-banks). While survey participants self-identified their responding institution types, each response was individually reviewed, and some survey participants were re-categorized as appropriate. In cases where a single participant could fall under more than one category,[7] they were assigned to the category that described their business the best. As a result, each survey participant was classified under only one category or responding institution type. Some survey questions looked more granularly at the market, distinguishing, for example, big tech firms, neo-banks, and foreign fintech firms. For some analyses, segments were aggregated to provide, for example, a result across the entire sample, or across groupings of traditional and non-traditional providers. It should also be noted that not all respondents answered every question, so the numbers of responses by type of respondent will not match across every survey element. 'Respondents' in each case refers to survey participants that responded to the question being discussed.

For purposes of this analysis, respondents reporting above 50 percent of revenue from emerging markets (234 respondents) were classified as being located in an EMDE. Most of these (226) derived over 75 percent of their revenue from EMDEs (figure 2) (question 10). In terms of ownership, most respondents were majority owned by domestic investors. Respondents that were majority owned by foreign investors constituted the second highest number by ownership. A minority of respondents were state-owned (figure 2).

Figure 2. Profiles of respondents

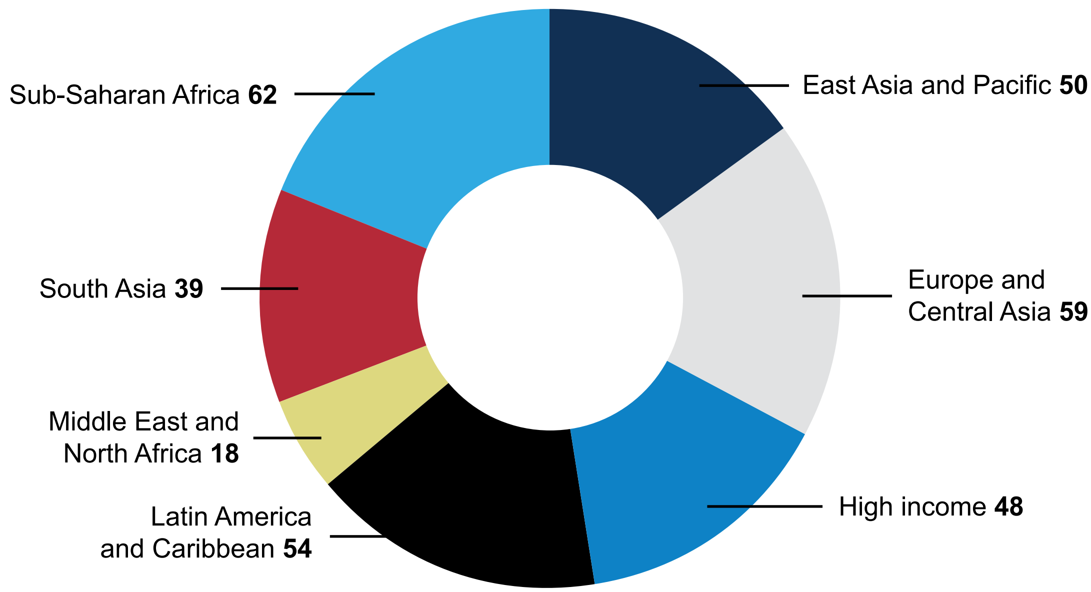
Sectoral composition



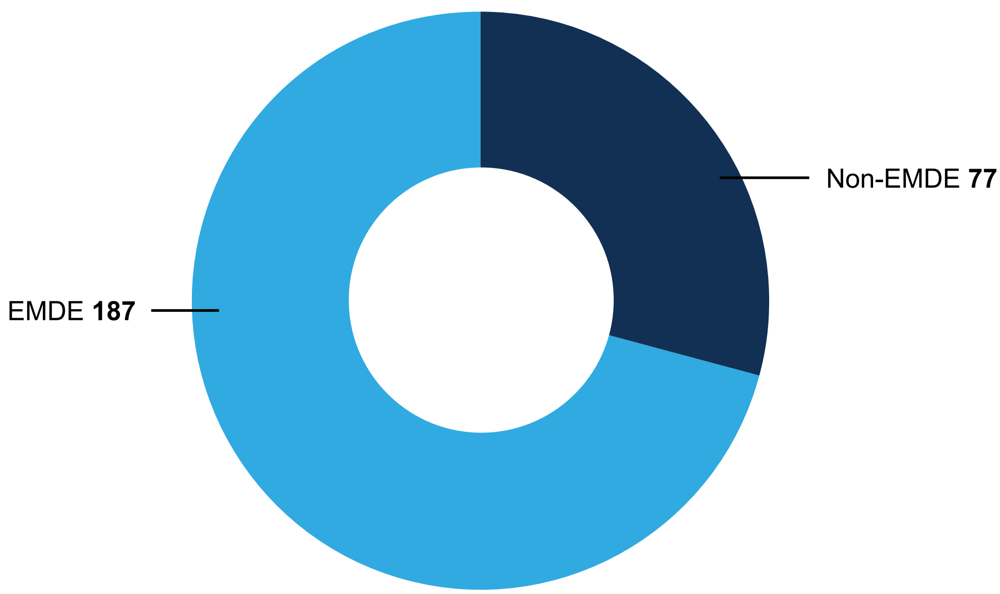
7. The most common overlaps were between fintech firms and payments and remittance service providers, and between microfinance institutions and banks or NBFIs.

Figure 2 continued

Regional composition



EMDE versus Non-EMDE



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

3. Analysis of Survey Responses

3.1 Digitization Trends

The survey responses pointed to a strong trend towards digitizing traditional financial services products, processes, and channels, which is likely to be further accelerated by COVID-19.

All respondents expected the use of digital channels for customer origination, sales, account opening, and customer activities to increase (figure 3).[8] Traditional providers such as banks, MFIs, NBFIs, and insurance companies have started from a low to medium baseline of digital channel use. Fintech firms and telcos, which started from a higher baseline of digital activities, predicted increases in five years (question 18[9] of survey). Detailed breakdowns by respondent types are provided in annex 2; key observations are:

- **Sales.** The use of digital channels for sales and customer origination was not predominant in any responding institution type other than fintech firms (85 percent). About half of large banks had high or medium digital customer origination, compared with under a third of small banks and MFIs; ratios were slightly higher for sales, with large banks close to 60 percent high/medium digital, and small banks and MFIs in the 30 to 40 percent range. Respondents across responding institution types believed that this will increase in five years.
- **Customer activities:** Digitization of processes for account opening and customer activities showed a similar pattern. Fintech firms were largely digital and small banks and MFIs lagged behind larger banks. Across categories, digitization of customer activities was stronger than digitization of account opening. For example, close to 69 percent of large banks characterized customer activities as high/medium digitized, while digital account opening was at 57 percent. Across respondents there was an expectation of strong increases in digitization in both areas (many fintech firms expected to stay at the same level, since their processes were already significantly digital).
- **Onboarding.** Across channels and processes, it appeared that the start of the customer journey was more difficult to digitize. While this may be partially due to evolving customer behaviors and channels use for some providers, the gap across all respondent types with respect to digital onboarding relative to other customer activities suggested additional barriers to digitizing customer onboarding. This was consistent with respondents' views on the need to improve regulatory provisions for remote onboarding (see below). There was broad expectation that this gap will close over the next five years.

More than 70 percent of respondents felt the COVID-19 pandemic increased the need for digital transformation across customer channels, internal processes, and product adaptation (question 19).[10] This observation held across responding institution types (figure 4). The impact of the pandemic on fintech priorities was observed at the

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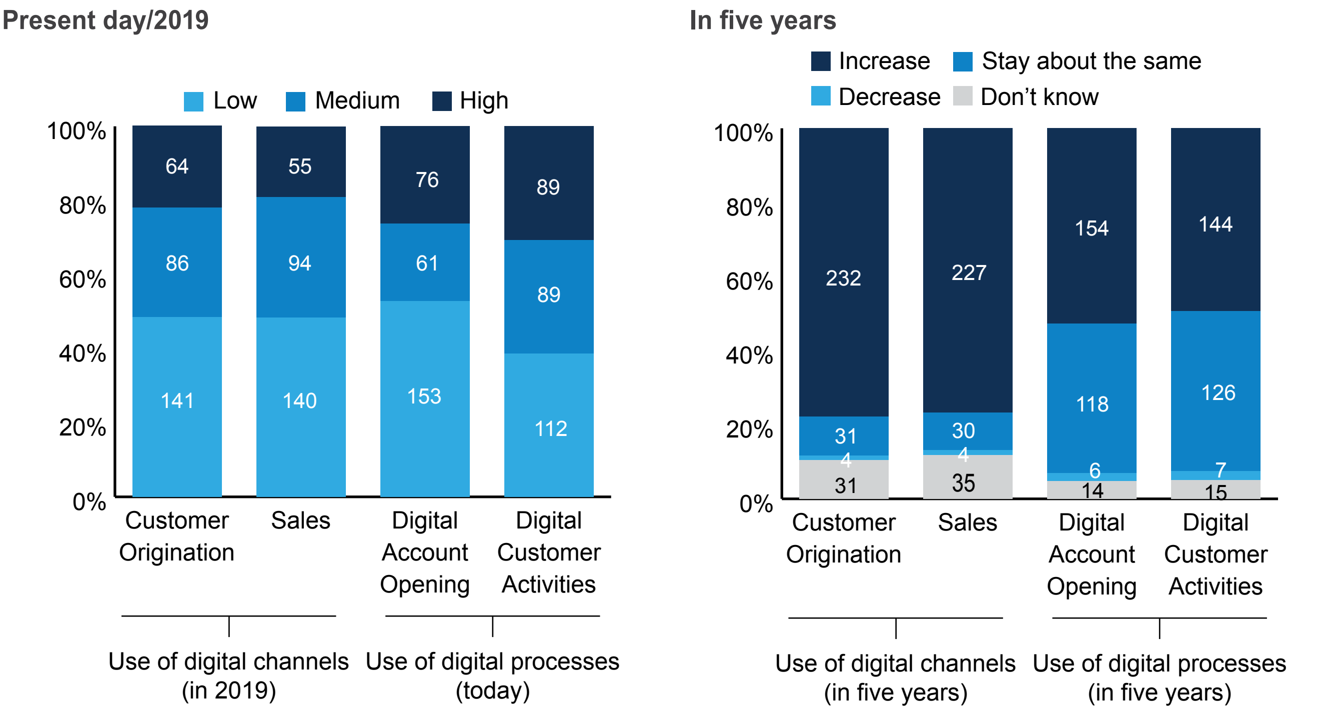
8. A detailed breakdown by responding institution type has been provided in appendix 2.
9. Question 18: Use of digital channels (e.g., mobile, internet, POS) and processes in your key markets in 2019: What proportion of your new customers originate through digital channels? What proportion of your sales originate through digital channels? What proportion of your account opening is fully digital (i.e. not paper-based or face-to-face, including those that are close to end-to-end digital? What proportion of activities (e.g. make a payment or apply for a loan) by your customers are fully digital (i.e. not paper-based or face-to-face)? See appendix 1 for full survey questionnaire.
10. Question 19: How has the COVID-19 crisis affected the need for digital transformation in your key markets in the following areas: Customer channels; Internal processes; Product adaptation? See appendix 1 for full survey questionnaire.

Figure 3. Use of digital channels and processes for sales and customer origination[a]



a. Question 18: Use of digital channels (e.g., mobile, internet, POS) and processes in your key markets in 2019: What proportion of your new customers originate through digital channels? What proportion of your sales originate through digital channels? What proportion of your account opening is fully digital (i.e. not paper-based or face-to-face, including those that are close to end-to-end digital? What proportion of activities (e.g. make a payment or apply for a loan) by your customers are fully digital (i.e. not paper-based or face-to-face)? See appendix 1 for complete survey questionnaire.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

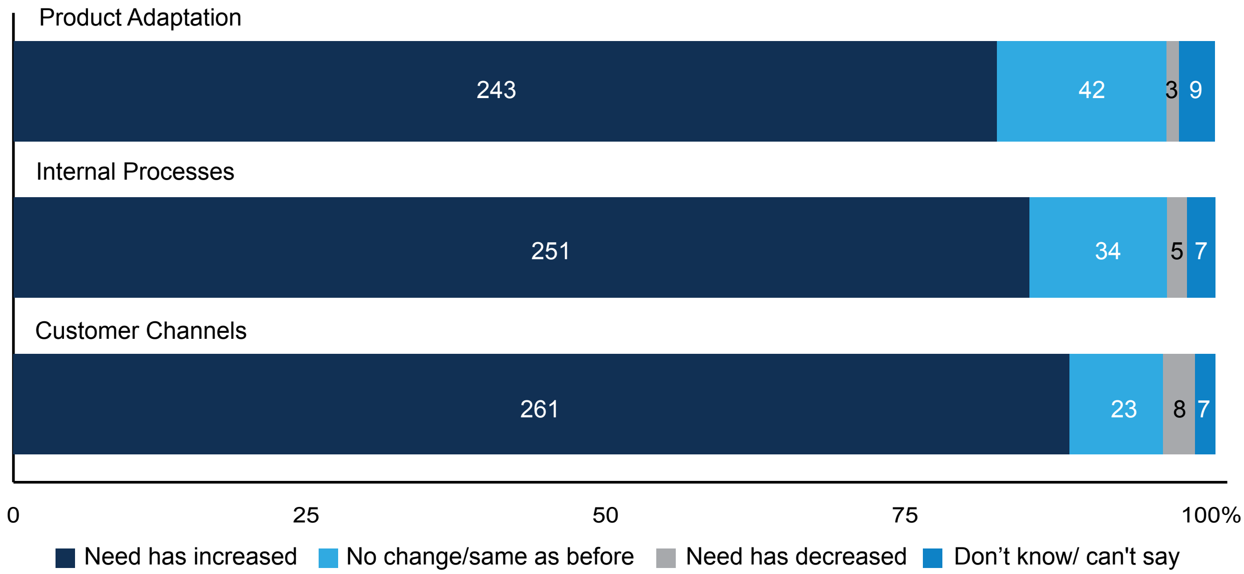
regulatory level as well. The 2020 CCAF-WB Survey found that the pandemic increased prioritization of fintech within central banks and regulatory agencies. 64 percent of regulators from EMDEs indicated that their prioritization of fintech had increased. Further, 37 percent of responding regulators had undertaken at least one measure targeting one or more specific fintech activities or sectors.[11]

COVID-19 had made adoption of fintech and digital transformation a higher strategic priority for most respondents (other than fintech firms and tech companies, who were not required to respond to this question) (figures 4 and 5) (question 35).[12]

- **Channels and Processes.** 86 percent of respondents indicated that the priority of digital transformation of customer channels had increased; 85 percent said priority of digitizing internal processes had increased. Among respondents who acknowledged higher priority, a significant number indicated that it was a "higher priority, but can't execute now." Small banks and NBFIs were more likely to expect a delay than large banks; this was consistent with the resource constraints under which these organizations often operated. However, a large share of insurance and payments providers also expected delays. Across categories, process digitization was more likely to be delayed than channel digitization. This may reflect the increased complexity of process modernization and also the criticality of digitizing customer channels to continue service provision during the pandemic.
- **Product adaptation.** A relatively low share of insurers (54 percent) saw product adaptation as an increased priority, despite insurers having increased prioritization of channels (78 percent) and processes (89 percent). One possible

11. 2020 CCAF-WB Survey https://www.jbs.cam.ac.uk/wp-content/uploads/2020/10/2020-ccaf-report-fintech-regulatory-rapid-assessment.pdf
12. Question 35: How has the COVID-19 crisis influenced your organization's strategic priorities for digital transformation in the following areas: Customer channels; Internal processes; Product adaptation? See appendix 1 for full survey questionnaire.

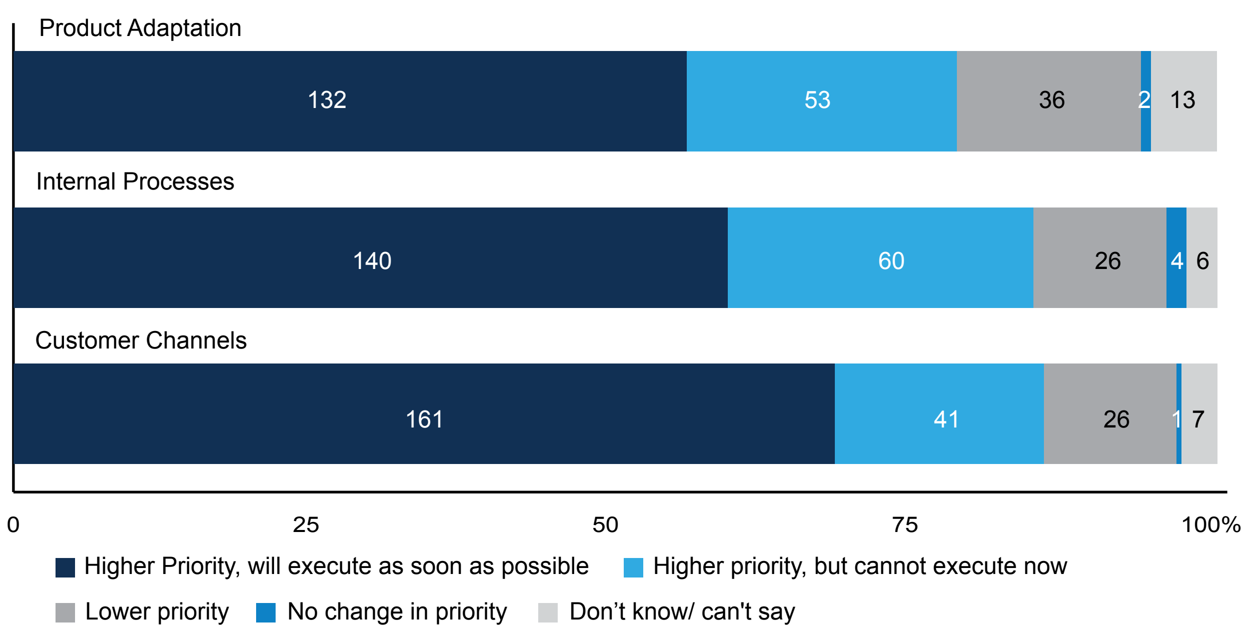
Figure 4. Need for digital transformation due to COVID-19[a]



a. Question 19: How has the COVID-19 crisis affected the need for digital transformation in your key markets in the following areas: Customer channels; Internal processes; Product adaptation? See appendix 1 for full survey questionnaire.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Figure 5. Change in strategic priorities (for incumbents) regarding digital transformation due to COVID-19[b]



b. Question 35: How has the COVID-19 crisis influenced your organization's strategic priorities for digital transformation in the following areas: Customer channels; Internal processes; Product adaptation? See appendix 1 for full survey questionnaire.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

reason for this was that insurtech in many countries was still at a nascent stage, compared to other forms of fintech, and the early examples of insurtech have mainly focused on distribution.[13] One insurance company in a high-income country even commented that digital innovation in the insurance space will not focus on products, but on innovative distribution channels and services.

These findings were consistent with findings of other surveys such as the IFC client survey on the *Early Impact of COVID-19 on Financial Institutions* (2020) and the Norton Rose Fulbright Survey (2020). The IFC client survey found that digital transformation gained priority for more than half of the clients surveyed. While digital transformation was already a corporate priority for nearly all, 62 percent of respondents stated that investments in digital channels such as mobile and internet banking had become an increased or urgent priority as a result of the pandemic. Other aspects, including the digitization of internal processes and the development of data analytics and alternative credit-scoring capabilities, had grown in importance for about half of those surveyed.[14] In July 2020, Norton Rose Fulbright (NRF) surveyed market participants'[15] views on the impact of COVID-19, lockdowns, and recession risks. The NRF study pegged fintech as a strategic priority for 96 percent of respondents, with several stating that COVID-19 lockdowns had accelerated the trend.

Insights from Survey Participants

"In the wake of the pandemic, digital commerce and payments have become an absolute necessity for businesses to survive. We believe social media and digital payments will be a powerful combination in a developing market such as ours, and has applications across the region in other markets as well." (NBFI based in SAR)

"After COVID-19, the need for digital services will be high. All businesses should adapt that as an opportunity to develop new products." (Bank based in MENA)

"The COVID-19 pandemic has substantially pushed digital transformation and MSMEs and the financial industry seized the advantages of digital transformation and will continue down this path." (Industry association based in the EU)

"As we wake up in a new world order post COVID-19 crisis, we will need to be ready for the fundamental shifts in our consumer behavior." (Multi-national bank based in SSA)

3.2 Impact of Fintech and Digital Transformation

Fintech and digital transformation were perceived as being largely good for business across all respondents.

Digital transformation is happening across industries, and changes in non-financial sectors affect how customers access and use financial services. This might create competition and disruption for incumbents within an industry, while changes in other industries might be seen as creating opportunities. We therefore asked respondents to distinguish between the impact of digital transformation within financial services, and the impact of digital transformation happening in other sectors.

13. Technology and innovation in the insurance sector https://www.oecd.org/pensions/Technology-and-innovation-in-the-insurance-sector.pdf
14. International Finance Corporation. 2020. The Early Impact Of Covid-19 on Financial Institutions.
15. Norton Rose created a qualitative report based on field interviews of senior business stakeholders. Market participants included a range of banks, asset/fund managers, insurers, established fintech businesses, fintech start-ups, and venture capital and consulting firms across the globe.

Most respondents believed that digital transformation in financial services was impacting their own businesses positively (question 20).[16] Unsurprisingly, all fintech firms believed that fintech and digital transformation in financial services had impacted their business positively, with an overwhelming majority (77 percent) reporting the impact as 'very positive.' Among large traditional banks, 84 percent said that digital transformation in financial services was impacting their business positively (42 percent being 'very positive'), while among small and medium traditional banks, almost 70 percent said that that fintech and digital transformation in financial services was impacting them positively (with 23 percent saying 'very positively'). About 12 percent of the traditional banks believed that it had no impact on their business. Overall, these findings are consistent with the regulatory attitudes gauged by the GFS 2019. Two-thirds of all jurisdictions surveyed at that time recognized positive potential for fintech.

Most respondents also believed that digital transformation in non-financial businesses impacted their businesses positively (question 20), with 63 percent of the fintech firms and 57 percent of the payments/remittance service providers saying that it impacted them 'very positively', and 54 percent of the large traditional banks and 64 percent of the small and medium traditional banks saying it impacted them 'somewhat positively.' Though 70 percent of the insurance companies believed that digital transformation of other sectors impacted their businesses positively, about 10 percent reported that it impacted them negatively.

Figure 6 below shows the net positivity score for the perceived impact of fintech and digital transformation for each responding institution type. It represents the average sentiment based on responses to both parts of question 20 of the survey.

This enthusiasm may stem in part from the potential for cost savings (question 29).[17] Respondents saw digital transformation delivering cost reductions across a majority (80 percent) of their product lines. At the same time, the respondents also saw risks to profitability and product margins, though for a much lower number of product areas—58 percent of product areas (on average, across all respondents), especially specific products such as payments and retail lending (question 29). Both traditional financial institutions and fintech/tech firms saw the greatest potential for cost savings in the payments and remittances space. In other product areas, traditional financial institutions saw greater potential to reduce costs than newer tech and fintech players. Product areas identified as having higher potential for cost savings for traditional financial institutions were personal lending, MSME lending, and corporate lending—in addition to payments and remittances. See figure 7.

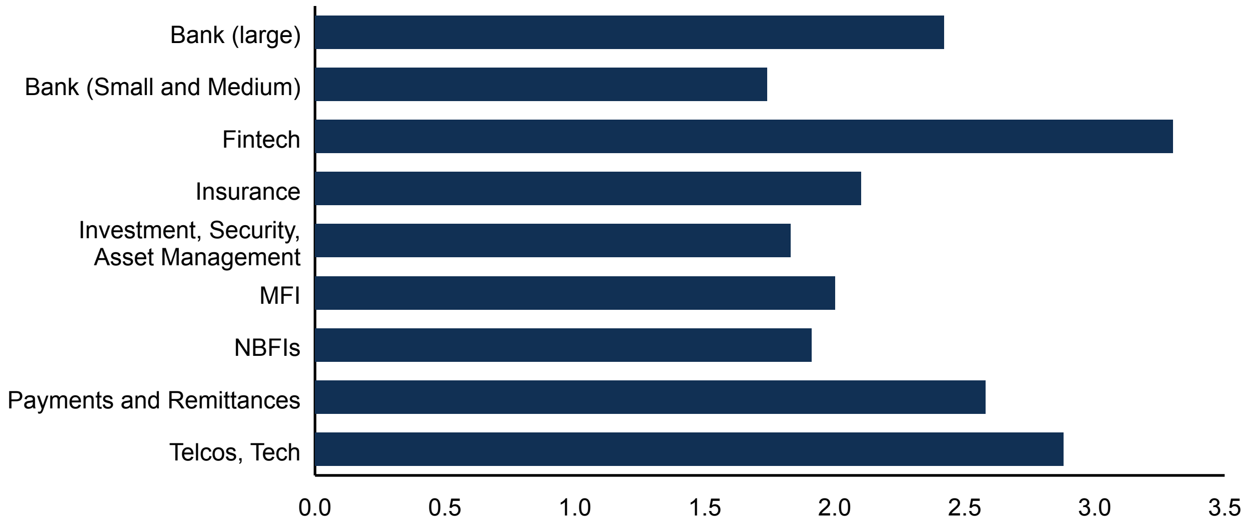
3.3 Corporate Strategy and Challenges to Digital Transformation

Institutions were engaged in a range of strategic fintech activities

Digital Transformation was a strategic priority at the board level for most institutions (question 34).[18] A significant majority (92 percent) of all the respondents[19] said fintech and digital transformation was a strategic priority at the board level of their organizations. While fintech and digital transformation was a priority of the board for more than 90 percent of respondents in most regional groups, the figure was slightly lower for SAR (76 percent).

16. Question 20: How are fintech and digital transformation of financial and non-financial services affecting your business? Part 1: Fintech and digital transformation in financial services beyond your own company are affecting your business; Part 2: Digital transformation of non-financial businesses in the rest of the economy (for example, retail, e-commerce, media) are affecting your business, that is, impacting customer needs and demands for financial services. See appendix 1 for full survey questionnaire.
17. Question 29: To what extent are your business lines affected by digital transformation of the market, in terms of: Demand deposit accounts; Savings and investments; Personal lending and credit products; MSME lending; Corporate lending; Mortgages, Payments, Remittances; Insurance; Investment banking/ capital markets. See appendix 1 for full survey questionnaire.
18. Question 34: Digital transformation and fintech adoption are a strategic priority at the board room level in my organization: a) Yes, b) No, c) Don't know. See appendix 1 for full survey questionnaire.
19. Fintech firms and tech companies were not asked this question as they are already digital.

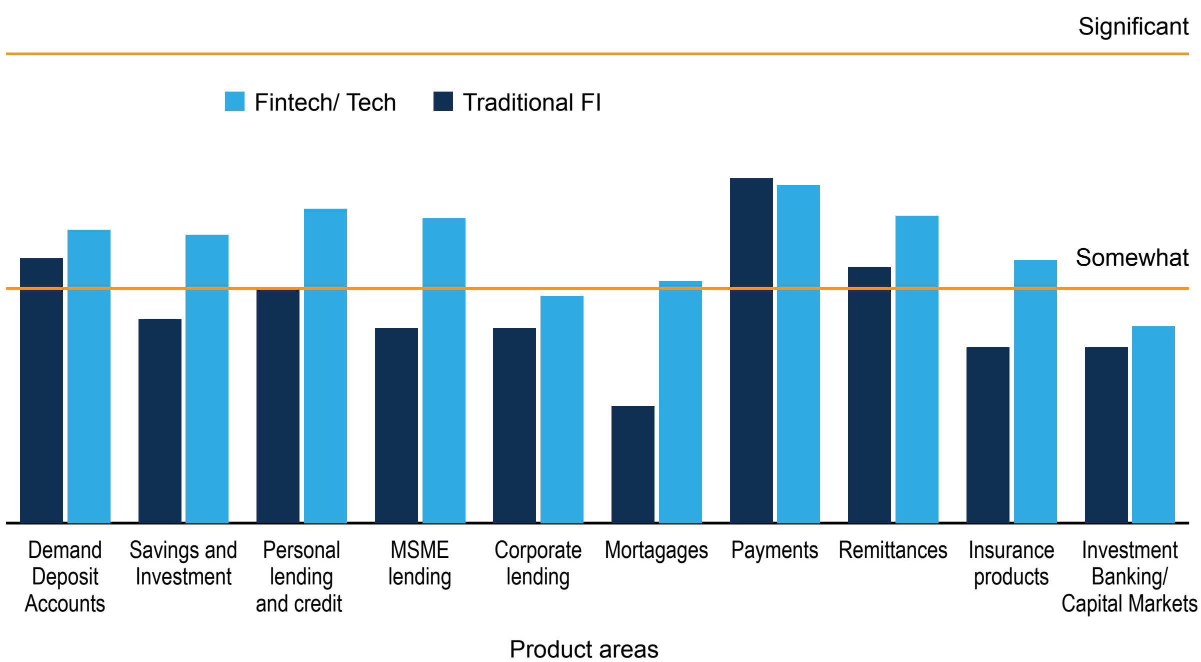
Figure 6. Net positivity score for the perceived impact of fintech and digital transformation by type of respondent (scale of -4 to +4)[a]



a. The following values were assigned to sentiments expressed by respondents on the perceived impact of fintech and digital transformation in financial and non-financial businesses: Very positively (+2); Somewhat positively (+1); Negligible Impact (0); Somewhat negatively (-1); Very negatively (-2). Separate scores were assigned for responses for fintech and digital transformation in financial businesses and for non-financial businesses. As a result, each respondent could have a maximum net positivity score of 4 (that is, 2+2) and a minimum score of -4 (that is, -2-2). Responses were then aggregated and averaged across product lines for each respondent. Responses were then averaged across the following responding institution types: Payments and Remittances, NBFIs/Insurance, Banking, Fintech/Tech.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Figure 7. Potential to reduce cost—by product area and responding institution type[b]



Note: Traditional financial institutions include banks (large, small, and medium), MFIs, NBFIs, Investment/Security/Asset-management companies, Insurance companies, Payments and remittance service providers.

b. The following values were assigned to sentiments expressed by respondents in response to question 29: Significant (+2); Somewhat (+1); None (0). Responses were then averaged across each product line for each respondent category (Fintech/ Tech or Traditional FI). The red lines in the graph represent average scores of 1 (Somewhat) and 2 (Significant)

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Large banks were leading other incumbents in innovations such as launching new digital products, creating a parallel digital business line, and transforming core businesses and activities (question 36;[20] appendix 3). While all banks had either created or planned to create digital products, large banks were leading other traditional intermediaries. Among large banks, 69 percent had already created new digital products while only 55 percent of insurers, 44 percent of small banks, 42 percent of MFIs, and 14 percent of NBFIs had done so. The remainder of insurers, small banks, and all MFIs planned to introduce digital products, while most NBFIs planned to, but 29 percent did not. Fintech firms were also active across many of these areas of innovation, with launching of new digital projects an obvious area of leadership. About half of the large banks and fintech firms were either planning to invest in or acquire a fintech firm, or had already done so. Notably, regulatory guidance on such investments was the area that was seen as most in need of improvement (see below).

Regulatory sandboxes were getting significant attention but seem to be used most by large banks and fintech firms (question 36). 60 percent of respondents either had participated, were participating, or planned to participate in a regulatory sandbox for a new product or service. However, there was a significant divergence between fintech firms and big banks, with sandbox participation rates of 75 percent and 83 percent, respectively, and others such as small banks (53 percent), MFIs (48 percent) and NBFIs (53 percent). Whether this was the result of smaller incumbents' lag in creating new products or specific challenges for smaller institutions to access sandboxes is worth further inquiry (appendix 3).

Increased innovation, improved customer experience, and better product design to meet user needs were key expected benefits from fintech and digital transformation.

Fintech and digital transformation were expected to result in a range of benefits to customers, providers, and the economy.[21] Some of the key benefits that respondents believed will be realized to a 'great degree' in the next five years included increased innovation (73 percent), improved customer experience (74 percent), improved product design to meet user needs (67 percent), and increased accessibility and outreach to new customers (62 percent) (see figure 8; question 21).[22] Additional benefits of fintech and digital transformation that would be realized at least moderately are: increased use of financial services in the economy (90 percent), increased competition and lower entry barriers (88 percent), increased operational and cost efficiencies (88 percent) (question 21).

Insights from Survey Participants

"Banks should spin out parallel fintech arms to run their digital businesses along with forging strong relations with established fintech firms and ecommerce players. The idea would be to build a digital platform that can cater to all banking and finance needs of a customer." (Bank based in EAP)

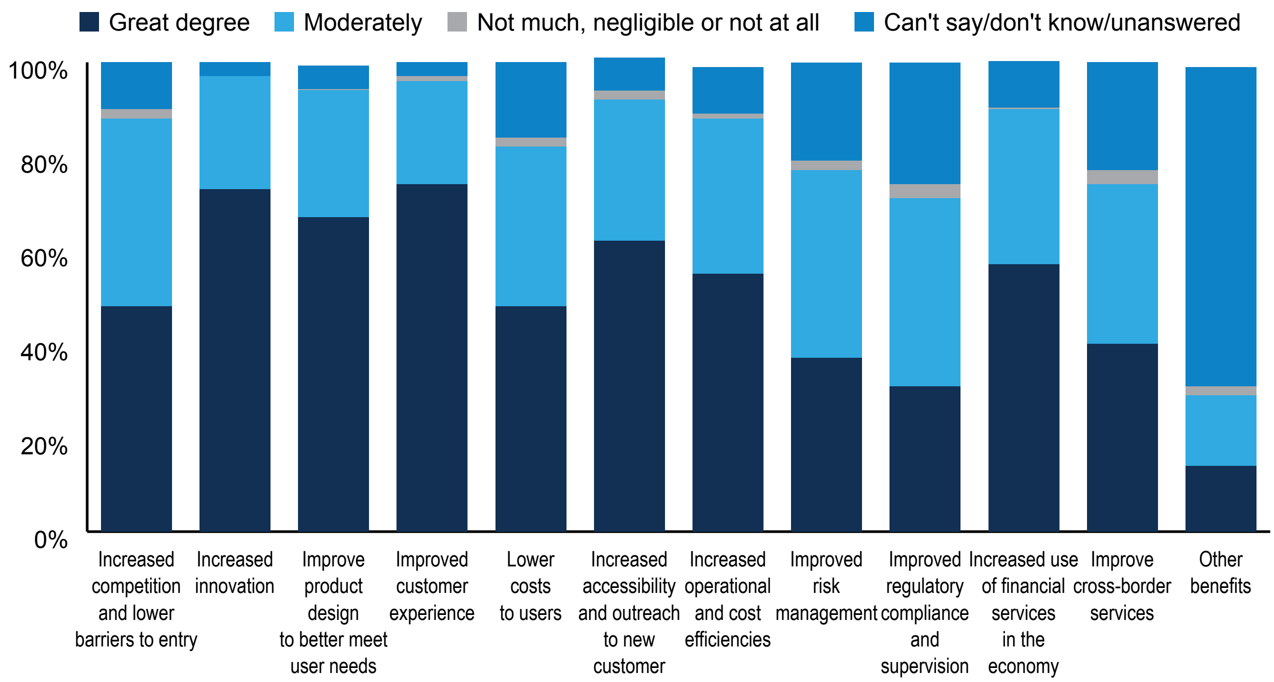
"Being an [NBFI], our technological transformation goes hand in hand with that carried out in banks or financial entities, and they must be coupled with each other." (NBFI based in LAC)

Key challenges were related to regulatory and supervisory frameworks, recruiting top talent, budget and resource limitations, and adapting legacy infrastructure.

At least half the traditional banks, insurance companies, MFIs, and NBFIs listed regulatory and supervisory challenges as one of their top three challenges (question 37)[23] (see figure 9). As described below, regulations in most areas had significant gaps and several respondents felt they were not 'fit for purpose.' More than 55 percent of the

20. Question 36: Which of the following activities have you engaged in, and which you plan to do in future (continue to do or newly engage in): a) Internal Innovation Activities; b) Fintech engagement; c) Digital ecosystems. For further parts of this question and the complete survey questionnaire, see appendix 1.
21. World Bank press release. October 18, 2018. The Bali Fintech Agenda: A Blueprint for Successfully Harnessing Fintech's Opportunities.
22. Question 21: To what degree do you think these potential benefits of fintech and digital transformation will be realized in your sector in the next 5 years? For further parts of this question and the complete survey questionnaire, see appendix 1.
23 Question 37: Please feel free to add further thoughts on consumer behavior and impact in your key markets or jurisdictions of operation. Also please feel free to add any clarifications to any of your responses to this section. For the complete survey questionnaire, see appendix 1. Fintech firms and tech companies were not asked this question.

Figure 8. The degree to which certain benefits of fintech and digital transformation are expected to be realized in the next 5 years



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

large traditional banks also cited recruiting and retaining top talent, and adapting legacy infrastructure as challenges. Half the insurance companies and 40 percent of the payments/service providers cited budget and resource limitations as challenges. Budget and resource limitations could be indicative of unwillingness by the respondents' senior management to allocate resources to transition out of legacy systems. According to Goodwin's 2020 Global Fintech Survey of financial services decision makers in the U.S. and Europe, there is a gap between awareness and actual resources dedicated to fintech development. In that survey, while 39 percent of respondents indicated that adoption of fintech was a high priority, a third of them reinvested only 10 percent or less of their profits in fintech development. Further, the Goodwin survey identified that some of the key drivers of fintech innovation in EMDEs included access to capital, access to talent, lower entry barriers, and clear legal and regulatory frameworks.[24]

Insights from Survey Participants

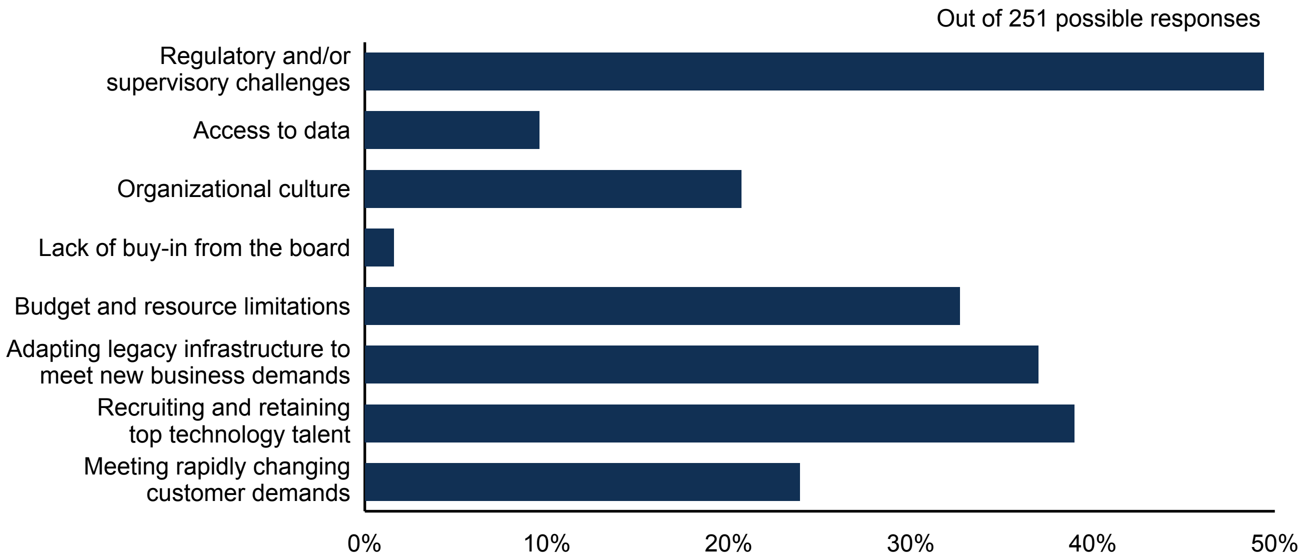
"We will expand but there are challenges with current legacy systems in many government institutions plus the limitations imposed by regulatory [bodies] and authorities from time to time." (NBFI based in MENA)

"Digital transformation should be mandated for the incumbents and newly licensed. Some incumbents do not want to invest in digital technologies or there is a lack of buy-in from the strategic level." (Bank based in SAR)

"The biggest challenge to digital transformation facing my organization is the fact that we are starting from scratch. We have always operated from physical structures face-to-face with customers." (Bank based in SSA)

24 Goodwin press release. September 14, 2020. Goodwin's 2020 Global Fintech Survey: Data is Top Driver, Greatest Threat To Financial Technology Adoption.

Figure 9. Top challenges faced by respondents



Note: Fintech firms and tech companies were not required to respond to this question (question 37).

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

3.4 Evolving Customer Needs and Trends

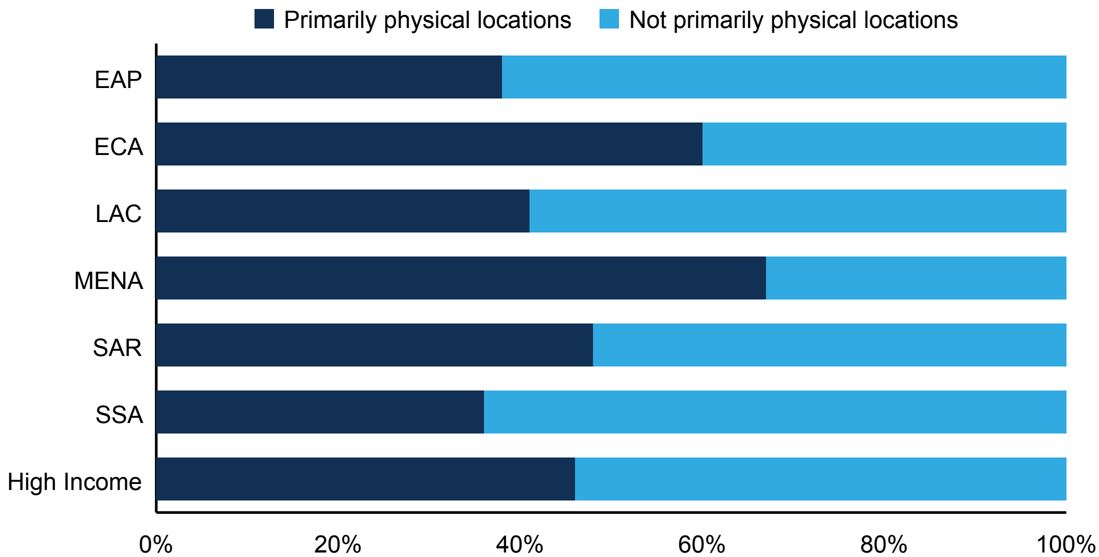
Physical locations were expected to remain important.

About half the traditional banks (of all sizes), and about 55 to 60 percent of the insurance companies, MFIs, NBFIs and payments/remittance service providers, believed that their business will still be conducted primarily through physical locations in five years (question 25).[25] In contrast, only 20 percent of the fintech firms believed that their businesses would be conducted primarily through physical channels (question 25). There were significant regional differences. In MENA, 66 percent of the respondents and in ECA, 61 percent of respondents believed that business will be primarily conducted through physical locations. Smaller percentages of respondents from SSA (36 percent) and EAP (38 percent) felt that physical locations will predominate (figure 10).

As the Market Structure Note,[26] **which is part of this series, explains, connectivity technology means that traditional infrastructure can increasingly be shared.** The multi-bank ATM and POS networks are one example. Agent networks are increasingly being shared, sometimes under regulations that discourage exclusivity.[27] In Peru, the BIM industry consortium mobile money platform created interoperability across all agents in the network.[28] POS cashback makes any store a virtual ATM. Thus, it is increasingly feasible for a financial services provider to have physical services points without operating them itself. Among the traditional banks (large and small), NBFIs and Investment/Securities companies that believed they will continue to operate through physical locations, around 80 percent felt that these locations will be their own branches (question 26).[29] MFIs expected to use partners and agents more; about 53 percent

25. Question 25: In the medium term (next 5 years) will a significant portion of your business be conducted through physical locations? a) Yes; b) No. For the full survey questionnaire, see appendix 1.
26. Fintech and the Digital Transformation of Financial Services: Implications for Market Structure and Public Policy (Market Structure note) by Erik Feyen, Jon Frost, Leonardo Gambacorta, Harish Natarajan, and Matthew Saal.
27. GSMA, June, 2020. Tracking the Journey Towards Mobile Money Interoperability. Emerging Evidence from Six Markets: Tanzania, Pakistan, Madagascar, Ghana, Jordan and Uganda.
28. IFC EM Compass. May, 2018. Modelo Peru: A Mobile Money Platform Offering Interoperability Towards Financial Inclusion.
29. Question 26: If respondent answered “yes” to question 25: Will these physical locations predominantly be: a) Your own branches or outlets; b) Agents or other

Figure 10. Use of physical locations to conduct business in the next five years



Note: Fintech firms and tech companies were not required to respond to this question (question 37).

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

expected to use their own branches and 40 percent indicated partners or agents. 67 percent of fintech firms expected to use agents or partners, and only 27 percent expected to operate their own branches or outlets. Insurance expected 80 percent agents and partners, which reflected existing business models. Descriptive comments indicated that traditional banks believed branches may not be used for everyday transactions but will continue to be important for client interaction and maintaining client relationships. Some also mentioned that branches and physical locations will serve as centers for obtaining financial advice and information about the various financial products offered by the institution. These types of customer interactions may be more difficult to manage via agents and partners.

Some banks in EMDEs pointed out in their descriptive comments that though market players are using technology, customers are not yet entirely ready to operate exclusively through digital means. In countries with significant rural populations (such as in SSA), banks mentioned that physical branch locations will be important for deposits as long as cash use is predominant. Digital literacy among customers will also be a key factor in determining whether financial institutions continue to operate through physical locations or go completely digital.

partners' physical locations (e.g., supermarkets, coffee shops); c) Other location or physical processor (please provide a brief description). For the full survey questionnaire, see appendix 1.

Insights from Survey Participants

"Even though we are using technology to make our services accessible, we still have people who fear to use it, they really want to see our offices; and some cannot use it at all. There is need for us to teach them how to apply online while some do not have tools, like smart phone or computers, to apply online." (Bank based in SSA)

"Banks will increasingly be platforms aggregating different services in a complex relationship with other providers like telcos, fintech firms, and other participants in the payment services space." (Bank based in SSA)

"Digital literacy still needs to be improved before customers are comfortable trusting technology over the person-to-person engagement. While COVID-19 has somewhat forced people to stay away from the branches and access funds via electronic means, we still have a long way to go." (Bank based in EAP)

"Consumers are becoming more digitally literate and will be using more ways to receive financial services online, rather than offline." (Bank based in ECA)

"[There is an] increased demand for personalization, leveraging existing data from past interactions with the bank or others instead of asking the customer the same information again." (Bank based in a high-income country)

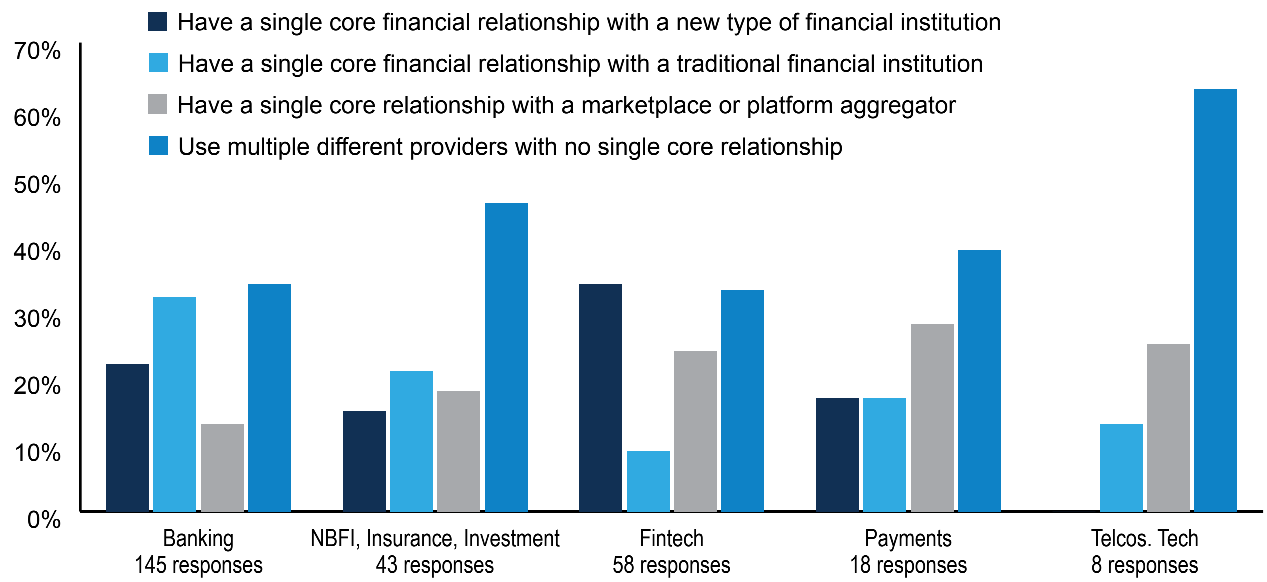
"Significant portion of the business processes would be carried out via use of technology, through software dedicated to the customers. However, cash would still be in demand, along with use of checks for payments. The proportion of customers using them would be lower than currently. Loan disbursement, credit scoring, deposit solicitation would still require bank officials to interact with customers in person." (Bank based in SAR)

There was broad consensus that customers will continue to have a single core relationship, but not on the type of institution with which that relationship will be.

Expectations for customer relationship patterns vary across respondent types (question 24;[30] figure 11). A majority of banks expected customers to have a single core relationship with a financial service provider in the next five years; 32 percent of responding banks expected that single core relationship to be with a traditional bank, while about 35 percent of banks saw that relationship shifting to a new player or platform, and the other third predicted no single core relationship. About two-thirds of fintech firms also expected customers to have a core financial services relationship, but only 9 percent of fintech firms saw traditional banks playing that role compared to new players (34 percent) or marketplaces (24 percent). Respondents from sectors that have always sat alongside other financial services did not expect to see core relationships persist; more than 50 percent of the insurance, NBFI, and telecom and tech companies believed customers will use multiple providers with no core relationship.

30 Question 24: In general, over the medium term (next 5 years) do you expect retail and SME customers to: a) Have a single core financial relationship with a traditional financial institution (e.g., a bank) and use other providers only for selected specific financial products/needs; b) Have a single core financial relationship with a new type of financial institution (for example, fintech firms, challenger banks, digital-only banks, big tech firms) and use other providers only for selected specific financial products/needs; c) Have a single core relationship with a marketplace or platform that aggregates access to multiple third-party products and services; d) Use multiple different providers with no single core relationship; e) Other (please provide a brief description). For the complete survey questionnaire, see appendix 1.

Figure 11. Expectations with respect to retail and SME customers' FSP relationships in the next five years (views by sector/responding institution type)



Note: The 'Banking' category includes large banks, small and medium banks, and MFIs.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

3.5 Competition and Changes to Market Structure

Perceptions on the major sources of competition in the next five years were wide ranging.

Respondents anticipated competition from diverse institution types in the next five years, though neo-banks and traditional financial institutions are most cited. (question 31).[31] For this question, we listed neo-banks, foreign fintech firms, and local fintech firms as three separate categories to provide a more granular view of potential competitors.[32] We wanted to assess whether neo-banks are seen as a different competitive challenge from fintech firms more generally, and whether cross-border entrants are seen as a threat. Since 2015, for example, there has been a 200 percent increase in the number of neo-banks globally, of which 45 percent are in the Americas, 35 percent are in EMEA, and 20 percent are in APAC.[33] (Survey results by institutional breakdown are provided in figure 35 in appendix 4: Competition Landscape).

- 87 percent of the traditional banks (large, small, and medium) believed they will face competition from traditional institutions and neo-banks. About 60 percent considered local fintech firms to be competition.
- On the other hand, more than 75 percent of the fintech firms believed they will face competition from neo-banks, local fintech firms, and foreign fintech firms. In contrast, only a little over 60 percent of the fintech firms believed they will face competition from traditional providers.
- NBFIs perceived a greater competition from neo-banks and fintech firms, in comparison to competition from traditional

31 Question 31: In the medium term (next 5 years), to what extent will you face competition from: Traditional financial institutions; Digital-only banks /neo-banks; Foreign traditional financial institutions entering the markets; etc. For details of this question and others in the survey questionnaire, see appendix 1.

32 This deviates from the segmentation applied to our respondent categories where all fintech firms and neo-banks are a single category.

33 BCG Fintech Control Tower (2020).

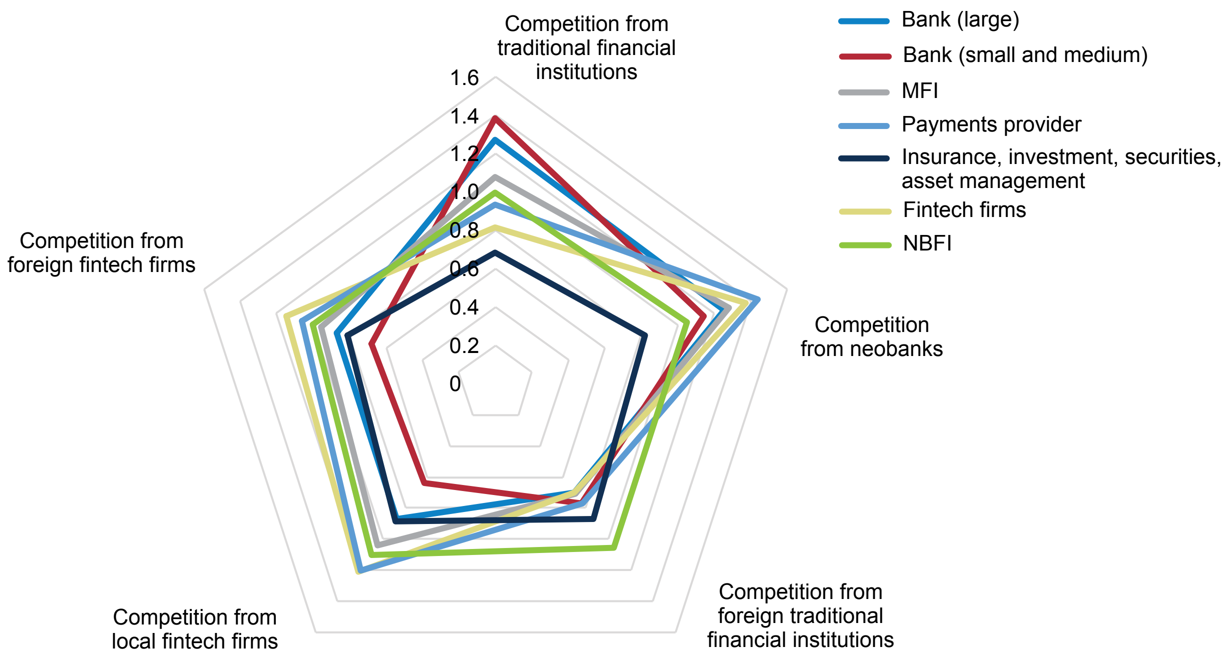
financial institutions. While 40 percent and 38 percent of the NBFIs believed they will face a great degree of competition from neo-banks and local fintech firms respectively, only 23 percent believed they will face a great degree of competition from traditional financial institutions.

- Payments/remittance service providers saw their greatest competitors in neo-banks (62 percent) and foreign fintech firms (36 percent).
- More than two-thirds of the insurance companies predicted competition from foreign fintech firms. One possible interpretation of this response is that insurance companies saw competitive threat from foreign fintech firms partnering with local insurers, many of whom are part of international groups,

However, as noted previously, notwithstanding their views on market concentration, over three-fourths of respondents across different responding institution types believed that entry barriers will be reduced due to fintech and digital transformation. This is consistent with the analysis in the Market Structure Note,[34] which is part of this series.

Mapping the expected competition from different types of providers shows that traditional institutions tend to be focused on competitors similar to themselves. For example, banks anticipated most competition coming from traditional financial institutions and neo-banks. Fintech firms did not see traditional banks as competitors but did worry about neo-banks and other fintech firms (domestic and foreign). Figure 12 shows the average competitiveness score for the perceived degree of competition that is faced by each responding institution type from each competitor type (traditional financial institutions, foreign traditional financial institutions, local fintech firms, foreign fintech firms, neo-banks), based on responses to question 31 of the survey.

Figure 12. Map of average competition expectations by responding institution type (0-2)[a]



a. For this part of the analysis, institutions were grouped into the following types: large banks, small and medium banks, fintech firms, payments providers, MFIs, NBFIs and Insurance, Securities, and Asset Management firms. The following values were assigned to sentiments expressed by respondents on the perceived degree of competition from each competitor type: Great Degree (+2); Moderately (+1); Not much (0); Negligible or not at all (0), and the average sentiment for each responding institution type about competition from each competitor type was calculated. As a result, each responding institution type-competitor type pair could have a maximum average competitiveness score of 2 and a minimum score of 0.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

34 Fintech and the Digital Transformation of Financial Services: Implications for Market Structure and Public Policy (Market Structure note) by Erik Feyen, Jon Frost, Leonardo Gambacorta, Harish Natarajan, and Matthew Saal.

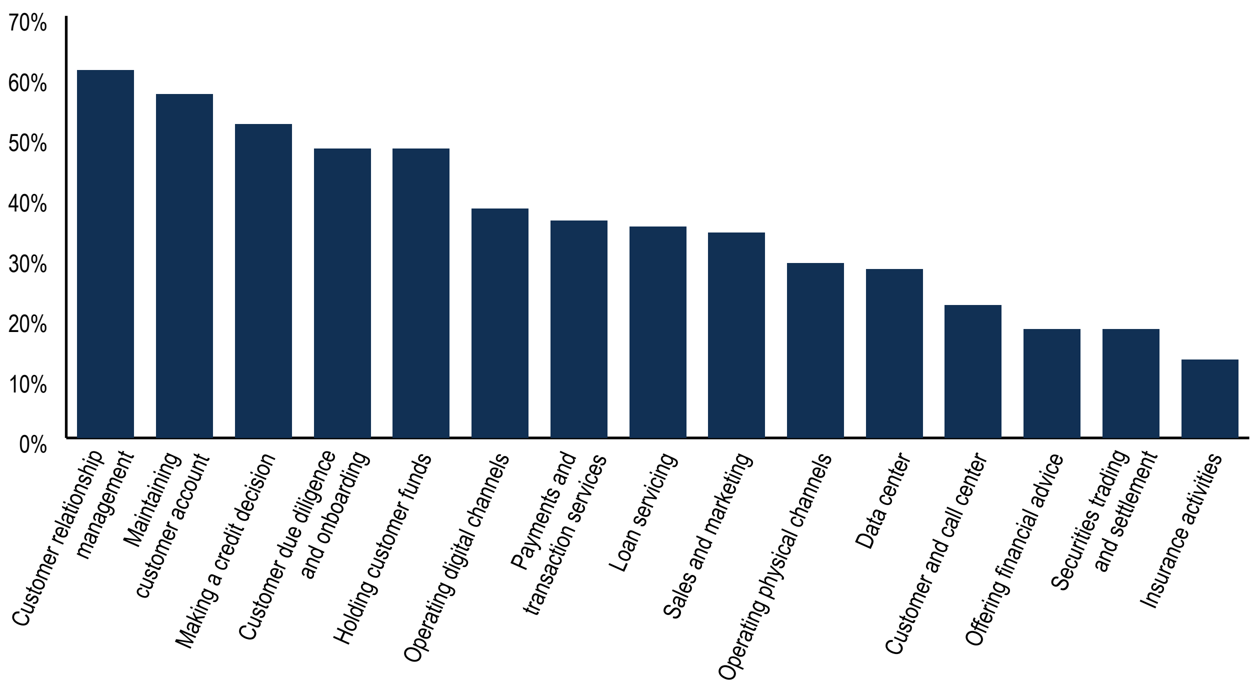
Most banks and MFIs will not outsource several core functions, while fintech firms and NBFIs appeared more open to outsourcing.

Most respondents believed they have certain core functions that they would not outsource or use a partner to conduct (question 32).[35] The top functions considered core across respondent categories were customer relationship management (61 percent), maintaining a customer's account (57 percent), and making a credit decision (52 percent). However, these figures were primarily driven by traditional banking institutions, namely, banks (large, medium, and small) and MFIs. Holding customer funds and maintaining customers' accounts, and customer relationship management were core functions for more than 70 percent of traditional banks. Eighty percent of the MFIs considered customer relationship management to be a core function, while 76 percent considered making a credit decision a core function. Meanwhile, fintech firms were more ambivalent about whether any of the functions mentioned in survey were to be considered core functions. Payment providers were prepared to partner for or outsource all functions other than payments, while insurance companies would partner or outsource all functions (figure 13).

Payments and Remittances markets were expected to be more concentrated.

In terms of market structure, more respondents believed that payments and remittances will be more concentrated, while insurance and investment banking/capital markets will be less concentrated (question 30).[36] Respondents were evenly split on whether demand deposit accounts and savings will be more or less concentrated, though a slightly higher number believed it will be more concentrated. Figure 14 shows the net concentration expectation[37] of each responding institution type.

Figure 13. Core functions that respondents will not partner for or outsource (Question 32)



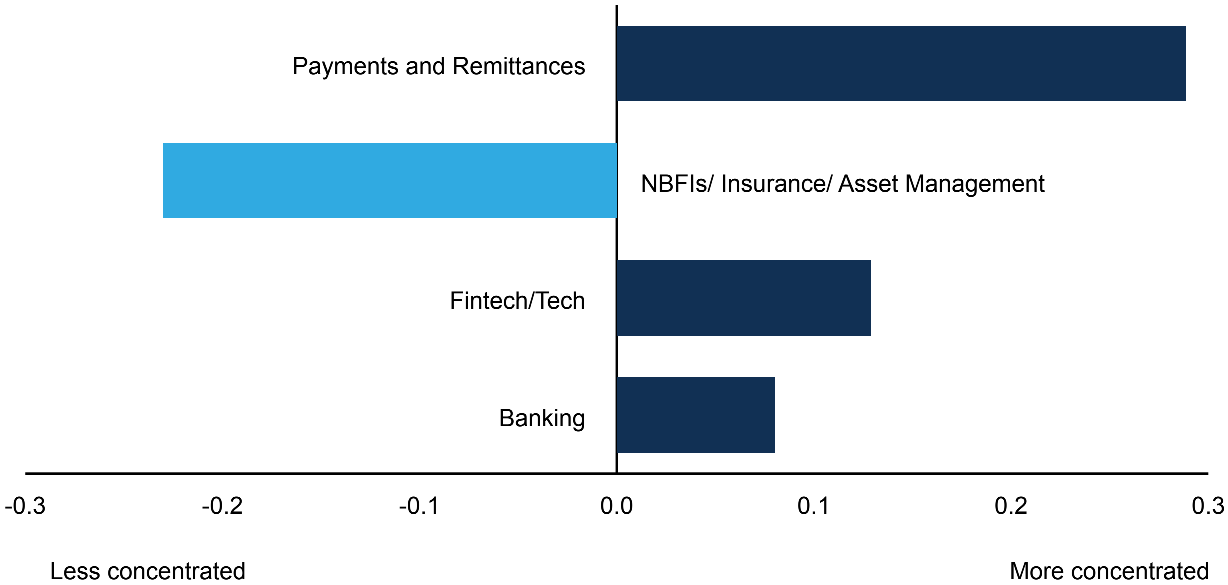
Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

35 Question 32: What operations and processes do you consider core to your business such that you would not outsource or partner for these? For details of this question and the complete survey questionnaire, see appendix 1.

36 Question 30: How will the market structure of your key product markets evolve in the medium term (next 5 years) in terms of number of providers? For details of this question and the entire survey questionnaire, see appendix 1.

37 The net concentration expectation for each responding institution type is a figure between (-1) and 1. It represents the average sentiment based on responses to question 30 of the Survey. The following values were assigned to sentiments expressed by respondents on the degree of market concentration (i.e. number of market players): More concentrated = 1; Less concentrated = (-1), No change = 0. Responses were then aggregated and averaged across product lines for each respondent. Responses were then averaged across the following responding institution types: Payments and Remittances, NBFIs/ Insurance, Banking, Fintech/Tech.

Figure 14. Net concentration expectations: What do respondents believe their key product markets will look like in five years? (Question 30)



Note: Responses have been aggregated across product lines and responding institution type. Numbers next to the bars represent the numbers of respondents. The 'Banking' category includes large banks, small and medium banks, and MFIs.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Insights from Survey Participants

"Digital transformation will bring challenges and competition ahead, but at the same time it will provide a wider range of access to customers and thus increase the amount of subscribers and revenue." (Fintech firm based in MENA)

"Competition between traditional banks and MNOs in the mobile money space is becoming intense, with the increasing number of mobile money agents. But this is a win-win situation. The MNOs have distribution channels and banks have bank accounts." (Large African Banking group based in SSA)

"Telecoms are our key distribution partners, they only pose a threat if they do not own up to the contractual obligations we share or when they refuse to work with us and provide a similar product with another firm." (Fintech firm based in SSA)

"The competition would be from any entity that uses digital means to onboard and service customers. This would mean the big tech firms like Google, Amazon, Facebook and also local new bank and fintech challengers. The banks would do well to take these risks into consideration and invest in digital transformation methods." (Bank based in EAP)

"We expect to face more competition from other types of providers (mainly the so called big tech companies)." (Bank based in a high-income country)

"There will be more providers reaching out to customers digitally, particularly digital banks and fintech firms, reducing space for existing and traditional service providers unless they completely transform and compete with the new entrants and disruptors." (Fintech firm based in SAR)

"Five trends in payments have arisen from growth in e-commerce and the growing importance of closed-loop and open marketplaces: expectation of instant, seamless, personalized experiences; global platforms concentrating on collecting data, offering additional services such as lending; cross-border payments/trade solutions to gain both buyer and seller customers; point-of-sale lending; mega-mergers to reinforce capabilities and accelerate the strategy." (Bank based in a high income country)

3.6 Views on Risks

There will be new manifestations of existing risks in the financial sector.

The top six risks for which risk perception for the next five years was higher were: operational and cybersecurity, data protection, third-party services, illicit financial activities, legal and reputational, and consumer protection (question 22).[38] These risks were inherent to the technological foundation of fintech and digital transformation. The aggregate risk perception was synthesized based on a ranking mechanism[39] (figure 15).

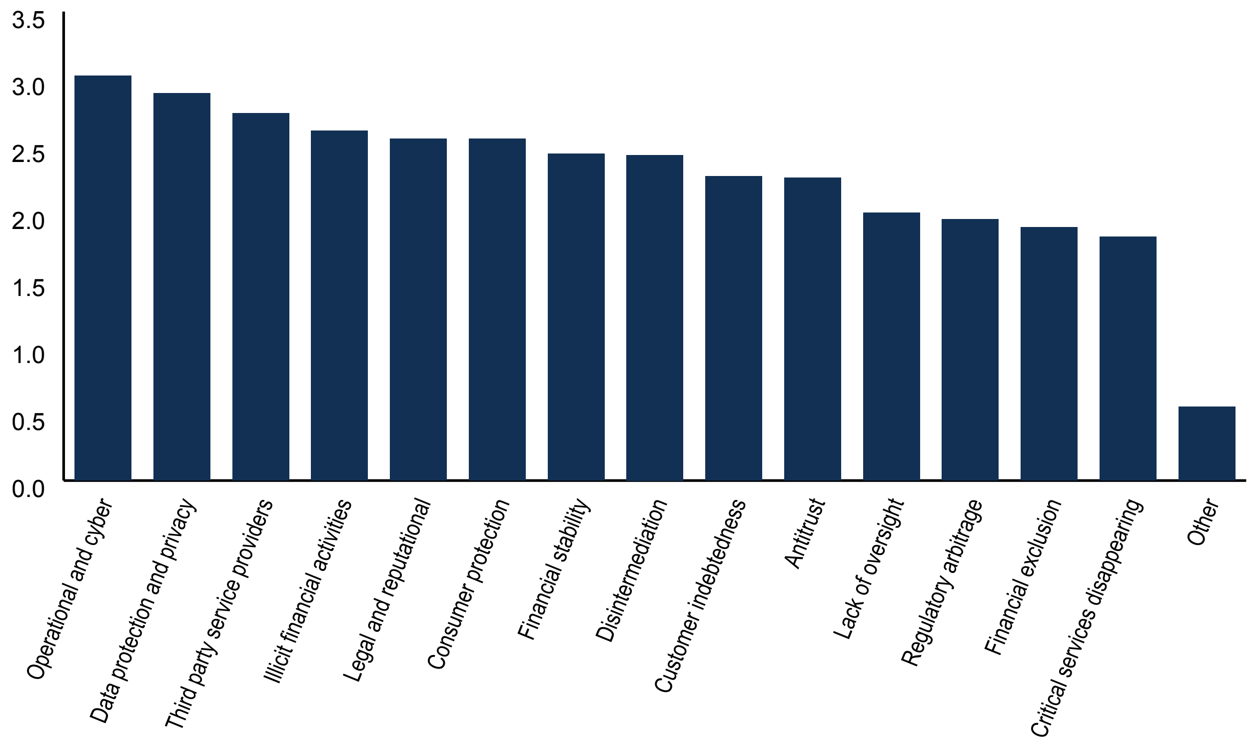
Risk perception in the next five years for all top risks was moderate across all types of participants. Risk perception was generally moderate across institution types and across different types of risk. Marginal variations in risk perception was observed when types of participants were compared, but these remained in moderate range. Across all risks, large banks and MFIs had higher risk perception. Small banks, fintech firms, and NBFIs had a slightly lower risk perception when compared to large banks and MFIs and were closer to the average for all participants. Payment services providers and insurance in general had lower risk perceptions, however for the latter there was a significantly lower perception of consumer protection risks. In relative terms, the marginal risk perception was higher when the entity was not digitally native, for example, large banks and MFIs. (figure 16)

The long-term risk perception was also moderate, which contrasts with other recent surveys that found a sense of urgency towards managing risks, particularly cybersecurity risks. The 2020 CCAF Global Covid-19 FinTech Market Rapid Assessment Study found that, during the first wave of the pandemic, fintech firms globally reported a 17 percent year-on-year increase in cybersecurity risk perception. Furthermore, these firms had to act quickly to mitigate the increased fraud and cybersecurity risks; 28 percent of surveyed firms at the time of the survey had already implemented enhanced fraud and/or cybersecurity features and 12 percent were in the process of doing so. The difference could be due to different phrasing around the time frame; reduction in risk perception for the long-term could be due to expectations on acquiring or developing a higher capacity to manage technology risks.

Risk perception related to financial stability and antitrust policy is higher for large entities and incumbents including big tech firms, large banks, insurers, and telcos, which signals concerns about the entry of new players. Large corporations and incumbents are more concerned than other entities about the effects that fintech and digital transformation will pose to financial stability and antitrust policy. This may either come from seeing the entry of new

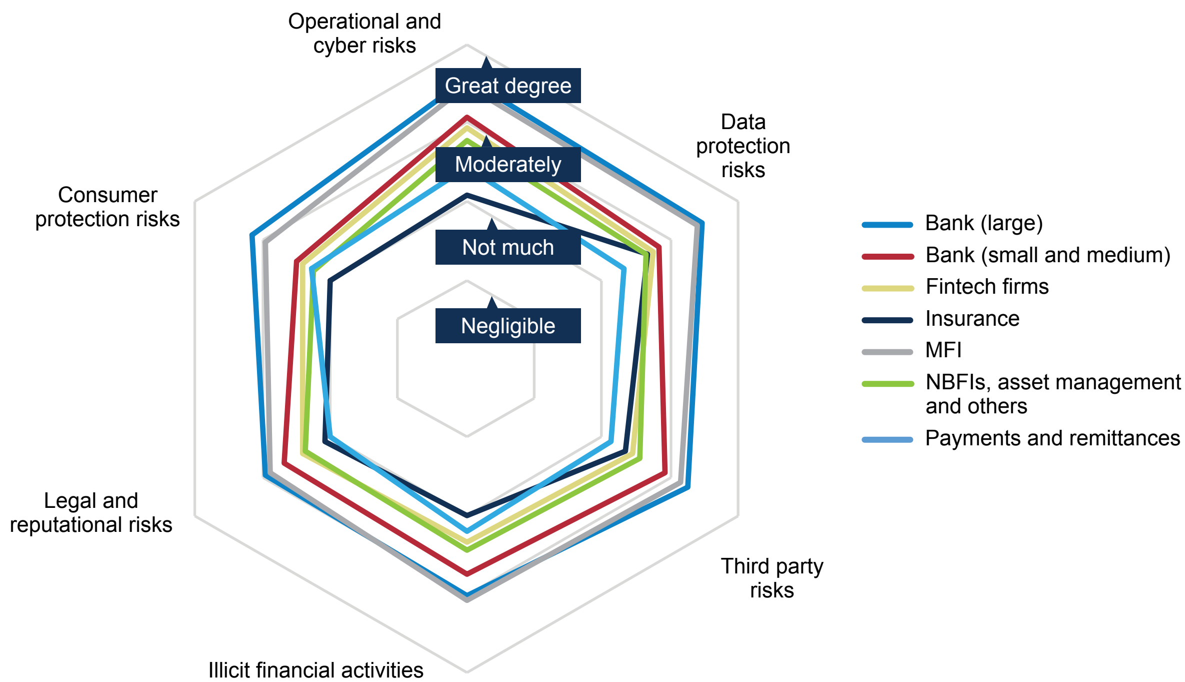
38. Question 22: To what degree do you think these potential risks of fintech and digital transformation will be relevant in your sector in the next 5 years? For details of this question and the entire survey questionnaire, see appendix 1.
39. Each type of risk perception was assigned with an incremental value based on increased risk: 1=Negligible, 2= Not much, 3=Moderately, and 4=Great degree. Then risks are ranked based on the cumulated value of the responses for each type of risk.

Figure 15. Risk perception of respondents



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Figure 16. Risk perception across respondents[a]



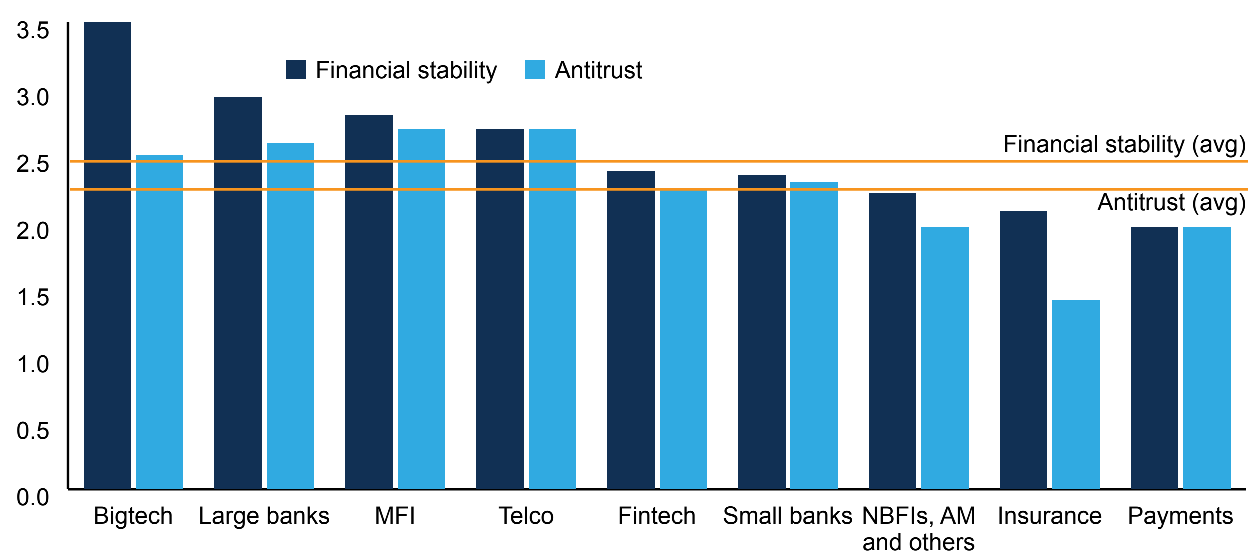
a. Fintech aggregates fintech, big tech, and telcos

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

participants as being riskier to the sustainability of the financial market, perceiving the digital transformation process as posing risks that may harm financial stability, or anticipating antitrust policy actions (figure 17).

The risk perceptions of respondents are comparable to the views of the regulators in the 2020 CCAF-WB Survey and GFS 2019. For instance, regulators perceive that the digital transformation of financial services may increase new, or exacerbate existing, cybersecurity risks. Regulators have also identified several Covid-specific risks related to fintech, such as data privacy concerns, concentration risk, decreased liquidity among digital capital-raising providers, and prudential risks due to economic uncertainty. Further, according to the 2019 CCAF-World Bank Global Regulator Survey findings, alternative finance supervisors see fraud, capital loss, and money laundering as significant risks. In the GFS 2019, over 60 percent of the regulators perceived higher levels of cyber risk and financial integrity risks associated with fintech developments in their respective markets.

Figure 17. Risk perception for financial stability and antitrust policy



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Insights from Survey Participants

“There is a trend of reduction of margins, which implies that some players, existing and new, will close their business.”

“Fintech and digital transformation equalize the competition platform whereby the most established institution may not necessarily have the advantage.” (Commercial Bank based in EAP)

“Financial institutions have to adopt digital transformation or perish.” (Fintech firm based in SAR)

“Regulations are a barrier to introduction of digital insurance products.” (Insurance firm in a high-Income country)

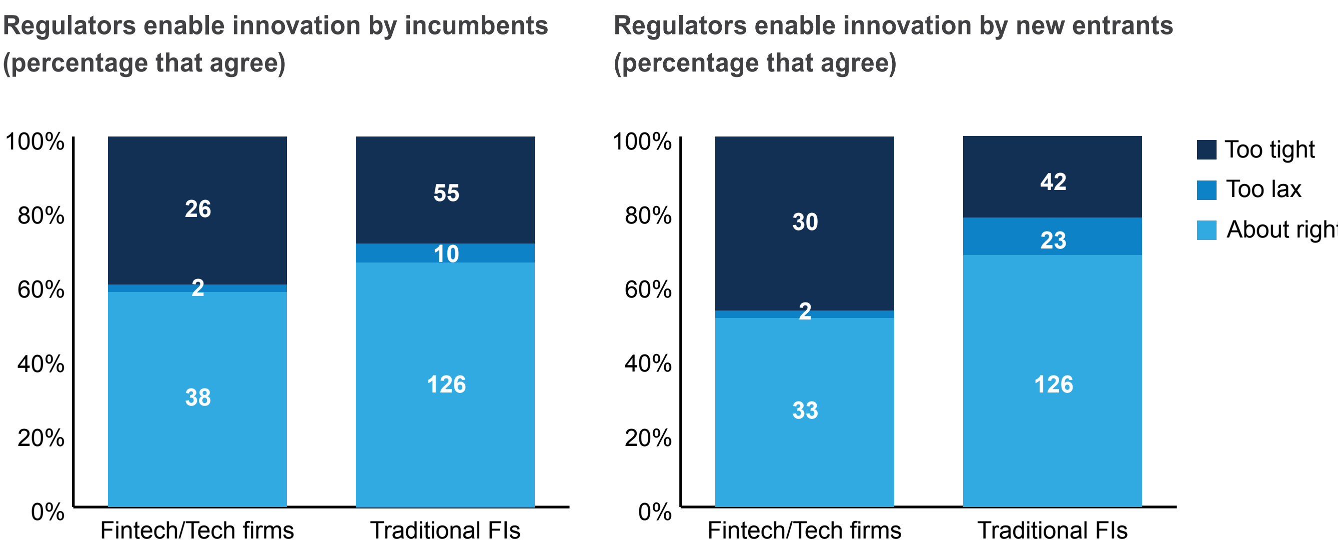
3.7 Regulatory and Supervisory Issues

Regulators can do more to enable innovation.

There was a marked gap between traditional institutions' and new entrants' views on the regulatory environment for innovation. 66 percent of traditional financial institutions (banks, MFIs, insurance companies, NBFIs, payments and remittance providers, asset management/securities/investment firms) believed that the regulatory and supervisory environment in their key markets for incumbents was 'about right' for innovation by incumbents, compared to 57 percent of fintech firms and tech companies. 65 percent of traditional financial institutions believed that the regulatory and supervisory environment was 'about right' for innovation by new entrants, compared to 51 percent of fintech and tech firms (see figure 18).

Fintech firms and tech companies were more likely to find the regulatory and supervisory environment for innovation to be 'too tight' for incumbents and new entrants. While 39 percent of the fintech firms and tech companies found the regulatory and supervisory environments in their key markets to be 'too tight' for innovation by incumbents, only 28 percent of the traditional financial institutions were of that view. Similarly, while 46 percent of the fintech firms and tech companies believed that the environment for enabling innovation by new entrants was 'too tight', compared to 21 percent of the traditional financial institutions (in this case, referring to banks, MFIs, insurance companies, NBFIs, payments and remittance providers, asset management/securities/investment firms) that believed the same. Unsurprisingly, few institutions thought that regulation was too lax for themselves. Among traditional financial institutions, 12 percent said that the regulatory environment was too lax for innovation by new entrants (see figure 18). Several traditional banks, across different jurisdictions, mentioned in their descriptive comments that authorities needed to do more to ensure that there was a level playing field for both incumbents and new entrants.

Figure 18. Do regulators enable innovation, and to what extent? (views by sector/responding institution type)

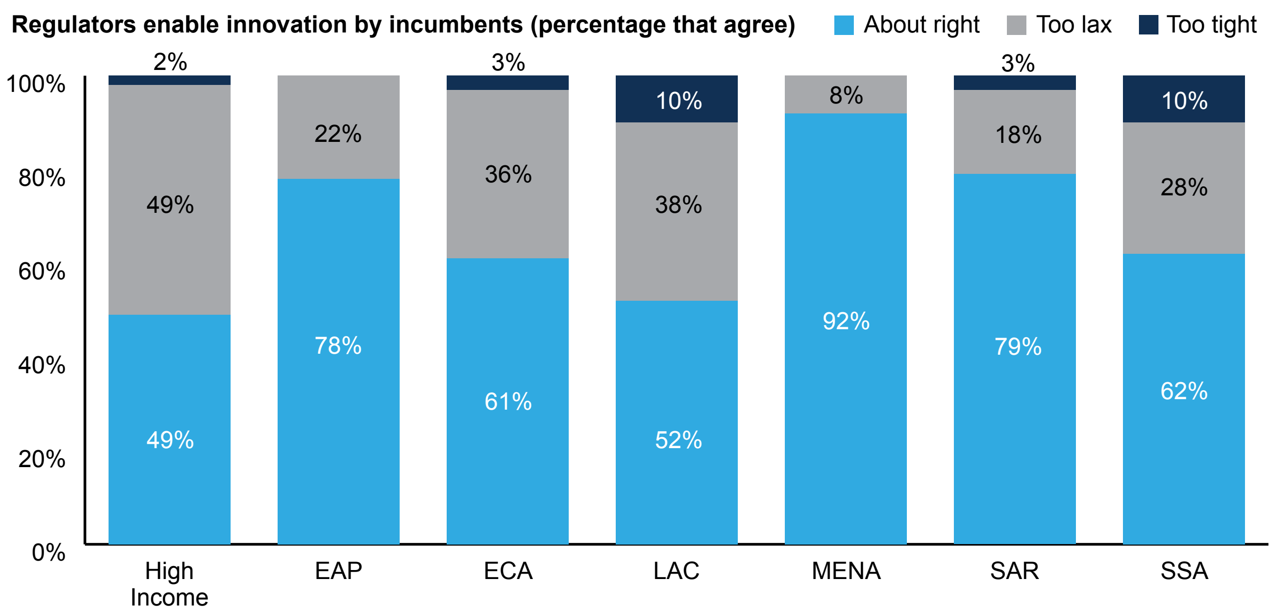


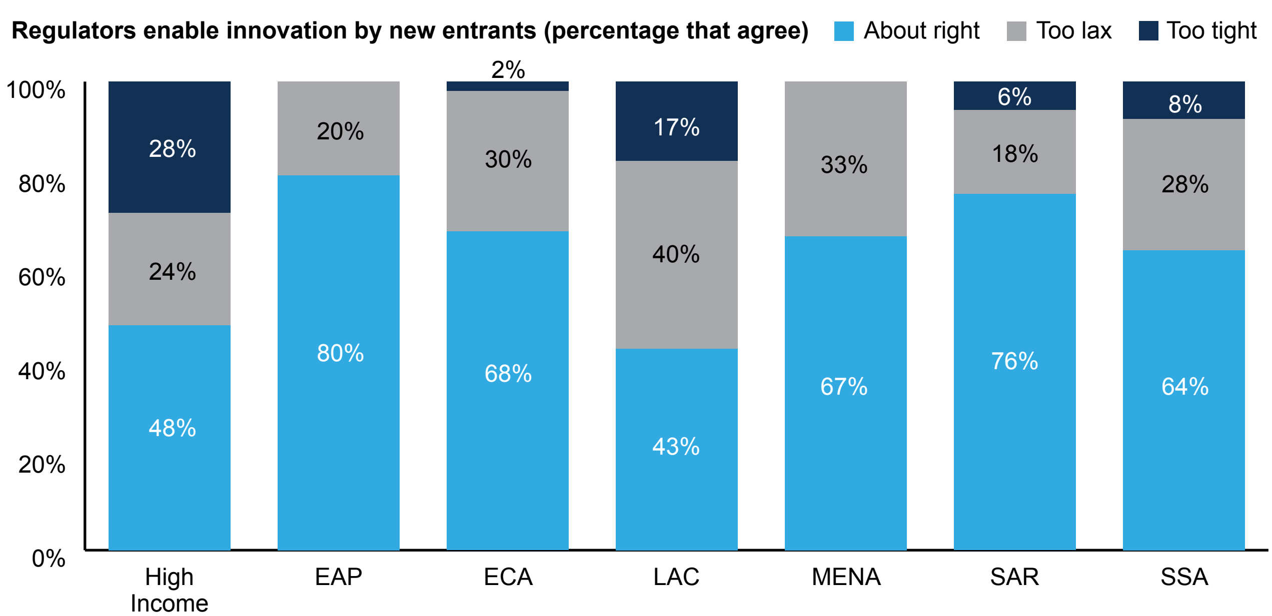
Note: Traditional FIs in this graph comprise large banks, small and medium banks, MFIs, payments and remittance providers, NBFIs, investment/securities/asset management companies, and insurance companies.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

At the regional level, significant proportions of respondents from ECA, LAC, and high-income countries expressed negative views of regulatory and supervisory environments to enable innovation (question 42).[40] In the LAC region, 38 percent believed the regulatory and supervisory environment was too tight for incumbents, and 40 percent believed that it was too tight for new entrants (figure 19). In the ECA region, 36 percent respondents believed the regulatory and supervisory environments in their key markets was too tight for incumbents and 30 percent believed it was too tight for new entrants. Among high-income countries, almost half of respondents believed it was too tight for incumbents, while almost a third believed that it was too lax for new entrants (figure 19).

Figure 19. Do regulators enable innovation, and to what extent? (views by region)





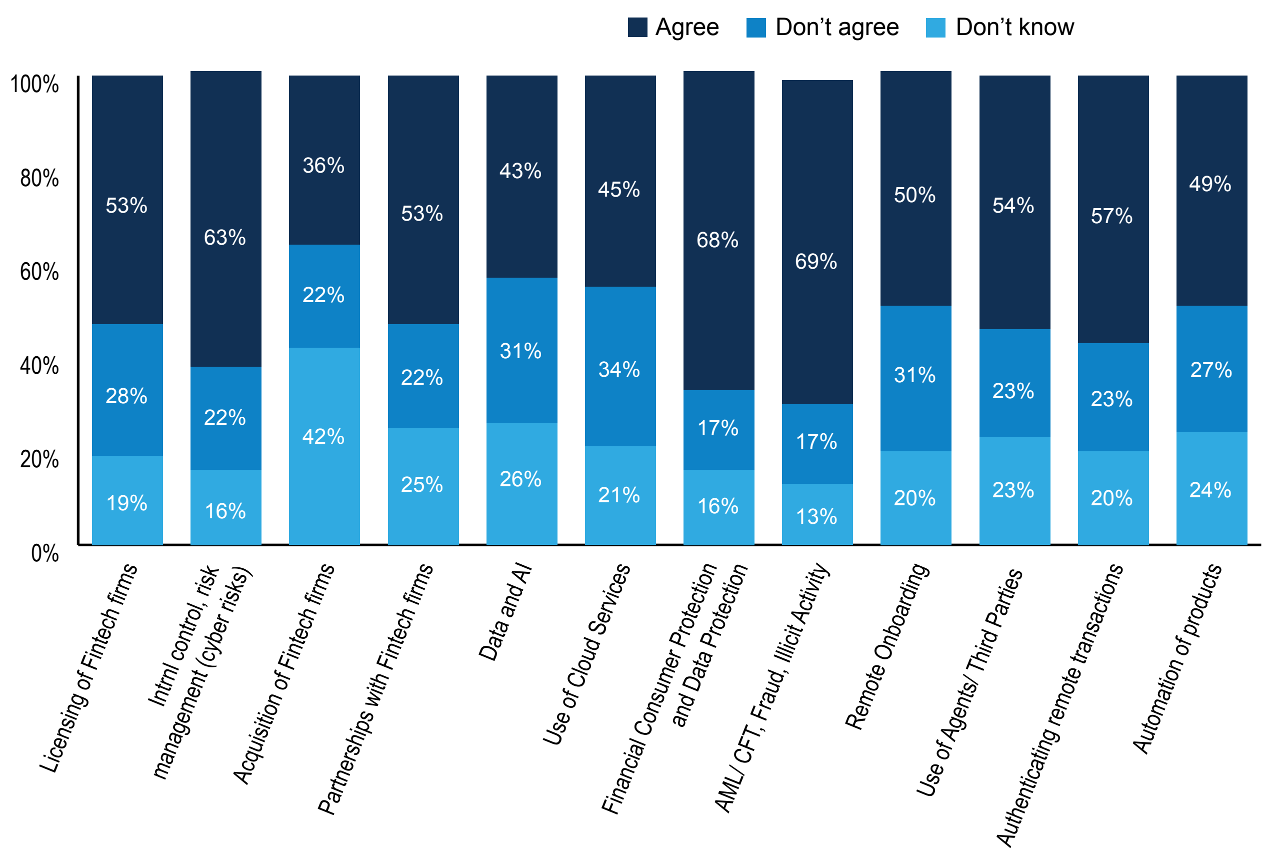
Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

40. Question 42: How would you characterize the overall regulatory and supervisory environment across your key markets with respect to enabling fintech and digital innovation by incumbents and new entrants? For more details of this question and the entire survey questionnaire, see appendix 1.

Regulatory guidance in new areas involving technology requires improvement.

Across a number of areas there was a need for significant work to improve regulatory and supervisory frameworks and guidance (question 43).[41] 63 percent supported existing regulations on internal controls and risk management, 67 percent on consumer protection and data privacy, and 68 percent on fraud and illicit financing activity (AML/CFT). Overall, 53 percent agreed with current licensing for fintech firms and new business models, though the percentage of agreement is lower for fintech firms (47 percent) and insurance and others (33 percent). A significant number of respondents chose 'Don't know' when asked whether they believed their regulatory and supervisory frameworks were fit for purpose, which could indicate that they had not yet encountered these issues while executing digital transformation plans. Another possibility is that regulatory guidance in these areas was not sufficiently well developed or well publicized. More than a quarter of respondents answered 'Don't Know' when asked whether regulatory frameworks are fit for purpose in areas such as acquisition of fintech firms (42 percent), data localization and AI (26 percent), and partnerships with fintech firms (25 percent) (see figure 20).

Figure 20. Is regulatory and supervisory guidance 'fit for purpose'? (all respondents)



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

41. Question 43: Is the regulatory framework and guidance in your key market (i.e. top market by revenue serviced by your team/ branch/ office) fit for purpose regarding fintech and digital transformation? For more details of this question and the entire survey questionnaire, see appendix 1.

See figure 21 for a regional heat map of responses on whether various types of regulations were 'fit for purpose.' Respondents in high-income countries and LAC regions had lower percentages of respondents that agreed regulatory guidance was 'fit for purpose' across most regulatory areas.

In terms of regulatory challenges, the 2019 CCAF-WB Global Regulator Survey documented that aligning multiple regulators is a challenge to regulation of online alternative finance activities in low and middle-income jurisdictions. The regulators in these jurisdictions normally do not have explicit statutory mandates for regulating online alternative finance activities. Regulators also reported a particular challenge in coordinating regulatory and supervisory work in 'multi-peak' jurisdictions with multiple regulators responsible for the same activities.[42]

Figure 21. Overall sentiment on whether regulatory and supervisory frameworks are 'fit for purpose.' (views by region) (percentage that agree)

Area of Regulation		EAP	ECA	LAC	MENA	SAR	SSA	High Income
Licensing and Partnerships	Licensing of Fintech firms	69%	48%	44%	58%	59%	62%	37%
	Acquisition of Fintech firms	44%	37%	29%	33%	38%	35%	35%
	Partnerships with Fintech firms	56%	58%	41%	58%	55%	57%	48%
New Technologies	Data and AI	54%	49%	29%	42%	48%	41%	39%
	Use of Cloud Services	51%	51%	46%	58%	32%	44%	40%
Conduct Risks	Financial Consumer Protection and Data Protection	77%	73%	64%	67%	68%	77%	48%
	AML/CFT, Fraud, Illicit Activity	90%	65%	69%	58%	77%	78%	43%
	Internal control and risk management including cyber risks	79%	68%	56%	67%	66%	54%	57%
Operational	Remote Onboarding	53%	47%	51%	45%	58%	56%	37%
	Use of Agents/ Third Parties	54%	60%	43%	50%	60%	64%	43%
	Authenticating remote transactions	66%	67%	45%	50%	59%	65%	41%
	Automation of products	61%	58%	37%	42%	50%	58%	33%

Lowest — Highest

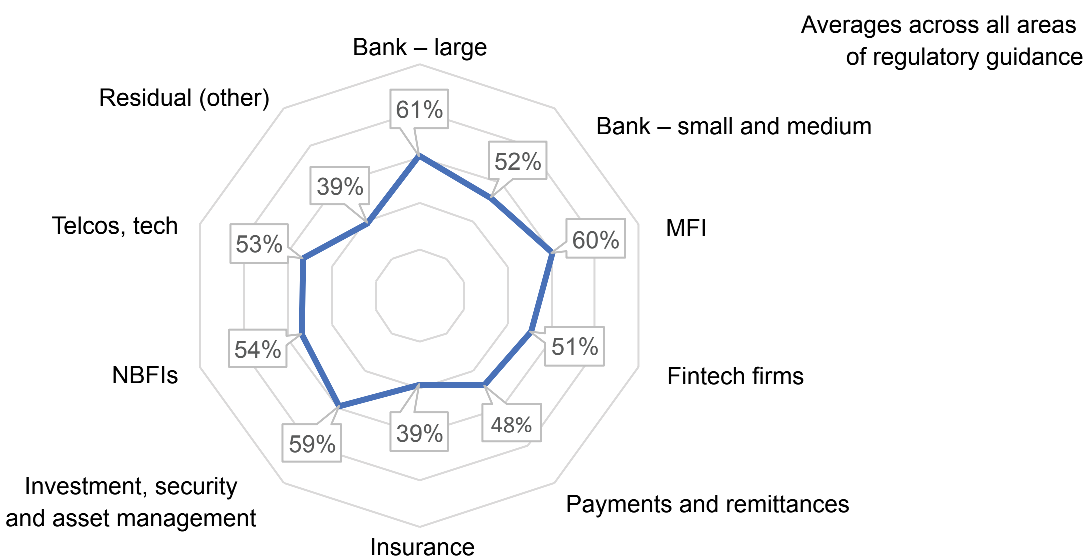
Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

42. World Bank and CCAF. 2019. Regulating Alternative Finance: Results from a Global Regulator Survey.

There were divergent views on regulation being 'fit for purpose' in several areas of regulation (question 43). Large banks, MFIs, and Investment, securities, and asset-management firms are overall the most satisfied, while insurance is least satisfied, particularly with remote onboarding. However, insurance companies are more satisfied (56 percent) than any other category about automation of new products and data and AI. Small and medium banks are less satisfied than large banks in every category of regulation. Figure 22 below represents the overall sentiment of various responding institution types on whether regulations are 'fit for purpose' (average sentiment across all types of regulation).

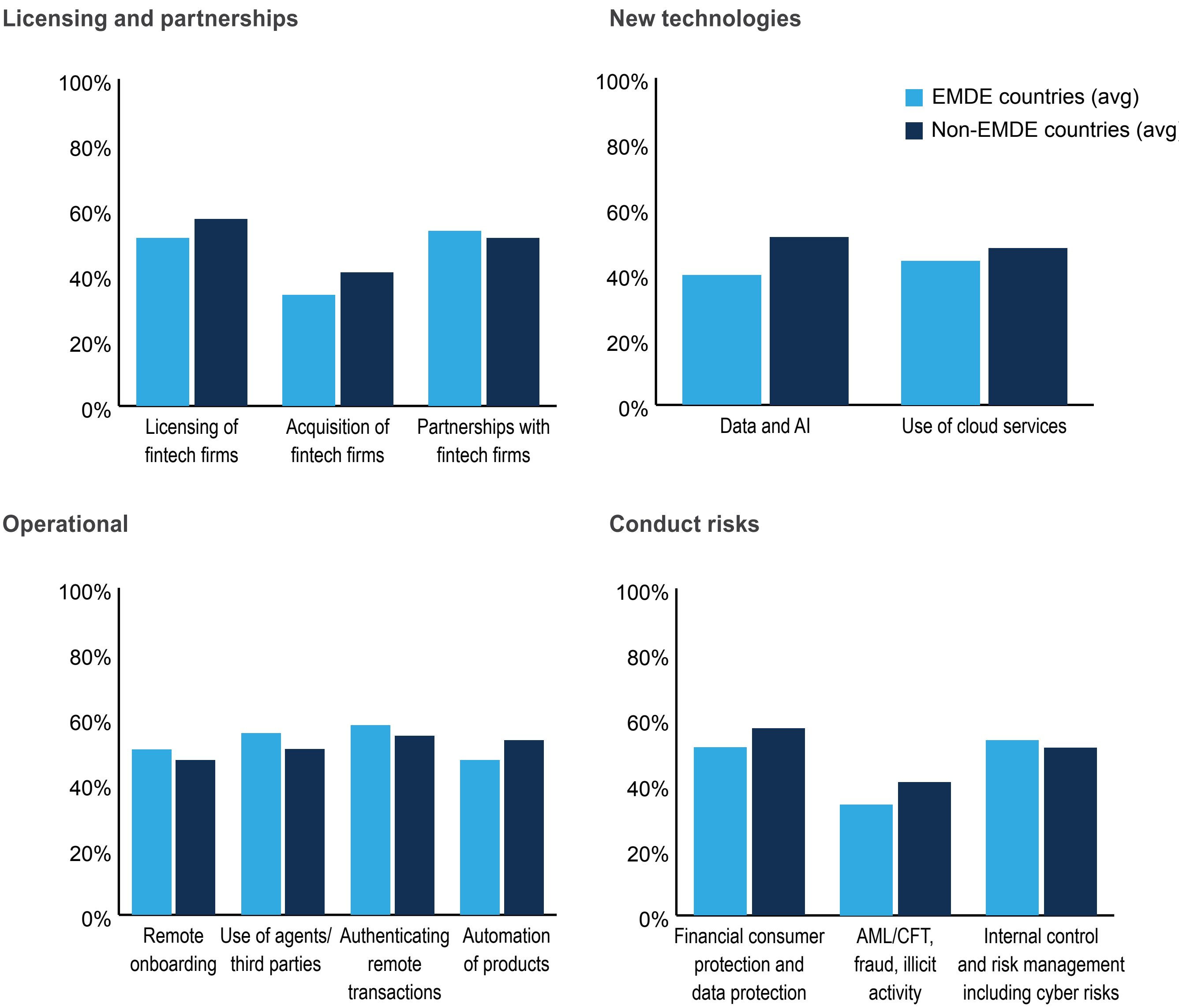
There were also important differences between EMDEs and non-EMDE countries. Respondents in EMDEs were more positive on regulatory frameworks pertaining to licensing and partnerships, and new technologies; but with significant variations for regulatory frameworks pertaining to operational and conduct risks. See figure 23 for a comparative picture of respondents in EMDE countries versus non-EMDE countries that agree regulations are 'fit for purpose' in various areas.

Figure 22. Overall sentiment on whether regulations are 'fit for purpose.' (views by sector/responding institution type) (percentage that agree)



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Figure 23. Are regulatory and supervisory guidance 'fit for purpose'? (percentage that agree)



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Insights from Survey Participants

“The financial regulatory framework often leaves banks in a situation of competitive disadvantage relative to non-bank providers of financial services. Most notably, the consolidated application of prudential requirements to banking groups implies the application of bank-level controls on all businesses within banking groups, even on those that are not related to the core banking business and compete with non-bank players that are, at best, only subject to activity-specific regulations.” (Bank based in the EU)

“Authorities still need to ensure there is a level playing field.” (Bank based in a high-income country)

“The development of a framework that enables companies such as ours to act as agency bankers on behalf of commercial banks has been tremendously helpful. However, central banking regulations currently in place impart several advantages on the mobile-money model over the agency-banking model. We do however believe that from a financial inclusion point of view it will be advantageous to have a common set of regulations for both agency bankers and mobile-money operators, thereby enabling fair competition and affording the agency-banking model the best chance of success.” (Payments provider in SSA)

“We are still missing adequate regulatory frameworks for crypto-currencies, crowdfunding, and open banking.” (Fintech firm in LAC)

“While the principle of technology neutrality is important, it is also essential that regulations consider the technologies where relevant. Take the example of crypto-assets, action is needed to address uncovered risks or to clarify the application of existing rules, including: AML vulnerabilities; pegging and conversion; regulated financial institutions’ exposures to crypto-assets; and consumer protections.” (Bank based in a high-income country)

According to several respondents, the most significant actions taken by regulators and supervisors in their respective jurisdictions included permitting e-KYC, remote onboarding and remote CDD. Some of the other regulatory actions include: permitting remote account opening or remote loan approvals; promoting use of digital payments, building regulatory sandboxes; permitting use of e-money; enacting payment systems laws and reforms (including PSD2 for EU countries); and permitting use of agent networks. However, on simplified KYC and CDD, it may be noted that 57 percent of the regulators that responded to GPS 2019 say that they do have different AML/CFT compliance standards for fintech firms compared to other financial sector players.

Several respondents highlighted that absence of a framework for remote onboarding or e-KYC was a major regulatory barrier. Some of the other common regulatory barriers cited by respondents included: unsuitable licensing laws, lack of licensing laws for fintech firms, outdated laws, unclear guidance or excessive restrictions on use of cloud-based services; lack of avenues for information sharing between financial institutions.

Several survey respondents noted the lack of regulatory frameworks for crypto-currencies. This rapidly-developing area was not covered directly in the survey. It will be an even stronger concern today, as digital currencies have proliferated and trading volumes (and volatility) have grown. Another paper in this series focuses on crypto-currency and CBDCs.[43]

The concerns with respect to level playing fields and lack of clarity in the application of regulations to new products and providers are mirrored in other studies of financial innovation. For example, a recent survey of firms[44] providing or using alternative data for financial services found that innovative credit scoring companies are not usually

43. What Does Digital Money Mean for EMDEs? *(Digital Money note)* by Erik Feyen, Jon Frost, Harish Natarajan, and Tara Rice
44. International Finance Corporation. September, 2021. The Emergence of New Data Ecosystems in Financial Services: Recent Developments in South East Asia.

covered under credit reporting legislation. In some countries credit scoring and rating are regulated, but the provision of scoring models is not. Data from banks is available to bureaus but not to other data analytics providers, and new types of lenders are not always required to report or share credit data as banks are. Data analytics entities are bound by data protection and privacy laws, if those exist in their jurisdictions, but there is an absence of clear regulation of non-traditional credit data and analytics providers with respect to their role in financial services.

From the regulators' perspective, the UNSGSA FinTech Working Group and CCAF (2019) reported that limited technical expertise within the regulator is the largest challenge or obstacle to regulatory innovation. Over 75 percent of regulators with a remit for fintech cited this. Limited funding or resources is also a significant issue, with 50 percent of regulators citing this as a challenge or obstacle.[45]

Some of the top areas in which regulators identified gaps in their existing regulatory frameworks in the GFS 2019 included crypto-assets, peer-to-peer lending, and mobile money and payment services. According to 77 percent of the regulators, fintech firms in their respective jurisdictions were subject to AML/CFT obligations. In this survey, 68 percent of respondents said that regulatory guidance for illicit financing (including AML/CFT) was fit for purpose. From a different perspective, 65 percent of the regulators who responded to the GFS 2019 believed they had established robust data privacy and data governance frameworks, and 62 percent said they had established minimum requirements for use of third-party service providers of fintech services.

Another finding from the GFS 2019 was that systematic monitoring of fintech developments was largely confined to institutions operating within each jurisdiction's regulatory perimeter. Most jurisdictions (65 percent) conducted some form of fintech surveillance, although most (60 percent) focused on institutions within their regulatory perimeter. The scope of surveillance covered sectors and activities led by payment systems (51 percent), money transfer systems (42 percent), and lending activities (36 percent). Additionally, the GFS 2019 found that fintech surveillance in most jurisdictions was mainly carried out through official data requests or through informal contacts with industry players.

Insights from Survey Participants

"We believe that current requirements by some authorities for signature put on paper or acceptance of only qualified electronic signatures is too restrictive and falling behind the concept of digital transformation." (Fintech firm based in ECA)

"There are disagreements /contradictions in the regulation of complete electronic work and the application and use of qualified electronic signatures." (Bank based in ECA)

"A lot of constraints for digital transformation stem from the lack of integration of external information systems and the absence of a vision and a national strategy for digitization." (Bank based in SSA)

"Grant virtual banking licenses that require digital transformation to start off from a high operating benchmark. This not only accelerate fintech innovation but also sustain financial stability." (Fintech firm based in EAP)

45. World Bank and CCAF. 2019. Regulating Alternative Finance: Results from a Global Regulator Survey.

4. Key Themes and Insights

4.1 Theme 1: Digital transformation of financial services is pervasive, strategically imperative, and accelerated by the COVID-19 pandemic

Most respondents confirmed that digitization of finance is both pervasive and imperative, a pattern that held across different types of institutions and regions (question 18).[46] While fintech firms were inherently more digital, 82 percent of all respondents across all types of institutions expected an increase in the digital proportion of key activities such as sales (for example, customer marketing and acquisition) and account opening (figure 3).

Respondents expected digitization to deliver significant benefits to customers and the institutions themselves, albeit with some potential risks. Increased innovation (73 percent), improved customer experience (74 percent), improved product design (67 percent), increased accessibility and outreach to new customers (62 percent), and increased use of financial services in the economy (57 percent), all figured as benefits that would be realized to a great degree in the next five years (question 21).[47] According to regulators that responded to the GFS 2019, the top three benefits of fintech included increased innovation (78 percent), increased access to financial services (62 percent), and increased competition and lower barriers to entry (41 percent). 78 percent of regulators also stated that fintech would increase financial inclusion for households. This was consistent with views of industry respondents in this survey. Furthermore, the expectation that fintech and digital transformation will lead to greater access to financial services and greater use was also consistent with the findings of the 2019 CCAF-WB Global Regulator survey.[48]

More respondents believed that their product lines will have more potential to reduce costs through digitization compared to the risk of losing customers or profits. This is demonstrated in figure 24. While 71 to 82 percent of respondents across responding institution types believed there was potential to reduce costs, less than 63 percent of the respondents in any category saw a risk to profit or the risk of losing customers. This was in keeping with the overall trend of optimism that the benefits of fintech and digital transformation will outweigh the risks and downsides (question 29).[49]

Areas of concern included operational, cyber, and integrity risks (63 percent), data protection/privacy (59 percent), and disintermediation of traditional providers (45 percent) (question 22).[50] **Given this last concern, it was worth considering why traditional players are sanguine about the benefits of fintech and digital transformation.** One reason may be anticipated cost savings. 55 percent of respondents indeed expected increased operational and cost efficiencies to a great degree and a further 33 percent expected increased operational and cost efficiencies to a moderate degree. Alongside broader access and increased use of financial services, this would deliver benefits even as

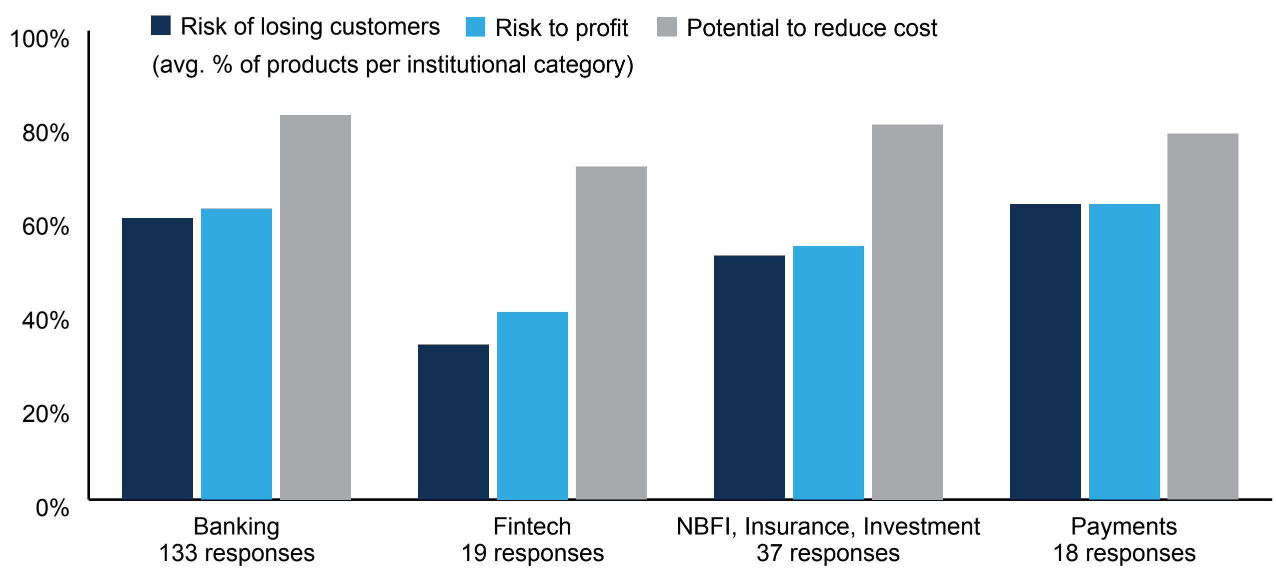
46. Question 18: Use of digital channels (e.g., mobile, internet, POS) and processes in your key markets in 2019: What proportion of your new customers originate through digital channels? What proportion of your sales originate through digital channels? What proportion of your account opening is fully digital (i.e. not paper-based or face-to-face, including those that are close to end-to-end digital? What proportion of activities (e.g. make a payment or apply for a loan) by your customers are fully digital (i.e. not paper-based or face-to-face)? See appendix 1 for full survey questionnaire.
47. Question 21: To what degree do you think these potential benefits of fintech and digital transformation will be realized in your sector in the next 5 years? See appendix 1 for full survey questionnaire.
48. World Bank and CCAF. 2019. Regulating Alternative Finance: Results from a Global Regulator Survey.
49. Question 29: To what extent are your business lines affected by digital transformation of the market? For the details of question 29 as well as the entire survey questionnaire, see appendix 1.
50. Question 22: To what degree do you think these potential risks? For the details of question 22 as well as the entire survey questionnaire, see appendix 1.

it comes with increased entry and competition. It is equally possible that respondents expected new entrants, but don't perceive a significant risk of losing customers and see the potential to reduce costs as higher than the risk to profits (figure 24) (question 29). As described above, many incumbent institutions did not expect these new competitors to change core customer relationships (figure 10).

COVID-19 accelerated the need to digitally transform customer channels, product adaptation, and internal processes. More than 80 percent of all respondents felt that COVID-19 increased the need for fintech and digital transformation and made digitization in customer channels, product adaptation, and internal processes a strategic priority. This finding broadly held across all types of institutions.

Risk-benefit[51] comparisons showed that all participants thought benefits outweighed risks. However, on a relative basis, large banks perceived lower net benefit from fintech and digital transformation. Technology-based entities such as big tech and fintech firms perceived the largest net benefit, while insurance providers also perceived a net benefit above the average for all participants, which was correlated to their risk perception being among the lowest from all participants. In contrast, banks, MFIs, telcos, and payment services providers had the lowest net benefit perception (figure 26).

Figure 24. Risk of losing customers, Risk to profits, and Potential to reduce costs from fintech and digital transformation. (views by sector/responding institution type)

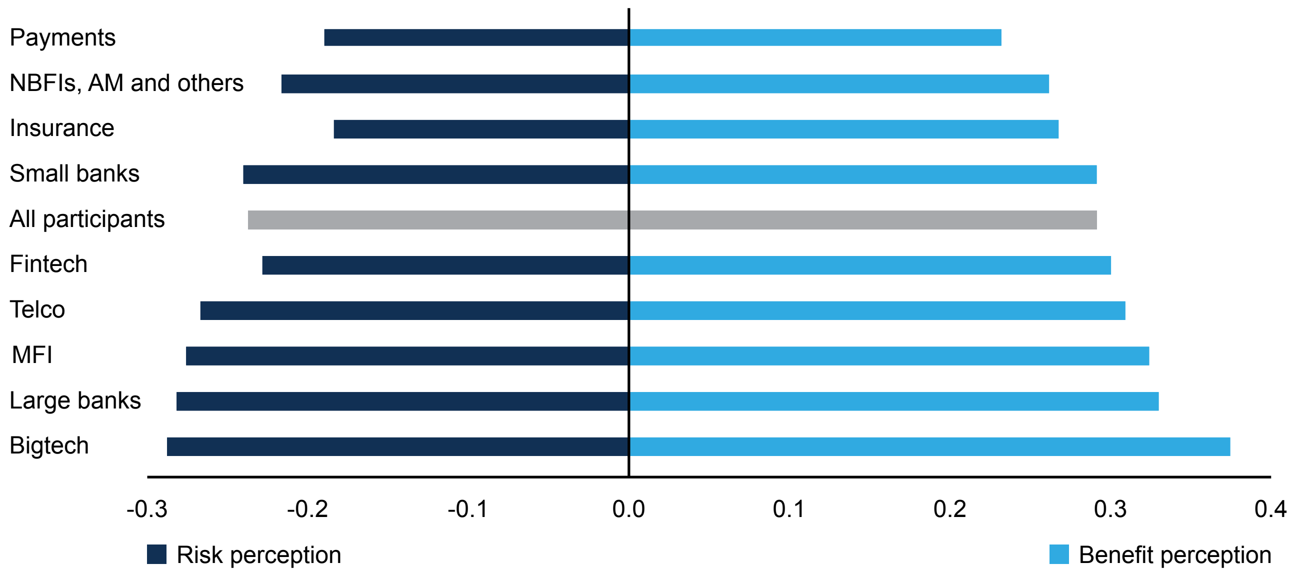


Notes: Percentages represent aggregated averages across responding institution types and product lines. The 'Banking' category includes large banks, small and medium banks, and MFIs. Values above the bars represent the numbers of respondents.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

51. The benefit perception was calculated in a similar way to the risk perception; an incremental value was assigned based on increased benefit perception: 1=Negligible, 2= Not much, 3=Moderately and 4=Great degree. Then, risks are ranked based on the cumulated value of responses for each type of risk.

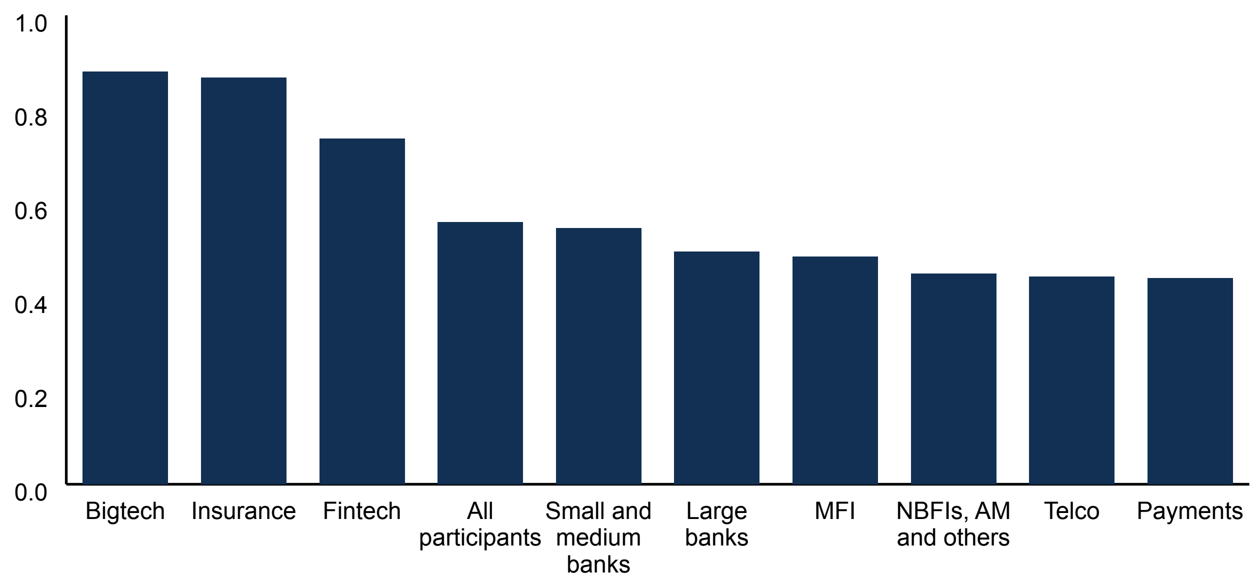
Figure 25. Risk/benefit perception. By responding institution type



Note: Responses have been aggregated across product lines and responding institution type. Numbers next to the bars represent the numbers of respondents. The 'Banking' category includes large banks, small and medium banks, and MFIs.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Figure 26. Net benefit[a]



a. Net benefit is calculated as average risk perception minus average benefit perception

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

4.2 Theme 2: The future is "Phygital"

While products, processes and channels are digitizing, a combination of physical and digital was widely expected to prevail. Half of banks and remittance operators, and 60 percent of MFIs, NBFIs, and payments operators, expect business to be conducted largely through physical locations (question 25).[52] Many traditional banks said they expected to operate physical locations to maintain customer relationships, for sales and marketing, and as sites where customers could seek financial advice. Some banks in EMDE countries went further and said some customers would resist the use of digital channels; therefore physical locations could not be done away with. 80 percent of fintech firms, on the other hand, do not expect to rely significantly on physical locations.

Banks expected to continue serving customers through their own delivery channels while others looked to more diverse channels and partners. 71 percent of large banks felt they needed to operate their own digital channels while 60+ percent of all other categories saw this as something that could be outsourced. To the extent that physical locations continued to be important, traditional institutions expected to continue using their own branches or outlets. The exception was in insurance, which has long used networks of brokers and agents to reach customers. 80 percent of banks expected the future physical locations to be their own branches, while fintech firm, payments, telecom, and tech companies and insurance expected to use agents (question 32).[53] More than 60 percent of respondents saw managing the account and customer relationship management as core functions that they would not outsource. That said, around half of respondents were open to outsourcing customer due diligence and onboarding and 78 percent would outsource call/customer service centers (question 32).

4.3 Theme 3: Customer relationships are changing, and incumbents and new entrants perceive customer relationship preferences very differently

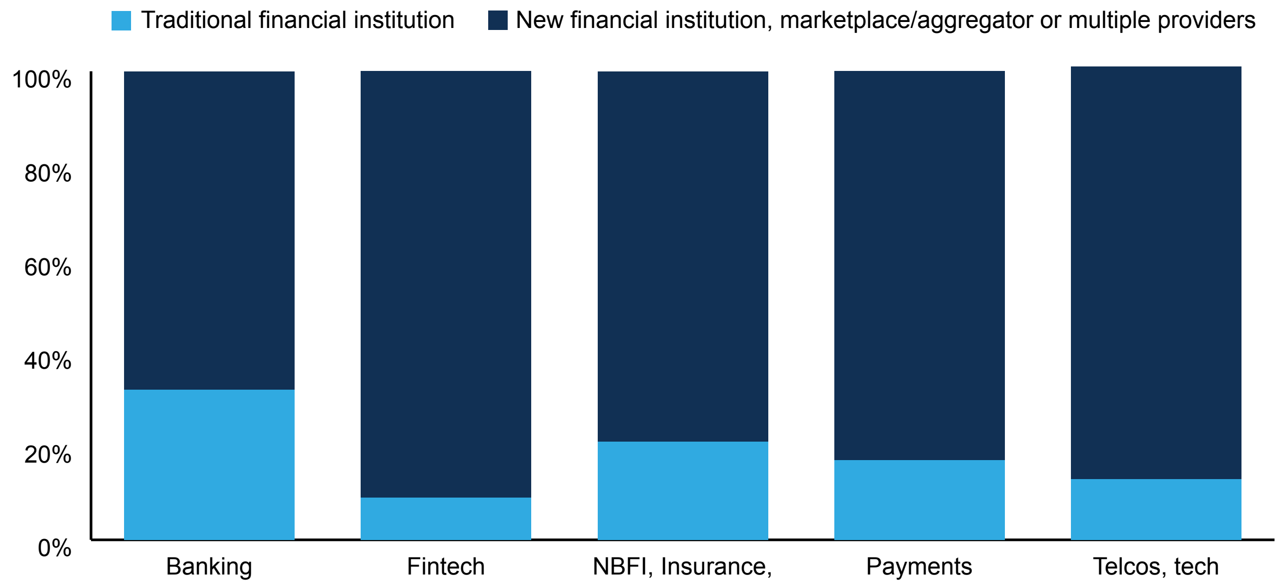
Who will "own" the consumer relationship is in flux. In most value chains, the entities closest to the consumer earn the highest margins, so customer ownership can be a key determinant of profitability. Banks and others have diverging views on customer preferences with respect to their core financial services provider (FSP). The survey probed this along two dimensions: whether customers will have a single core relationship or use multiple providers (directly or via a marketplace or platform player), and whether relationships would focus on traditional or new providers (question 24).[54] A third of banks expected consumers to favor single provider relationships with a traditional provider. Payments, telecom companies, insurance, and fintech firms were more likely to project that consumers would be willing to assemble their own packages from multiple providers or use aggregators. Fintech firms, payments and investment companies, NBFIs, and MFIs also largely expected customers to use a single provider, but they overwhelmingly expected it to be a new type of core relationship, that is, with a fintech firm, challenger bank, platform, or marketplace (figure 27). Insurance is again an outlier among FSPs, with the majority expecting customers to use multiple providers with no single core relationship (question 24).

52 Question 25: In the medium term (next 5 years) will a significant portion of your business be conducted through physical locations? For the complete survey questionnaire, see appendix 1.

53 Question 32: What operations and processes do you consider core to your business such that you would not outsource or partner for? For details of this question and the complete survey questionnaire, see appendix 1.

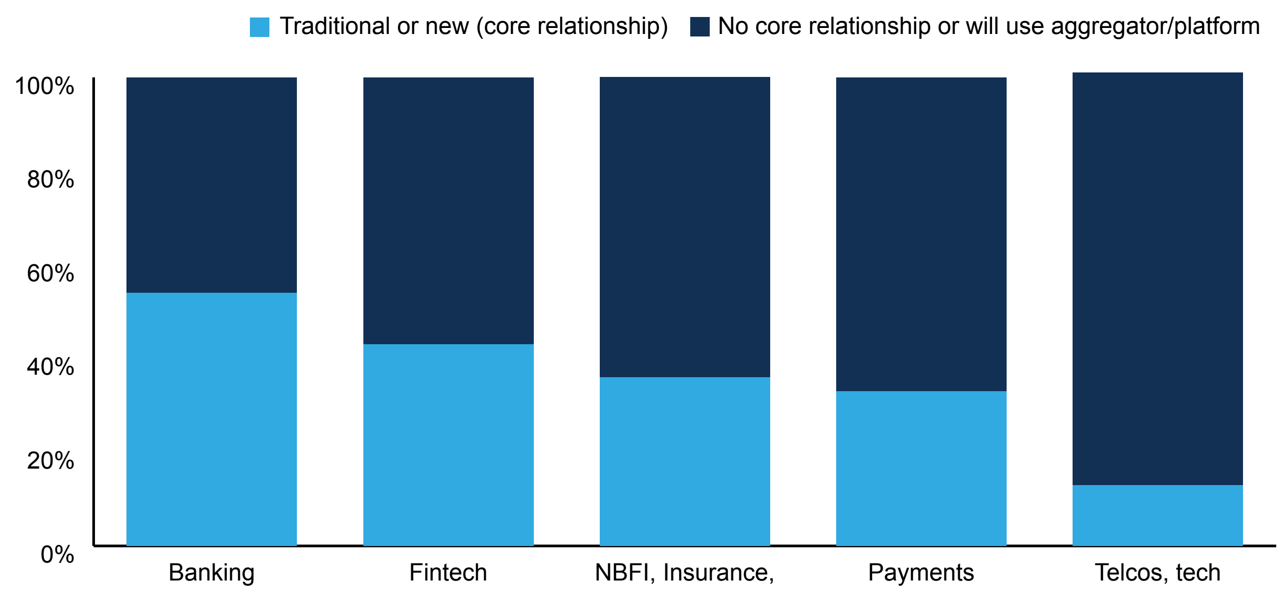
54 Question 24: In general, over the medium term (next 5 years) do you expect retail and SME customers to: a) Have a single core financial relationship with a traditional financial institution (e.g., a bank) and use other providers only for selected specific financial products/needs; b) Have a single core financial relationship with a new type of financial institution (for example, fintech firms, challenger banks, digital-only banks, big tech firms) and use other providers only for selected specific financial products/needs. c) Have a single core relationship with a marketplace or platform that aggregates access to multiple third-party products and services; d) Use multiple different providers with no single core relationship. e) Other (please provide a brief description). For the full survey questionnaire, see appendix 1.

Figure 27. Relationships with traditional financial institutions versus with new types of providers (views by sector/type of respondent)



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Figure 28. Single core relationship versus multiple providers (views by type of respondent)



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

This is consistent with the disaggregation trend described in the Market Structure Note,[55] **which is part of this series.** Most respondents acknowledged the disaggregation of financial services: 54 percent of all respondents expected customers to obtain services from multiple providers, either independently assembled or via a third-party platform or aggregator. Figure 28 shows the share of each responding institution type that believed customers will use atomized providers, assembling a set of services themselves or via a platform or marketplace. Most respondents expected disaggregated business models (possibly reassembled via a platform or marketplace) to dominate, and even 46 percent of banks expected these atomized approaches to dominate. Divergence across types of respondents could be driven by different baseline experiences as well as different views regarding customer ownership and convenience.

4.4 Theme 4: Banks and fintech firms think they are not competing with each other

Banks and fintech firms had divergent perceptions of whom they are competing with. Respondents tended to see the greatest competitive threat coming from institutions that are similar to them. Overall, 70 percent of respondents indicated that fintech and digital transformation had the potential to disintermediate traditional players. However, banks mostly saw other banks and neo-banks as bigger competitive threats than fintech players. Similarly, fintech firms appeared more concerned about competing against other tech players and neo-banks than against traditional banks (figure 12) (question 31).[56]

Expectations with respect to customer preferences can be viewed alongside the data on anticipated sources of competition (figure 12), which shows that banks saw themselves mostly in competition with existing or neo-banks, while fintech firms saw themselves competing with new providers, including other fintech firms and neo-banks. Consistent with this view, banks still saw customers as preferring a core provider relationship and tended to see themselves as the largest gravitational force at the center of the customer's financial orbit. Fintech firms were more inclined to see new types of players (not necessarily themselves) as the aggregators of choice, and thus perceived they were competing more with other new providers than with traditional banks.

If all respondents observed a change and thought they were positioned as winners, they could not all be right. While there are different market segments, traditional banks, neo-banks, and many fintech firms are all aiming at mass markets. These mass markets may behave differently across countries due to culture, regulation, infrastructure and other factors. Banks may only be able to hold their position at the center of their customer's financial worlds to the extent that they in fact become more like tech platforms and less like traditional providers. One bank put it this way, "Banks will increasingly be platforms aggregating different services in a complex relationship with other providers like telcos, fintech firms, and other participants in the payment services space."

55 Fintech and the Digital Transformation of Financial Services: Implications for Market Structure and Public Policy (Market Structure note) by Erik Feyen, Jon Frost, Leonardo Gambacorta, Harish Natarajan, and Matthew Saal.

56 Question 31: In the medium term (next 5 years), to what extent will you face competition from: a) Traditional financial institutions; b) Digital-only banks /neo-banks; c) Foreign traditional financial institutions entering the markets; d) Telecom operators; e) Local non-bank fintech firms; f) Foreign fintech firms; g) Big tech competitors (for example, Google, Amazon, Facebook/ WhatsApp, Baidu, Yandex, Jumia, Lazada, Grab, etc.); h) Other non-financial companies (e.g. logistics companies, large retailers or distributors, etc.). For the complete survey questionnaire, see appendix 1.

4.5 Theme 5: Most financial services markets will be more competitive, but also more concentrated (the "barbell effect")

The vast majority of respondents, 78 percent overall, believed there will be increased competition and lower barriers to entry in the next five years (question 21).[57] Yet when asked about the market structure for key product markets, responses indicated a bias towards more, rather than less concentration (see figure 14). Overall, expectations for increased concentration were greatest for payments and remittances. Insurance respondents had less expectations of increased concentration than others. Responses were more evenly split for deposits, savings, investment, retail, and MSME lending, with slightly more respondents expecting greater concentration. The opposite was true for corporate lending, mortgages, and capital markets, there was a bias towards less concentration in the overall responses. The expectations for increased competition were consistent with the WBG-CCAF 2019 survey on regulators' views of the impact of alternative finance on their markets (question 30).[58]

Responses differed by type of institution and product market. A plurality of banks saw demand deposits, savings, investments, and lending product markets getting more concentrated, while other types of respondents saw potential for less concentration. This may be another indication of the bifurcated perspective in which incumbents saw less risk to their markets than is implied by the expectations of their competitors. In every category except corporate lending and investment banking, more fintech firms predicted greater concentration than less (question 30).

Most respondents believed there will be increased competition and lower barriers of entry, but that markets will at the same time become more concentrated. Figure 29 shows the numbers and percentages of respondents under each responding institution type that believed entry barriers will reduce and there will be increased competition in the next five years (question 21).[59] Contrast this with figure 14, where the Net Concentration Expectation shows that, other than NBFIs, all other types of respondents believed their product markets will become more concentrated overall (question 30).

Expectations of increased entry and competition on the one hand, and a tendency towards concentration on the other, is consistent with the 'barbell' hypothesis developed in the Market Structure Note,[60] which is part of this series. According to that hypothesis, innovation and an enabling regulatory environment permit the entry of new players while reduced fixed costs permit them to be viable serving niche markets. At the same time, economies of scale and scope as well as customer preferences for simplicity (one-stop-shopping) would favor those multiproduct players that scale up and concentrate market share. It is also notable that many new entrants in the insurance sector partner with incumbents rather than compete directly. A situation of low entry barriers and increased competition on the niche provider-side of the market, and concentration among a few large multi-product players on the other end of the spectrum, is consistent with this survey's results.

In the GFS 2019, more than 91 percent of regulators believed that fintech would increase competition in the payments, clearing, and settlements sector. 69 percent believed that it would increase competition in credit and deposit services, and 48 percent said so for insurance services. In contrast, 57 percent of the industry respondents in this survey offering payments services expected the payments market to become more concentrated, while only 33 percent believed there would be less market concentration in the next five years. The industry respondents also leaned towards the view

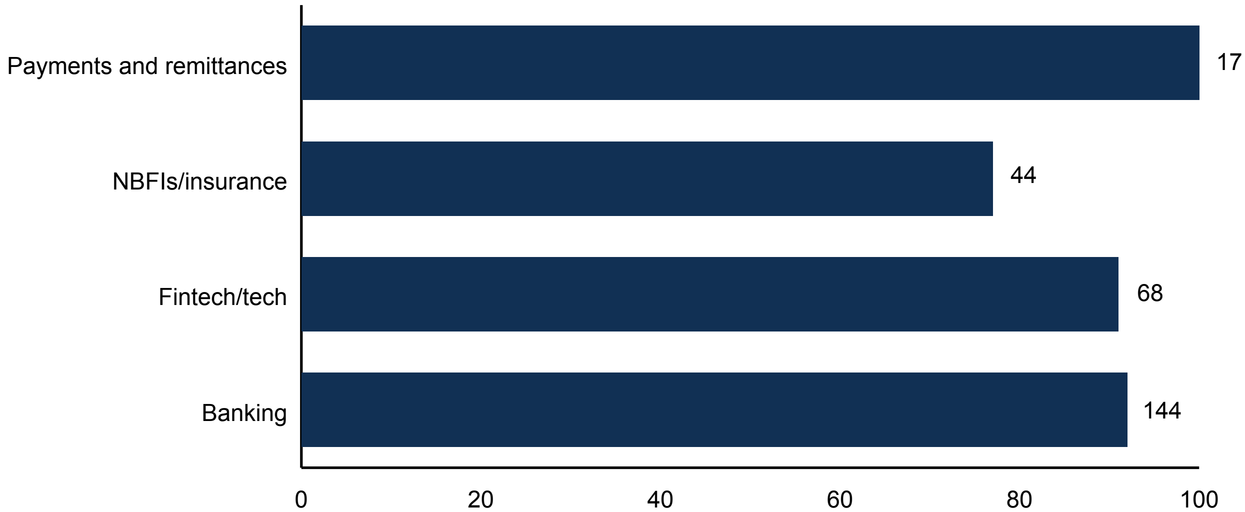
57 To what degree do you think these potential benefits of fintech and digital transformation will be realized in your sector in the next 5 years? a) Increased competition and lower barriers to entry; b) Increased innovation (e.g., new business models, products, and services); c) Improve product design to better meet user needs; d) Improved customer experience; etc. For more details of this question and for the complete survey questionnaire, see appendix 1.

58 Question 30: How will the market structure of your key product markets evolve in the medium term (next 5 years) in terms of number of providers? For more details of this question and the complete survey questionnaire, see appendix 1.

59 Question 21: To what degree do you think these potential benefits of fintech and digital transformation will be realized in your sector in the next 5 years? For further parts of this question and the complete survey questionnaire, see appendix 1.

60 Fintech and the Digital Transformation of Financial Services: Implications for Market Structure and Public Policy (Market Structure note) by Erik Feyen, Jon Frost, Leonardo Gambacorta, Harish Natarajan, and Matthew Saal.

Figure 29. Reduced barriers of entry and increased competition (percentage that agree; views by type of respondent)



Notes: Numbers next to the bars represent the numbers of respondents.

Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

that the market would be more concentrated for demand deposit accounts, personal and MSME lending, and savings and investments, but less concentrated for insurance, investment banking, and capital markets. However, as noted above, market concentration (typically measured with market share of the largest players) can co-exist alongside entry and competitive, or at least contestable, markets.

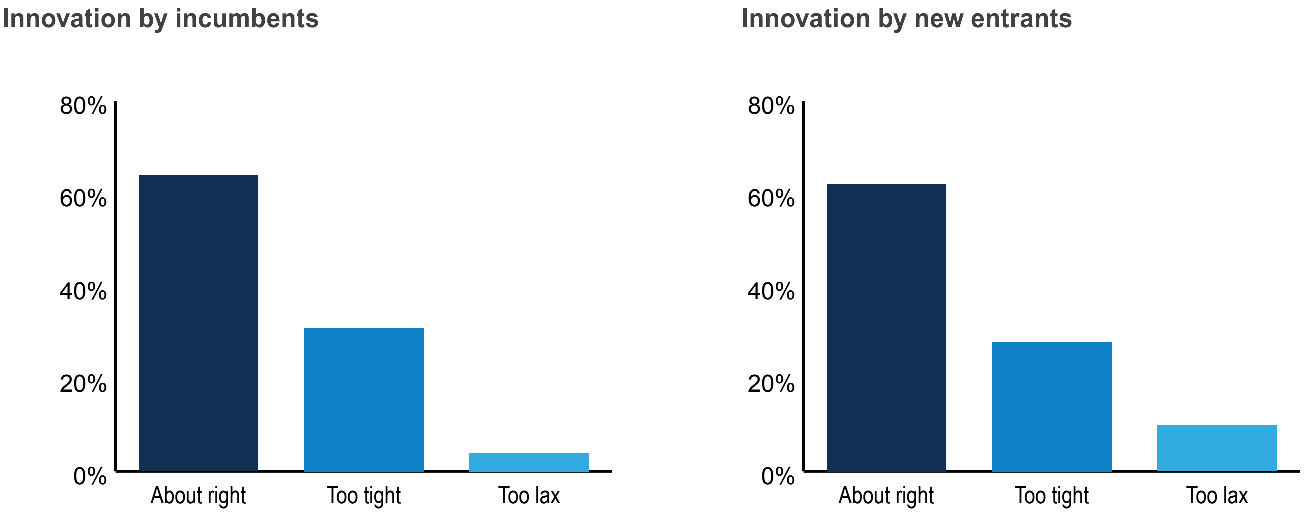
4.6 Theme 6: Regulatory barriers to innovation need attention

Despite the perceived favorable regulatory environment for innovation by incumbents and new entrants across 9 out of 12 specific regulatory areas, less than 60 percent of respondents believed their regulatory and supervisory frameworks and guidance was "fit for purpose." For example, majorities of respondents across types characterized the overall regulatory and supervisory environment with respect to enabling innovation as 'about right,' yet a sizeable proportion of respondents categorized it as 'too tight' (figure 30). In the descriptive responses, respondents cited lack of regulatory frameworks for specific products or technologies, and differential impact of regulations on different categories of providers, resulting in an unlevel playing field as regulatory and supervisory challenges.

With respect to enablement of innovation, differences in perception tended to line up with industry segments. 46 percent of fintech firms and tech companies felt the regulatory and supervisory environment for innovation by *new entrants* was too tight, while only 21 percent of traditional financial institutions[61] saw this as a problem (question 42),[62] and 12 percent of incumbents thought regulation of innovation was too lax. The gap was in the same direction, though much smaller, on the question of whether regulation and supervision adequately enabled innovation by *incumbents*: 39 percent of fintech firms and tech companies saw this as too tight, compared to 29 percent of traditional financial institutions. This

61. Comprising large/small and medium banks, MFIS, NBFIs, investment/securities/asset-management companies, insurance companies, payments and remittance providers.
62. Question 42: How would you characterize the overall regulatory and supervisory environment across your key markets with respect to enabling fintech and digital innovation by incumbents and new entrants? For more details of this question and the complete survey questionnaire, see appendix 1.

Figure 30. Regulatory and supervisory environment for enabling innovation



Note: Traditional FIs in this graph comprise large banks, small and medium banks, MFIs, payments and remittance providers, NBFIs, investment/securities/asset management companies, and insurance companies.

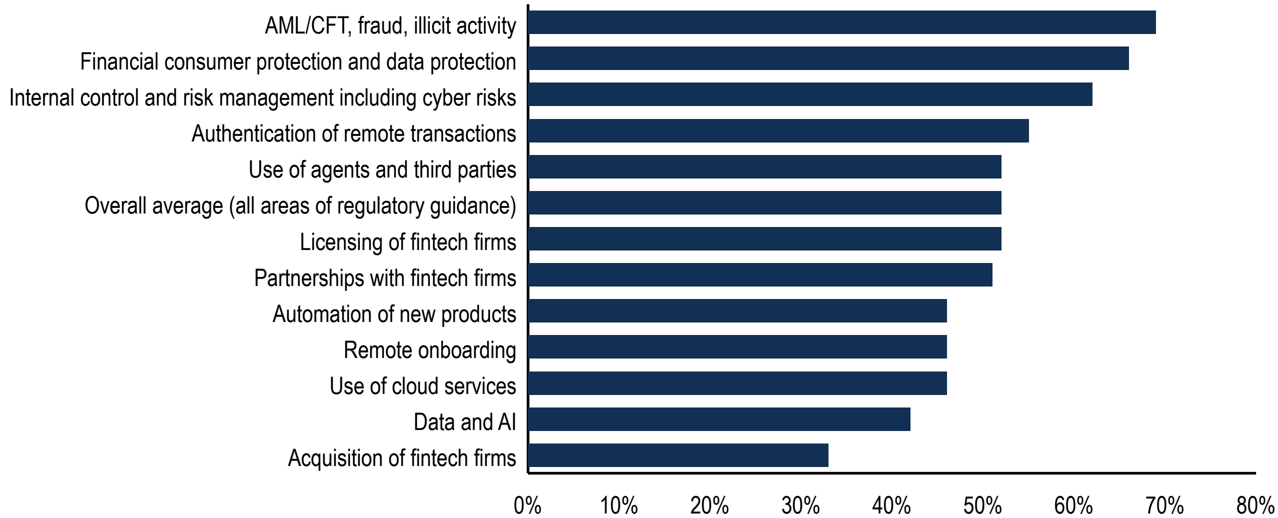
Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

may have reflected the B2B nature of some fintech firms; 50 percent of the B2B fintech firms felt that regulation and supervision was too tight. (question 42)

A granular analysis of the perceptions of "fit for purpose" by different regulatory areas shows that there is significant scope for regulatory development (figure 31). Respondents' views of whether the regulation and regulatory guidance was 'fit for purpose' were above 60 percent for only three out of twelve areas covered. While regulation is not a popularity contest, the fact that 30 to 40 percent or more of market players felt regulations needed to be updated merits some attention. Regulatory guidance in areas such as acquisition of fintech firms (33 percent), data localization and use of cloud services (46 percent), and artificial intelligence (42 percent) were found to be more lacking. While respondents were positive overall about regulations on issues such as application of financial consumer protection and data privacy rules (66 percent, question 43),[63] and rules related to fraud and illicit activity (AML/CFT) (69 percent, question 43), respondents in high-income countries were less positive than EMDE respondents regarding these areas. The latter two could be deserving of additional attention by regulators, given survey responses with respect to the extensive willingness to outsource data center operations. Partnerships and outsourcing, use of third-party agents and channels is another area where industry respondents (other than large banks and MFIs) saw room for improvement. Regulations covering remote onboarding and account opening had the approval of only 46 percent of the respondents. This was consistent with current and future expectations on the use of digital channels and processes (question 18,[64] figure 3); digitized account opening was expected to increase, but at a lower rate than the expected increase in customer origination and sales through digital channels. Comments from respondents also reflected a need to improve digital KYC and onboarding. Regulators might consider revisiting this area to meet the projected increased use of digital channels for customer acquisition and onboarding (82 percent), a trend that has been reinforced by the COVID-19 pandemic.

63. Question 43: Is the regulatory framework and guidance in your key market (i.e. top market by revenue serviced by your team/ branch/ office) fit for purpose regarding fintech and digital transformation? For more details of this question and the complete survey questionnaire, see appendix 1.
64. Question 18: Use of digital channels (e.g., mobile, internet, POS) and processes in your key markets in 2019: What proportion of your new customers originate through digital channels? What proportion of your sales originate through digital channels? What proportion of your account opening is fully digital (i.e. not paper-based or face-to-face, including those that are close to end-to-end digital? What proportion of activities (e.g. make a payment or apply for a loan) by your customers are fully digital (i.e. not paper-based or face-to-face)? See appendix 1 for full survey questionnaire.

Figure 31. Is regulatory guidance 'fit for purpose'? (Percentage of respondents that agree)



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Appendix 1: Survey Questionnaire

Section 1: Introduction

IMPORTANT NOTES:

- This document is for reference only.
- The questions on the online survey platform are final and in case of any inconsistency between the questions in this document and on the online survey platform, please follow the instructions on the online survey platform.
- Numbering of questions might differ on the online survey platform due to operation of survey logic.

Definitions

Digital financial services (DFS). Financial services which rely on fintech for their delivery and use (fintech is defined below). Financial services include payments, savings, credit (from any type of provider, including banks, microfinance institutions, non-bank financial institutions, online marketplaces and other platforms or providers), insurance, investment, and financial advice.

Fintech. Advances in digital technology (e.g., web, mobile, cloud, machine learning, distributed ledger) that have the potential to transform the provision of financial services spurring the development of new – or modify existing -- business models, applications, processes, and products.

Digital transformation. The process of adopting fintech by incumbent financial institutions.

Fintech firm. A new entrant in the financial sector which specializes in offering digital financial services.

Abbreviations

AML/CFT. Anti-Money Laundering/ Countering Financing of Terrorism.

API. Application Programming Interface.

B2B. Business to business.

B2B2C. Business to business to customer.

B2C. Business to customer.

IT. Information Technology.

MSME. Micro, Small, and Medium-sized enterprises.

SME. Small and Medium-sized enterprises.

Section 2: Details of your organization

1. Name of organization:

2. Contact person:

3. Type of company/ business (select all that apply):
   a) Traditional commercial bank (other than a digital-only bank)
   b) Non-bank payments service provider
   c) Non-bank remittance service provider
   d) Microfinance institution
   e) Insurance company
   f) Specialized (mono-liners), non-bank financial institution (leasing, consumer finance, factoring, mortgage broker)
   g) Fintech firm
   h) telecom provider
   i) bigtech company (e.g., social media, e-commerce, online search)
   j) other (please describe):

4. If you selected Fintech firm in the previous question, what describes your business the best:
   a) domestic payments
   b) international payments and/or remittances
   c) alternative finance (e.g. marketplace finance, crowdfunding etc.)
   d) digital-only banks /neo-banks
   e) savings and investments
   f) insurtech
   g) other (please describe in the free form below)

5. Year of establishment:

6. Headquarters (global headquarters):

7. Where is your office/ branch/ team primarily located?

8. How many countries does your company/ institution operate in? (including through subsidiaries, group companies, or joint ventures)

9. If your office/ branch/ team serves multiple countries, please name up to the top 5 countries of operation by revenue with the one generating the highest revenue listed first:

10. % of gross revenues in emerging economies

11. Ownership
    a) Majority-owned by the domestic investors
    b) Majority-owned by foreign investors
    c) Majority-owned by the State or state-owned investor

12. Total revenue (2019, USD millions)

13. Total assets (2019, USD millions)

Section 3: Target segments in the key markets where your team operates or offers its services in 2019:

Please respond from the overall perspective of the key markets in which your business/ organization operates.

14. What customer segment is your main focus (select all that apply)
    a) Retail
    b) MSME (traditional banker-customer relationship)
    c) Corporate (traditional banker-customer relationship)
    d) B2B (services provided to another financial institution – e.g. credit scoring, clearing services)
    e) B2B2C (services provided to financial institutions or businesses to enable them to provide services to their customers – e.g. loan origination through marketplace lending)

15. How many customers do you have in total across your key markets (2019) (for B2B2C provide end users served)
    a) 1 -10
    b) 10 -100
    c) 100 - 1000
    d) 1000 – 10,000
    e) 10,000 – 100,000
    f) 100,000 – 1 million
    g) Greater than 1 million

16. Are your customers predominantly located in rural areas?
    a) Yes
    b) No

17. Approximately what proportion of your customers are:
    a) male
    b) female
    c) juristic personalities (other companies, firms)
    d) other
    □ unknown/not tracked

18. Use of digital channels (e.g., mobile, internet, POS) and processes in your key markets in 2019:

Customer sales/ origination:

	Today					**In 5 years**			
	0-25%	**25%-50%**	**50%-75%**	**75%-100%**	**Don't know**	**Increase**	**Decrease**	**Stay about the same**	**Don't know**
What proportion of **your new customers** originate through digital channels?									
What proportion of **your sales originate** through digital channels?									

Customer activities:

	Today			**In 5 Years**		
	High	**Medium**	**Low**	**High**	**Medium**	**Low**
What proportion of your **account opening** is fully digital (i.e. not paper-based or face-to-face, including those that are close to end-to-end digital?						
What proportion of **activities** *(e.g. make a payment or apply for a loan)* by your customers are fully digital (i.e. not paper-based or face-to-face)?						

19. How has the COVID-19 crisis affected the need for digital transformation in your key markets in the following areas:

	Increased the need	**Decreased the need**	**No change/ Same as before**	**Don't know/ Can't say**
Customer channels				
Internal processes				
Product adaptation				

Section 4: Market developments

Please respond from the overall perspective of the key markets in which your business/ organization operates.

20. How are fintech and digital transformation of financial and non-financial services affecting your business?

	Very positively	Somewhat positively	Negligible impact	Somewhat negatively	Very negatively	Don't know
Fintech and digital transformation in **financial services** beyond your own company are affecting your business						
Digital transformation of **non-financial businesses** in the rest of the economy *(e.g., retail, e-commerce, media)* are affecting your business i.e., impacting customer needs and demands for financial services						

21. To what degree do you think these potential benefits of fintech and digital transformation will be realized in your sector in the next 5 years?

	Great Degree	Moderately	Not Much	Negligible or not at all	Don't know
Increased competition and lower barriers to entry					
Increased innovation *(e.g., new business models, products, and services)*.					
Improve product design to better meet user needs					
Improved customer experience					
Lower costs to users					
Increased accessibility and outreach to new customers					
Increased operational and cost efficiencies.					
Improved risk management *(e.g., fraud, credit underwriting, operational risk)*					
Improved regulatory compliance and supervision.					

Increased use of financial services in the economy					
Improve cross-border services					

Other benefits (please provide brief description):

Please share any additional comments or clarifications (optional):

22. To what degree do you think these potential risks of fintech and digital transformation will be relevant in your sector in the next 5 years?

	Great Degree	**Moderately**	**Not Much**	**Negligible or not at all**	**Don't know**
Financial stability risks					
Operational and cyber risks					
Risks related to reliance on third party service providers					
Legal and reputational risks					
Illicit financial activity risks *(e.g., AML/CFT)*					
Anti-trust (i.e. competition risks) and "winner takes all"					
Consumer protection risks *(e.g. mis-selling, fraud, loss of customer funds)*					
Data protection and privacy risks					
Customer indebtedness and asset quality					
Disintermediation of traditional providers					
Financial exclusion					
Regulatory arbitrage					
Lack of oversight					
Disappearance of critical services					

Other risks (please provide brief description):

Please share any additional comments or clarifications (optional):

23. Please feel free to add further thoughts on the impact of fintech and digital transformation on the financial industry in your key markets or jurisdictions of operation. Also please feel free to add any clarifications to any of your responses to this section.

Section 5: Evolution of consumer needs and behavior

Please respond from the overall perspective of the key markets in which your business/ organization operates.

24. In general, over the medium term (next 5 years) do you expect retail and SME customers to:
    a) Have a single core financial relationship with a *traditional* financial institution *(e.g., a bank)* and use other providers only for selected specific financial products/needs
    b) Have a single core financial relationship with a *new type* of financial institution *(e.g., fintech firm, challenger bank, digital only bank, bigtech)* and use other providers only for selected specific financial products/needs.
    c) Have a single core relationship with a marketplace or platform that aggregates access to multiple third-party products and services
    d) Use multiple different providers with no single core relationship.
    e) Other (please provide a brief description)

25. In the medium term (next 5 years) will a significant portion of your business be conducted through physical locations?
    a) Yes
    b) No

26. [If yes]
    Will these physical locations predominantly be:
    a) Your own branches or outlets
    b) Agents or other partners' physical locations *(e.g., supermarkets, coffee shops)*
    c) Other location or physical processor (please provide a brief description)

27. [If yes]
    For what operations will these physical locations be needed?

28. Please feel free to add further thoughts on consumer behavior and impact in your key markets or jurisdictions of operation. Also please feel free to add any clarifications to any of your responses to this section.

Section 6: Competition and market structure

Please respond from the overall perspective of the key markets in which your business/ organization operates.

29. To what extent are your business lines affected by digital transformation of the market, in terms of:

	Risk of losing customers	**Risk to profitability / decreased margins**	**Potential to reduce costs**
Demand deposit accounts	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No
Savings and investments	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No
Personal lending and credit products	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No
MSME lending	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No
Corporate lending	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No
Mortgages	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No
Payments	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No
Remittances	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No
Insurance	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No
Investment banking/ capital markets	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No	□ Significant □ Somewhat □ No

30. How will the market structure of your key product markets evolve in the medium term (next 5 years) in terms of number of providers:

	More concentrated	**Less concentrated**	**No material difference**	**Don't offer this service**	**Don't know/ Can't Say**
Demand deposit accounts					
Savings and investments					
Personal lending and credit products					
MSME lending and credit products					
Corporate lending and credit products					
Mortgages					
Payments					
Remittances					

Insurance					
Investment banking/ capital markets					

31. In the medium term (next 5 years), to what extent will you face competition from:

	Great Degree	**Moderately**	**Not Much**	**Negligible or not at all**	**Don't know/ Can't say**
Traditional financial institutions					
Digital-only banks /neo-banks					
Foreign traditional financial institutions entering the markets					
Telecom operators					
Local non-bank fintech firms					
Foreign fintech firms					
Bigtech competitors *(e.g., Google, Amazon, Facebook/ WhatsApp, Baidu, Yandex, Jumia, Lazada, Grab, etc)*					
Other non-financial companies (e.g. logistics companies, large retailers or distributors, etc.)					

32. What operations and processes do you consider core to your business such that you would not outsource or partner for these? (select all that apply)

a) Maintaining a customer's account
b) Holding customer funds
c) Customer due diligence and onboarding
d) Customer relationship management
e) Payments and transaction services
f) Credit scoring
g) Making a credit decision
h) Loan servicing
i) Operating physical channels *(e.g., branches, agents)*
j) Operating digital channels *(e.g., web, mobile)*
k) Sales and Marketing
l) Securities trading
m) Securities clearing and settlement
n) Offering financial advice
o) Insurance sales
p) Insurance underwriting

q) Insurance claims management
r) Data center
s) Call/Customer Service center

33. Please feel free to add further thoughts on competition and market structure in your key markets or jurisdictions of operation. Also please feel free to add any clarifications to any of your responses to this section.

Section 7: Strategy of your organization

Please respond from the overall perspective of the key markets in which your business/ organization operates.

34. Digital transformation and fintech adoption are a strategic priority at the board room level in my organization:
a) Yes
b) No
c) Don't know

35. How has the COVID-19 crisis influenced your organization's strategic priorities for digital transformation in the following areas:

	Higher priority – execute as soon as possible	**Higher priority, but can't execute now**	**No change in priority**	**Lower priority going forward**	**Don't know/ Can't say**
Customer channels					
Internal processes					
Product adaptation					

36. Which of the following activities have you engaged in, and which you plan to do in future (continue to do or newly engage in):

Areas	**Activities**	**Have done already**	**Plan to initiate or continue**	**No such plan**
Internal Innovation Activities	a) Create new digital products			
	b) Create an internal innovation lab, incubator, or accelerator			
	c) Create parallel digital version of a business line or product			

	d) Provide Banking-as-a-Service (i.e. provide fintech firms and third parties with access to core systems and functionality so that they can integrate digital banking and payment services into their own products)			
	e) Spin out a business to enable it to operate more independently as a fintech firm			
	f) Participate in a regulatory sandbox for a new product or service			
	g) Transformation of core activities and businesses			
Fintech engagement	a) Partner with a fintech firm to offer its product(s) to your clients			
	b) Invest in a fintech firm			
	c) Acquire a fintech firm			
	d) Participate in an external innovation lab, incubator, or accelerator			
Digital ecosystems	a) Participate in digital marketing platforms to generate leads *(e.g., comparator website for cars or real estate, social media platforms)*			
	b) Establish partnerships with e-commerce platforms			
	c) Create your own e-commerce platforms			
	d) Establish partnerships with bigtechs as critical technology providers			
	e) Establish partnerships with other external partners (retail, travel, transport)			

37. What are the biggest challenges to digital transformation facing your organization? (Select up to three)
    a) Regulatory and/or supervisory challenges
    b) Meeting rapidly changing customer demands
    c) Recruiting and retaining top technology talent
    d) Adapting legacy infrastructure to meet new business demands
    e) Budget and resource limitations
    f) Lack of buy-in from the board
    g) Organizational culture
    h) Access to data
    i) Other (please specify)

38. Please feel free to add further thoughts on the strategic approach to fintech and digital transformation in your key markets or jurisdictions of operation. Also please feel free to add any clarifications to any of your responses to this section.

Section 8: Regulatory and supervisory environment

39. Are you currently licensed and regulated in all your key markets where you operate or offer digital financial services?
    a) Yes
    b) No

40. [If No]
    Please explain where you are licensed or what other operating authorization governs your activities

41. [If Yes]
    What requirements do you need to comply with regarding your fintech activities in these key markets (select all that apply):
    a) Prudential
    b) Consumer protection
    c) Financial integrity
    d) Investor Protection
    e) Don't know

42. How would you characterize the overall regulatory and supervisory environment across your key markets with respect to enabling fintech and digital innovation by incumbents and new entrants:
    (If you interact with regulators across multiple jurisdictions, please provide your response with reference to the top market by revenue serviced by your team/ branch/ office)

	About right	**Too tight**	**Too lax**
Enable innovation by <u>incumbents</u>			
Enable innovation by <u>new entrants</u>			

If too tight or too lax explain why:

43. The regulatory framework and guidance in your key market (i.e. top market by revenue serviced by your team/ branch/ office) fit for purpose regarding fintech and digital transformation:
    (If you interact with regulators across multiple jurisdictions, please provide your response with reference to the top market by revenue serviced by your team/ branch/ office)

	Agree	**Don't Agree**	**Don't Know**
Licensing of fintechs or other new business models			
Internal control and risk management, including cyber risks			
Acquisitions of fintechs			

Partnerships and outsourcing with fintechs			
Data and artificial intelligence			
Use of cloud services/data localization			
Application of financial consumer protection and data privacy rules			
Fraud and illicit financial activity (i.e., AML/CFT)			
Remote onboarding and account opening *(e.g., eKYC)*			
Use of agents or other third-party channels			
Authentication and remote transactions			
Automation of new products (i.e., underwriting a digital loan)			
Other area requiring guidance (please specify)			

44. (a) What are the most important regulatory and supervisory actions that have been taken to facilitate the adoption of fintech and other digital financial products and services for your organization and your customers?

    (b) What regulatory and supervisory barriers remain?

45. Please feel free to add further thoughts on regulatory issues in your key markets or jurisdictions of operation. Also please feel free to add any clarifications to any of your responses to this section.

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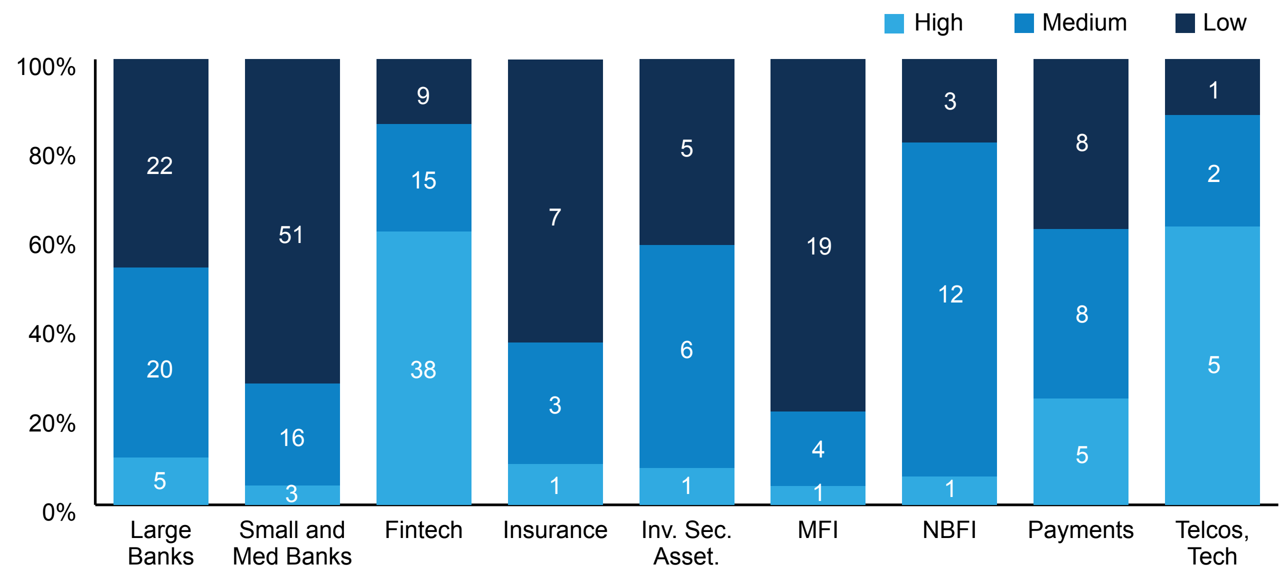
Appendix 2: Use of Digital Channels and Processes at Present and in Five Years

Figure 32. Use of digital channels for sales and customer origination (views by sector/type of respondent)

Digital customer origination, 2019



Digital customer origination in five years

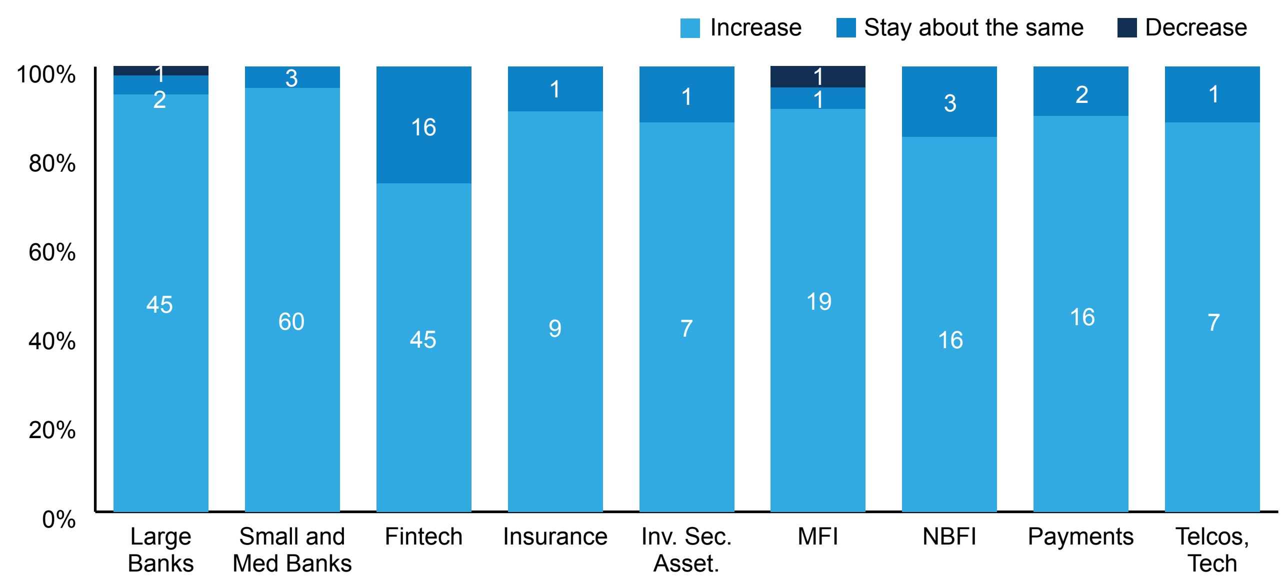
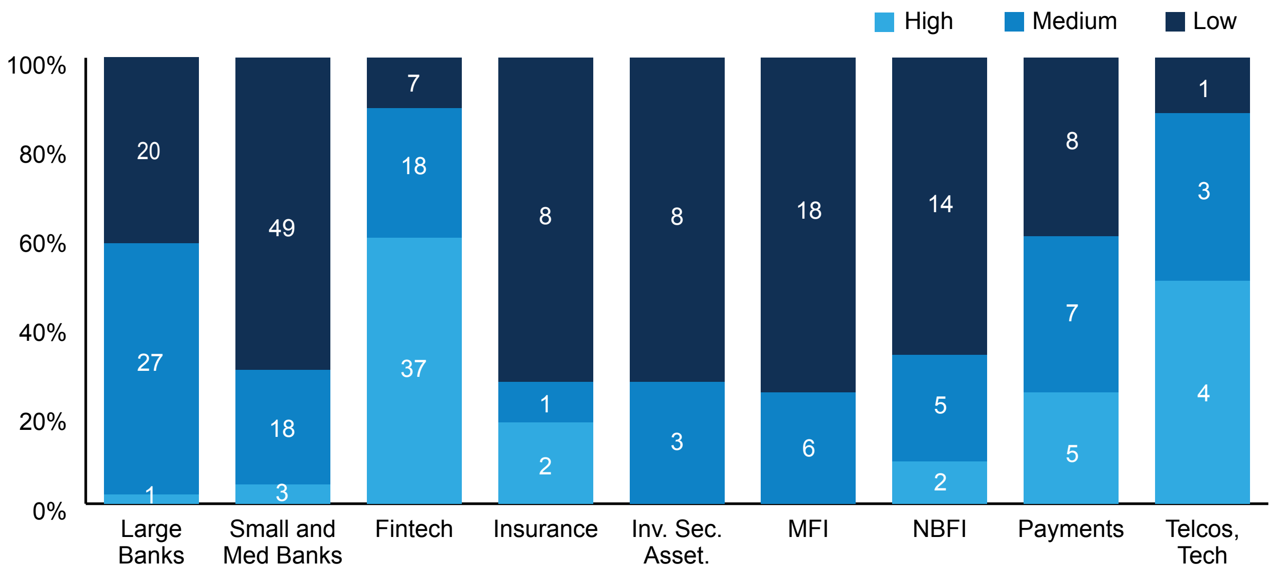
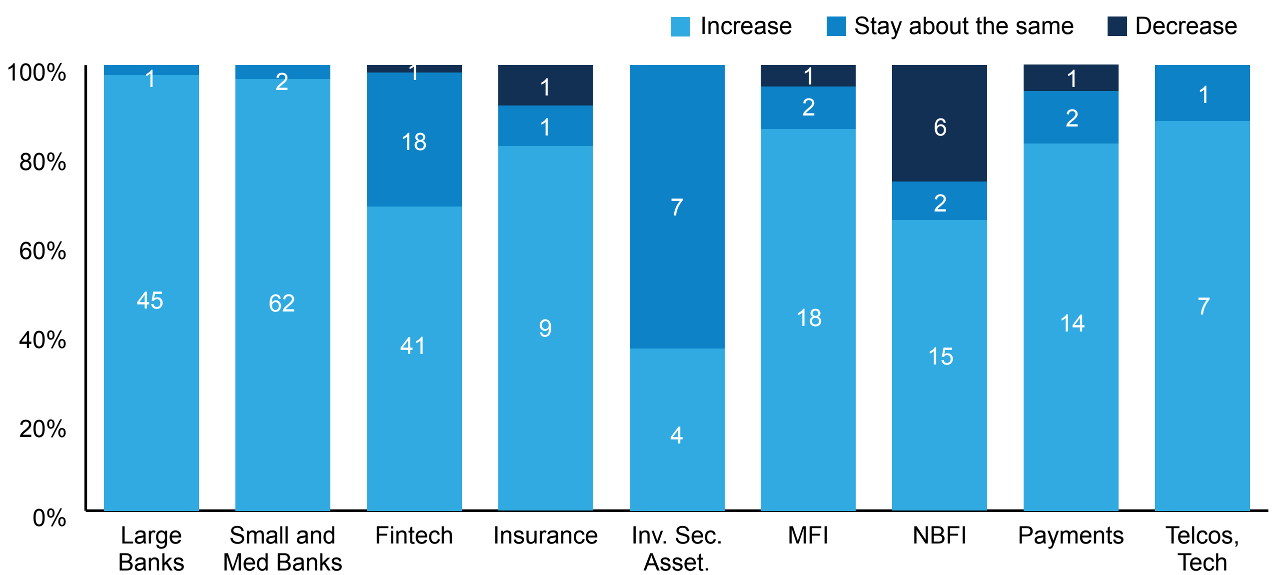


Figure 32 continued

Digital sales, 2019



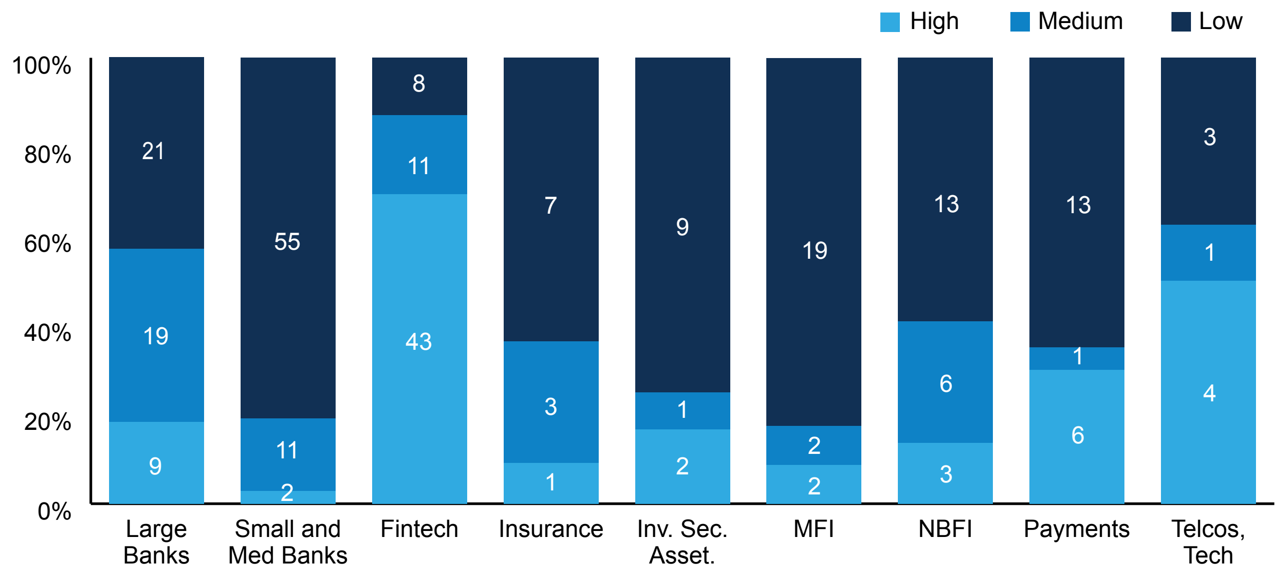
Digital sales in five years



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Figure 33. Use of fully digital processes for account opening and customer activities

Digital account opening, present day



Digital account opening in five years

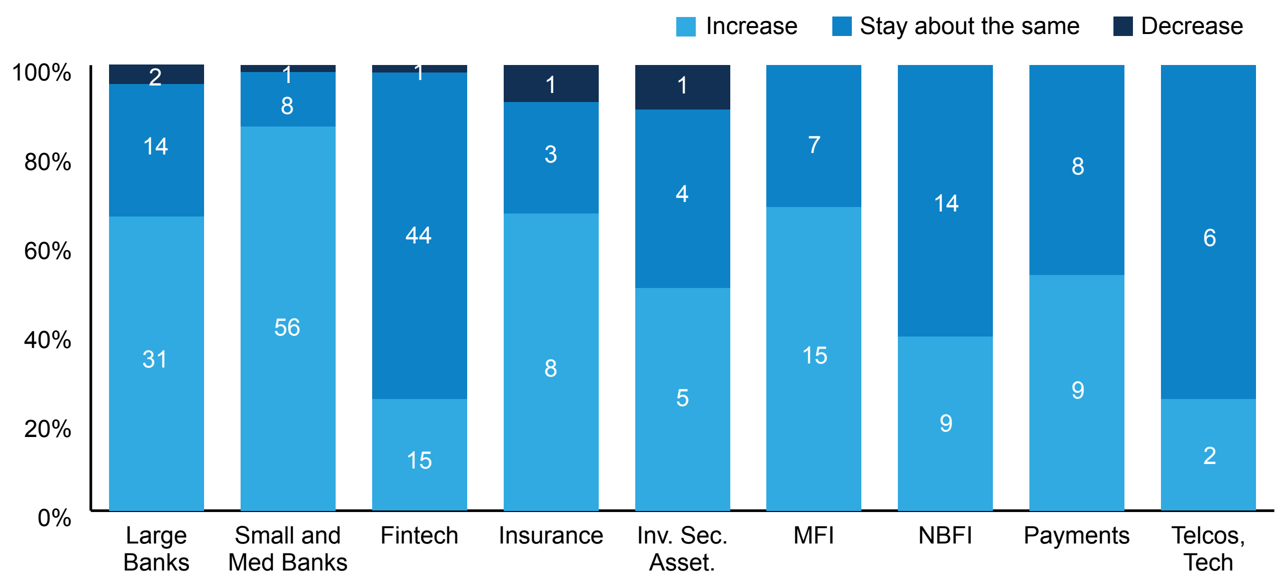
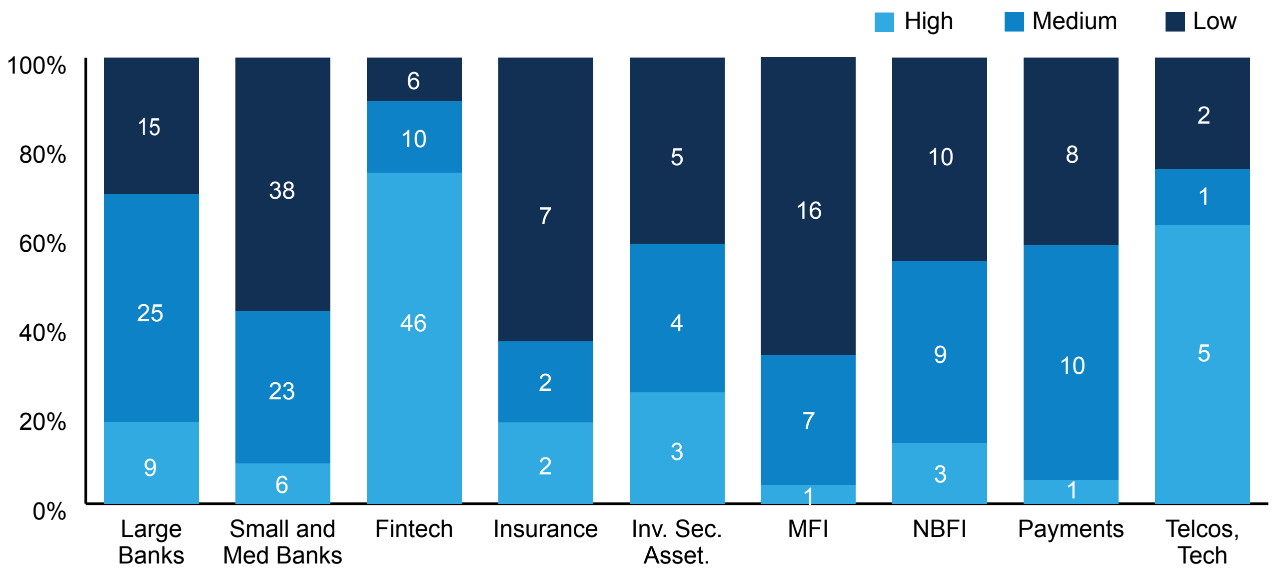
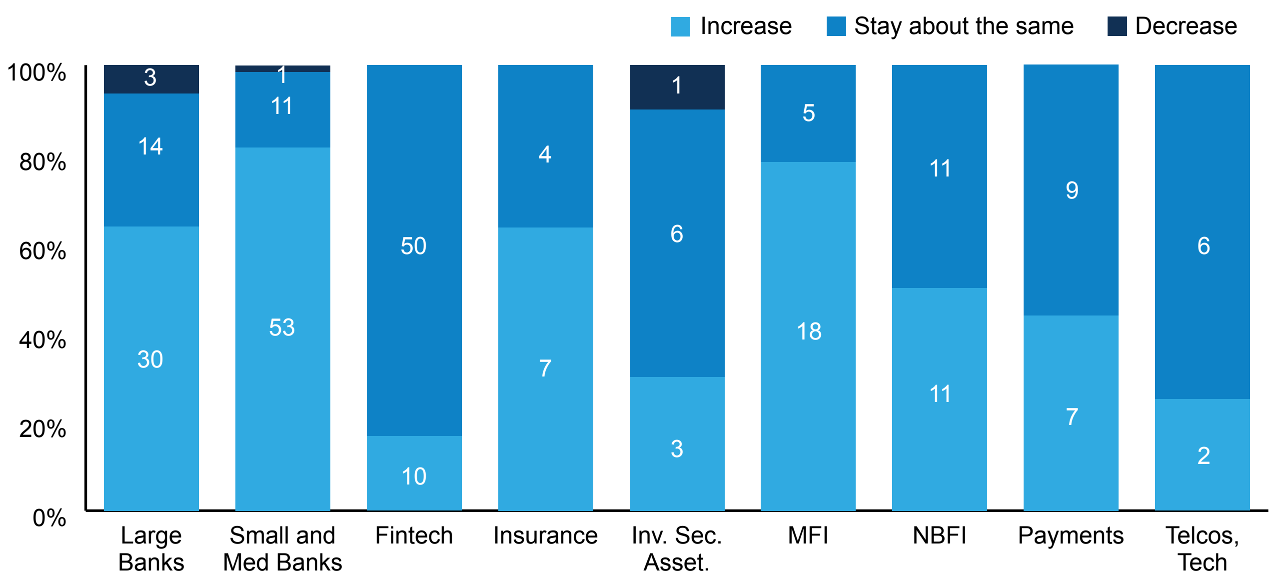


Figure 33 continued

Digital customer activities, present day



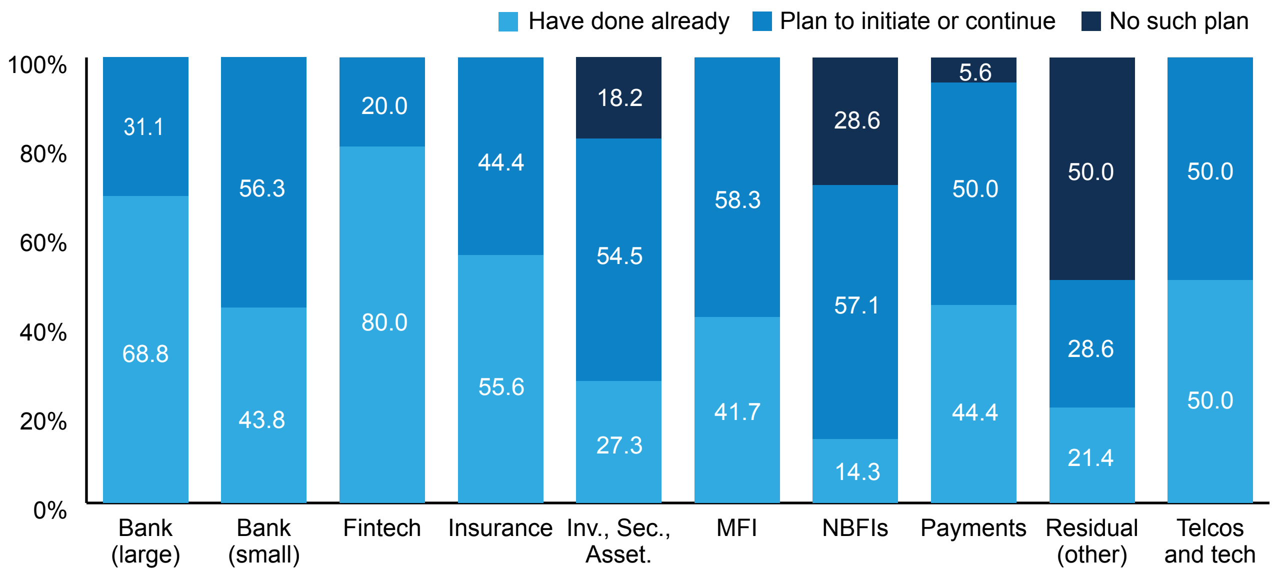
Digital customer activities in five years



Appendix 3: Strategic Fintech Activities Being Undertaken by Respondents

Figure 34. Strategic activities being undertaken by respondents (views by sector/type of respondent)

Creating new digital products



Creating an internal innovation lab

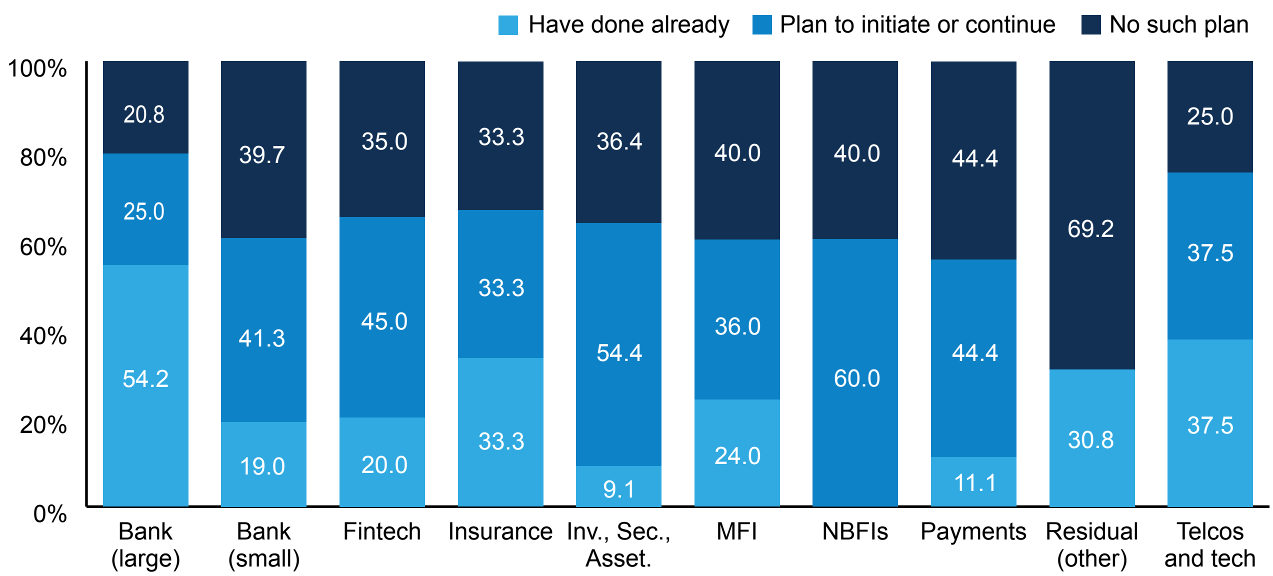
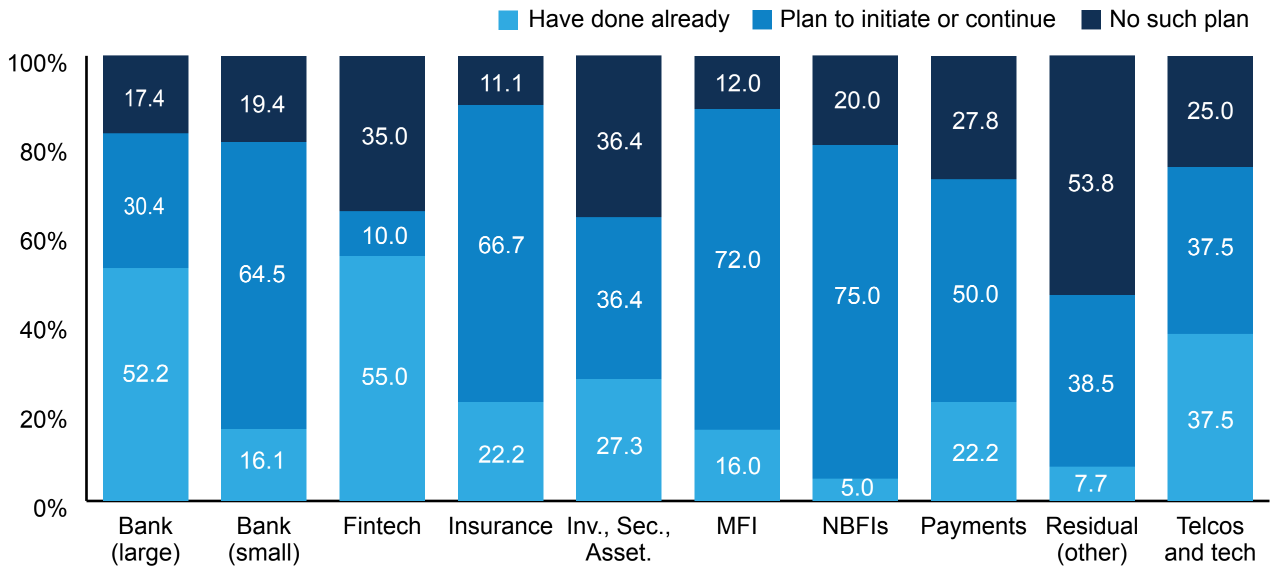


Figure 34 continued

Creating a parallel business line



Participate in a regulatory sandbox

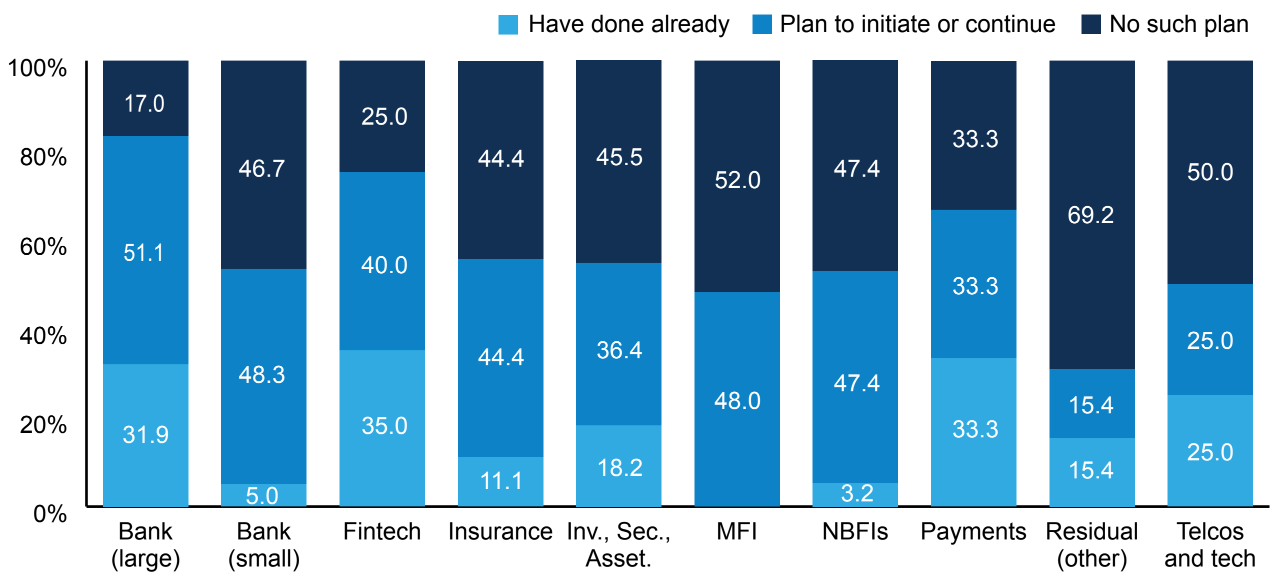
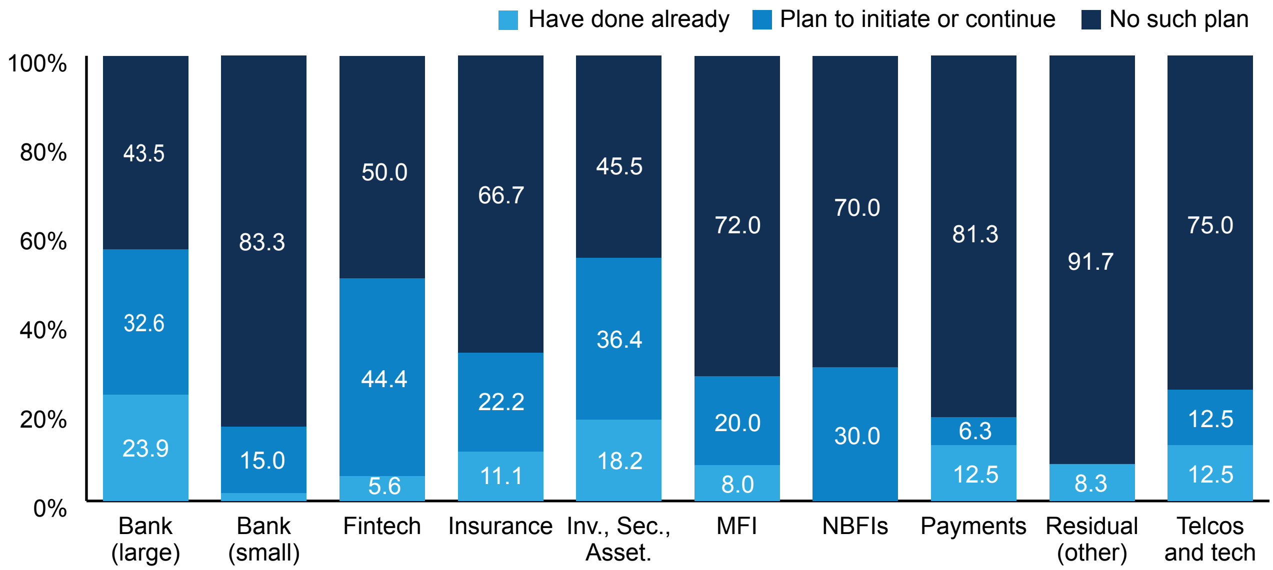
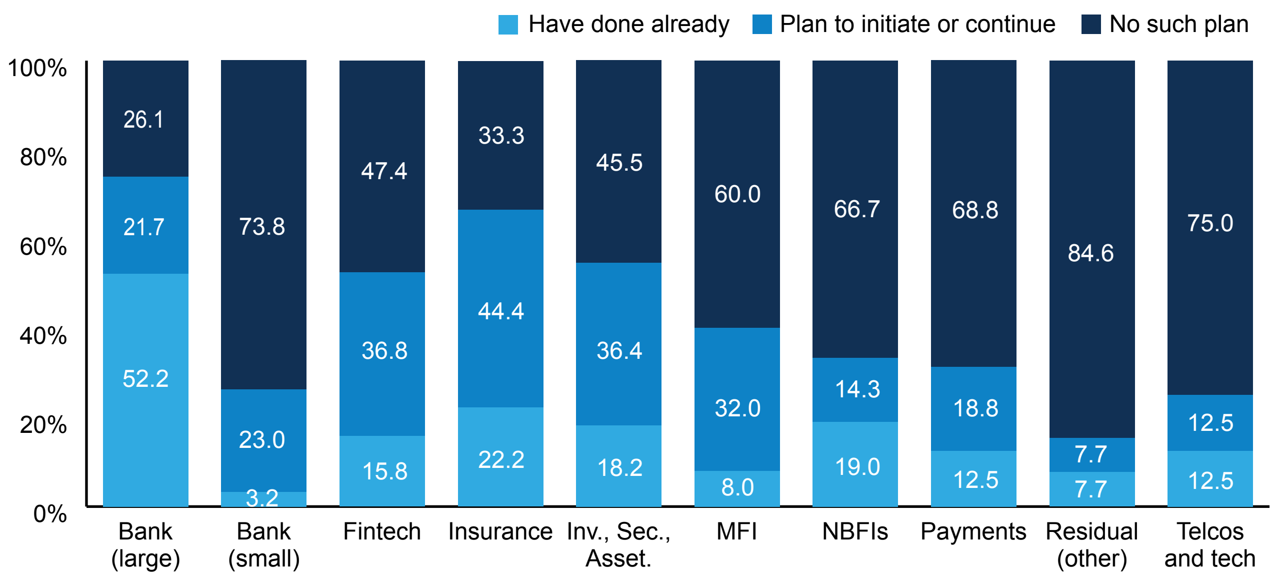


Figure 34 continued

Acquire a fintech



Invest in a fintech

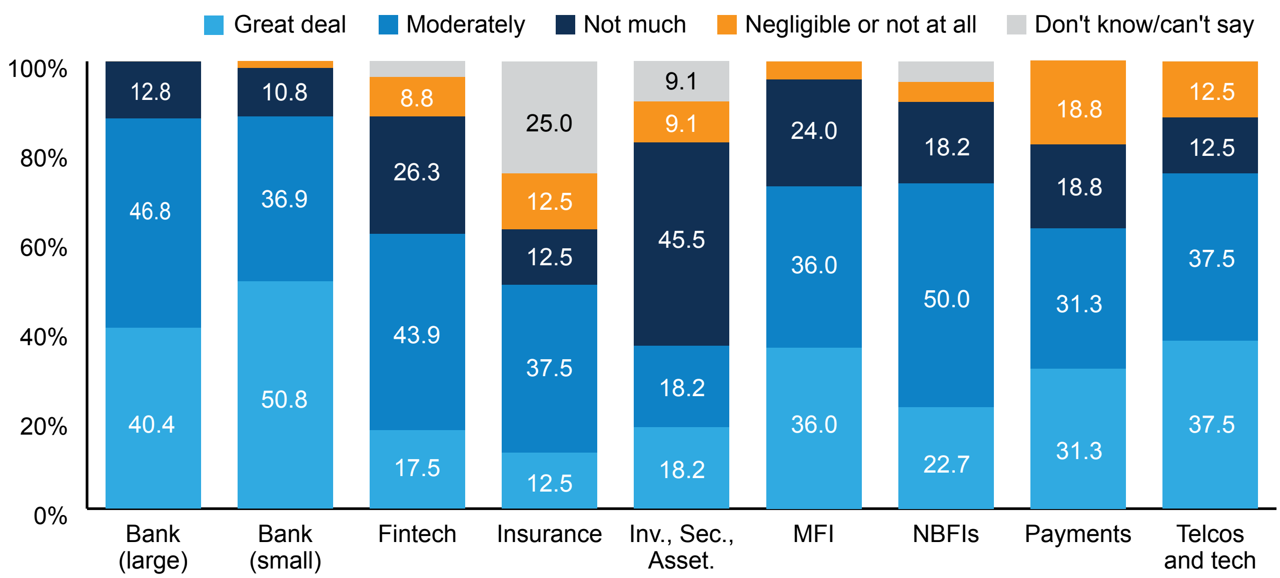


Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

Appendix 4: Competition Landscape

Figure 35. Who do institutions see as competitors? (views by sector/ type of respondent)

Competition from traditional financial institutions



Competition from neobanks

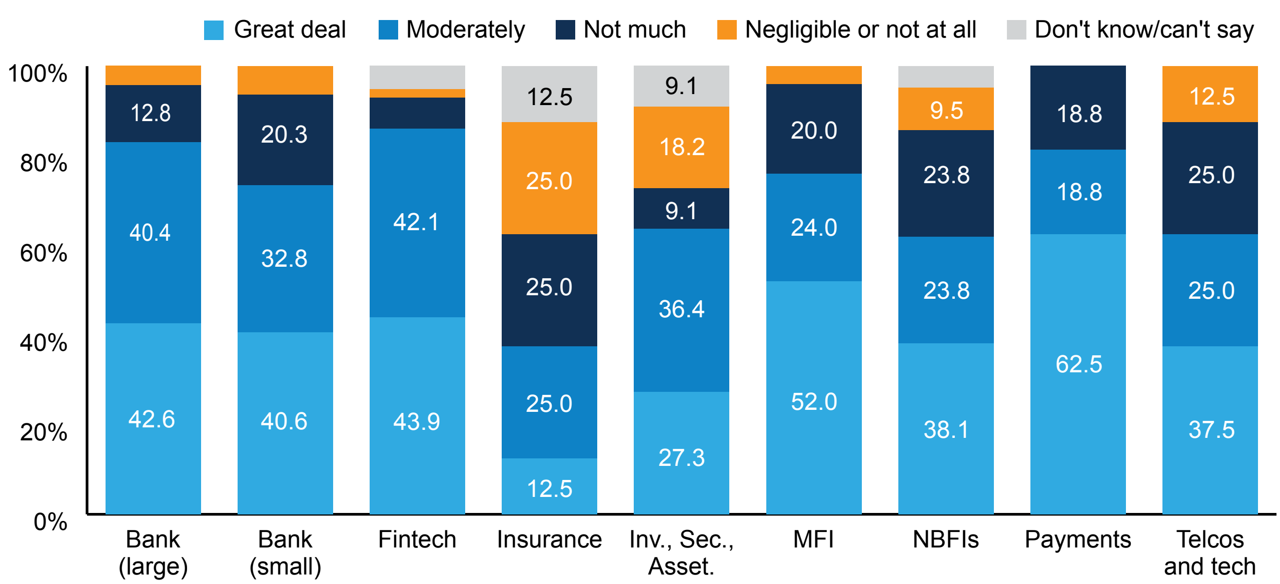
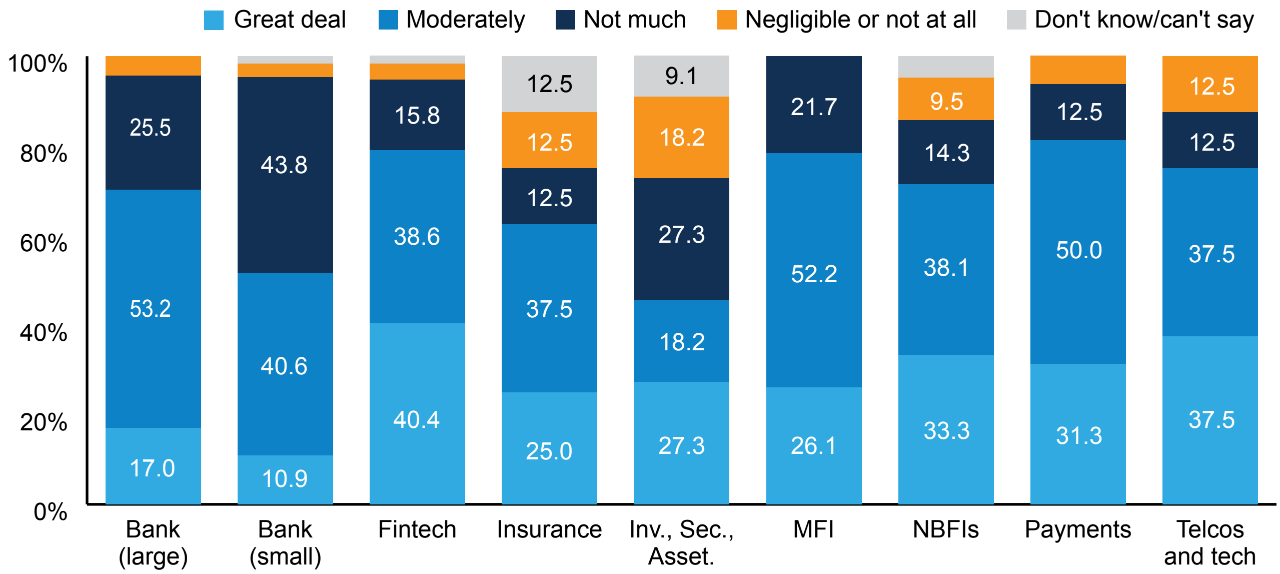
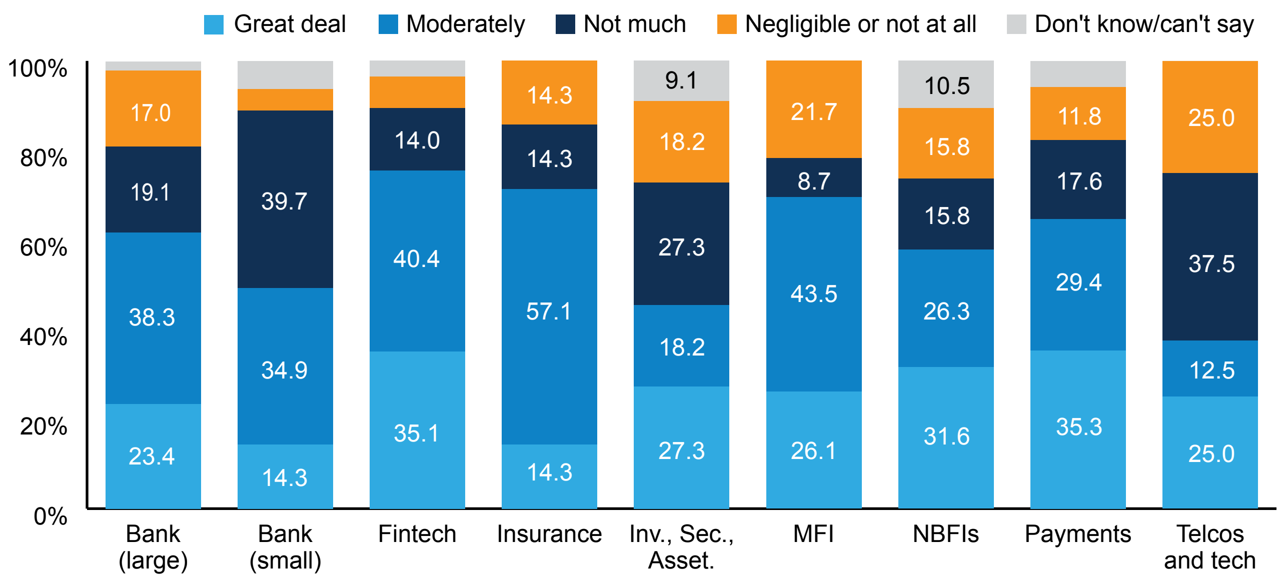


Figure 35 continued

Competition from local fintech firms



Competition from foreign fintech firms



Source: World Bank Group (based on responses to the Digital Technology and the Future of Finance Survey 2020)

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