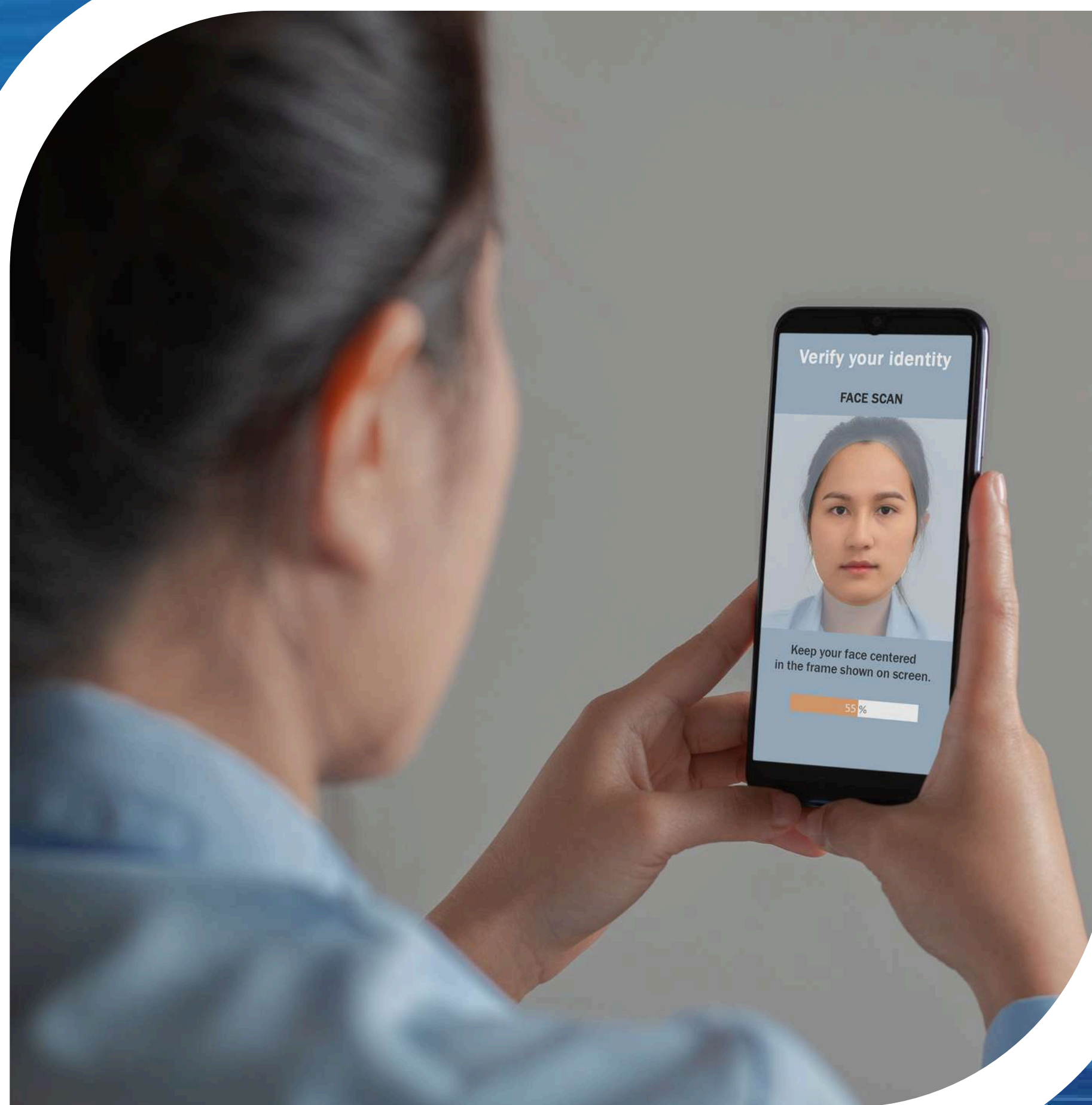


ANNUAL MEMBERS SURVEY 2024

English





fintech
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INDEF

Annual Members Survey 2024





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List of Acronyms

| | |
|--------------|---|
| 3T | Least developed, Frontier, and Outermost/ <i>Tertinggal, Terdepan, dan Terluar</i> |
| AFPI | Fintech Association for Peer-to-Peer Lending Services/ <i>Asosiasi Fintech Pendanaan Bersama Indonesia</i> |
| AFTECH | Indonesian Fintech Association/ <i>Asosiasi Fintech Indonesia</i> |
| AI | Artificial Intelligence |
| AML | Anti-Money Laundering |
| AMS | Annual Members Survey/ <i>Survey Anggota Tahunan</i> |
| APJII | Indonesian Internet Service Providers Association/ <i>Asosiasi Penyelenggara Jasa Internet Indonesia</i> |
| ASEAN | Association of Southeast Asian Nations |
| Bareskrim | Criminal Investigation Agency/ <i>Badan Reserse Kriminal</i> |
| BI | Bank Indonesia |
| BI-SNAP | BI National Standard for Payments Open API/ <i>BI Standar Nasional Open API Pembayaran</i> |
| BPS | Central Statistics Agency/ <i>Badan Pusat Statistik</i> |
| BSP | Central Bank of the Philippines |
| CERT | Computer Emergency Response Team |
| CoC | Code of Conduct |
| CSR | Corporate Social Responsibility |
| DPO | Data Protection Officer |
| DRP | Disaster Recovery Plan |
| Dukcapil | Population and Civil Registration/ <i>Kependudukan dan Catatan Sipil</i> |
| e-KYC | Electronic Know Your Customer |
| ESG | Environment, Social, and Governance |
| FKIJK | Financial Services Industry Communication/ <i>Forum-Forum Komunikasi Industri Jasa Keuangan</i> |
| FSTI | Financial Sector Technology Innovation |
| GLI | Gender Lens Investing |
| ICS | Innovative Credit Scoring |
| ILO | International Labour Organization |
| IMDI | Digital Society Index of Indonesia/ <i>Indeks Masyarakat Digital Indonesia</i> |
| IPO | Initial Public Offering |
| ISO | International Standard Organization |
| IT | Information Technology |
| ITE | Electronic Information and Transaction |
| ITSK | Financial Sector Technology Innovation/ <i>Technology Innovation in Financial Sector (ITSK)</i> |
| Kemenkominfo | Ministry of Communication and Informatics/ <i>Kementerian Komunikasi dan Informatika</i> |
| KIC | Katadata Insight Center |
| LJK | Financial Services Institutions/ <i>Lembaga Jasa Keuangan</i> |
| LPBBTI | Peer-to-Peer Lending Services (P2P Lending)/ <i>Layanan Pendanaan Bersama Berbasis Teknologi Informasi</i> |
| MSMEs | Micro, Small, and Medium Enterprises |
| NGO | Non-Governmental Organizations/ <i>Lembaga Swadaya Masyarakat</i> |
| O2O | Online-to-Offline |
| OJK | Financial Services Authority/ <i>Otoritas Jasa Keuangan</i> |
| PBI | Bank Indonesia Regulations/ <i>Peraturan Bank Indonesia</i> |
| PEP | Politically Exposed Person |
| POJK | Financial Services Authority Regulations/ <i>Peraturan Otoritas Jasa Keuangan</i> |
| PUJK | Financial Services Business Actors/ <i>Pelaku Usaha Jasa Keuangan</i> |
| PwC | PricewaterhouseCoopers |
| QR | Quick Response |
| QRIS | Quick Response Code Indonesia Standard |
| RPJMN | National Medium-Term Development Plan/ <i>Rencana Pembangunan Jangka Menengah Nasional</i> |
| SMEs | Small and Medium Enterprises |
| SNLKI | National Survey of Financial Literacy and Inclusion/ <i>Survei Nasional Literasi dan Inklusi Keuangan</i> |
| STEM | Science, Technology, Engineering, Mathematics |
| TPAK | Labor Force Participation Rate/ <i>Tingkat Partisipasi Angkatan Kerja</i> |
| UI/UX | User Interface/User Experience |
| UK | United Kingdom |
| US | United States |
| UU | Law/Undang-undang |
| UU ITE | Electronic Information and Transactions Law/ <i>Undang-Undang Informasi dan Transaksi Elektronik</i> |
| UU P2SK | Financial Sector Development and Strengthening Law/ <i>Undang-Undang Pengembangan dan Penguatan Sektor Keuangan</i> |
| UU PDP | Personal Data protection Law |
| WNA | Foreigner/ <i>Warga Negara Asing</i> |
| WNI | Indonesian Citizen/ <i>Warga Negara Indonesia</i> |
| WTR | World Talent Ranking |

1 AFTECH Chairman's Note

AFTECH Chairman's Note



The Indonesia Fintech Association (AFTECH) enters its eighth year in 2024. AFTECH's journey so far proves our commitment to continue supporting the development of Indonesia's fintech industry. As AFTECH ages, the challenges and opportunities it faces are increasingly diverse. Nevertheless, AFTECH's spirit to innovate and provide the best contributions to ensure Indonesia's fintech ecosystem is inclusive and sustainable remains firm.

The Annual Members Survey (AMS) 2024 is one of AFTECH's important initiatives to understand our members' needs, aspirations, and challenges. Through this survey, we hope to gather valuable insights to develop more targeted policy strategies and advocacy, as well as to improve our services and support to all members.

The survey's results will also serve as the foundation for AFTECH's in formulating more innovative and facilitative programs, as well as strengthening collaboration between members and other stakeholders. We believe that AFTECH can further encourage the growth of Indonesia's more inclusive and sustainable fintech industry through solid cooperation.

Fintech has faced volatile global economic conditions and a prolonged tech winter within the past year. Despite this, Indonesia's fintech sector continues to show its resilience and ability to adapt quickly to existing changes. With various innovations and solid collaborations with other Financial Services Institutions, the Indonesia's fintech industry has succeeded in creating inclusive and efficient financial solutions for the wider community and solidify fintech as an inseparable part of the digital economy ecosystem.

The development of regulations is an essential factor in the legitimacy of the fintech industry. Law Number 1 of 2024 on the Second Amendment to Law Number 11 of 2008 on Electronic Information and Transactions (UU ITE) and implementing regulations of Law Number 4 of 2023 on the Development and Strengthening of the Financial Sector (UU P2SK), such as OJK Regulation Number 3 of 2024 on the Implementation of Technological Innovation in the Financial Sector, provide legal certainty for fintech. However, such regulations also require fintech players to be more disciplined in implementing Governance, Risk, and Compliance (GRC)

This dynamic is also reflected in the results of AMS 2024. The fintech industry that is slowly starting to pick up can be seen from the efforts to downsize companies, which in the previous survey period were quite high; this time, 77.9% of respondents did not downsize, and 65.7% planned to increase the number of workers. Meanwhile, the value of business transactions from small and medium-sized fintech also improved, although the high-income group experienced a slight moderation. The spirit of collaboration to increase productivity is also reflected in 89.3% of respondents actively establishing partnerships with other Financial Services Institutions. This is inseparable from regulatory support, where 89.3% of respondents assessed that regulatory developments have supported innovation, and 86.9% of respondents assessed that it encouraged the fintech industry's growth. Last year, AMS raised thematic issues related to gender. AMS 2024 raised thematic issues of Environmental, Social, and Governance (ESG) as part of a survey topic to members, finding that 26.7% of AFTECH members already have developed and published corporate ESG reports.

Thank you to the AFTECH members who participated in AMS 2024. Your contribution is invaluable in helping AFTECH, as an association; regulators, investors, academicians, and the public, further understand the current dynamics of the fintech industry and formulate strategic steps ahead. We all hope that the results of this survey will provide real benefits for the development of Indonesia's fintech businesses and innovations.

I would also like to thank the Institute for Development of Economics and Finance (INDEF) for partnering in preparing AMS 2024 and all AFTECH members who have participated as survey respondents and in-depth interviews. The issuance of the 2024 AMS will also be possible with the support of Bank Indonesia (BI), the Financial Services Authority (OJK), the Women's World Banking (WWB), and The Bill & Melinda Gates Foundation (BMGF). On behalf of AFTECH, I would like to thank all involved partners for their support in developing this report.

Warm Regards,

Pandu Sjahrir

Chairman of the Indonesia Fintech Association (AFTECH)



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2 Executive Summary

Executive Summary

Indonesia's fintech industry landscape continues to show dynamic developments after facing tech winter and global economic volatility. Fintech innovation continues to grow due to supportive regulatory facilitation, especially after implementation of the Financial Sector Development and Strengthening Law (UU P2SK) and its implementing regulations. Indonesia's fintech industry is also becoming more prudent, with a clearer direction towards profitability. Companies adopt sustainable business strategies, improve operational efficiency, and focus on high-value products. The commitment to the principles of Governance, Risk Management, and Compliance (GRC) and even exploring the implementation of Environmental, Social, and Governance (ESG) principles allows fintech companies to overcome challenges and take advantage of opportunities, thereby strengthening the role of the fintech industry in encouraging financial inclusion and economic growth in Indonesia.

The Annual Members Survey (AMS) 2024 found that most fintech companies are still within the growth stage. The operational range of fintech businesses is dominated by companies under 10 years old, with 59.5% of companies aged 6-10 years and 26.0% with less than 5 years of operations. In regards to labor, the fintech industry is dominated by companies with fewer than 50 people, with workers between 10-50 people reaching 43.5% and less than 10 people as much as 11.6%. Meanwhile, high talent gap, especially in data analytics and cybersecurity skills, still remains. From a gender perspective, the level of Chief Executive Officer (CEO) or female equivalent in the fintech industry is still 26%.

The growth stage of fintech players can also be seen from their funding stage and financial performance. Independent funding (bootstrapping) still dominates with 46.6%, followed by the pre-seed and seed stages which cumulatively reach 22.9%. Apart from independent funding, the majority of fintech funding sources originate from venture capital (45.0%), followed by private equity (26.0%) and angel investors (17.6%), with the top three funding sources coming from Indonesia (50.4%), Singapore (26.7%), and China (6.9%). In addition, AMS 2024 recorded that 50.3% of respondents reported between IDR 5-500 billion annual transaction value, whereas 23.7% other respondents reported less than IDR 5 billion annual transaction value.

Fintech's role in financial inclusion can be seen from the demographic of the market share of its products and services, which consists of mostly young and lower-middle-income consumers. The main segment of fintech users are individuals covering 45.0%, and micro, small, and medium enterprises covering 24.4%.

In terms of age, most of the fintech market share is the under 35 years old age group, with the 25-35 age group reaching 55.7% and the 18-25 years range reaching 13.0%. In terms of income, consumers with IDR5-10 million monthly income reached 38.2% followed by the IDR2.5-5 million monthly income group, which amounted to 19.1%. In addition, Jakarta and the island of Java still dominates market share location largely due to accessibility, resources, information technology infrastructure, and innovation ecosystem.

Cooperation with other Financial Services Institutions (LJK) and the Government is an effort by the fintech industry to develop its business while increasing financial inclusion and literacy, 89.3% of AMS 2024 respondents stated that they have partnered with the digital economy ecosystem to boost growth and innovation. To improve financial literacy, cooperation with banks (55.0%) and establishing strategic partnerships with the government (30.0%) are the most common initiatives. Meanwhile, in terms of financial inclusion, similar trend is showcased in the collaboration initiatives with banks (66.0%) and the government (35.0%). One of the examples of collaboration that aims to encourage the increase of financial inclusion and literacy is namely the Financial Services Industry Communication Forum (*Forum Komunikasi Industri Jasa Keuangan/FKIJK*), which facilitates fintech operators to collaborate with banks; and the Pre-Employment Card (*Kartu Prakerja*) program and utilizes fintech for its distribution.

Positive fintech industry trends require a robust regulatory framework. Most fintech companies agreed that the current regulatory framework supports innovation (89.3%), supports investment (81.0%), and specifically supports the fintech industry's growth (86.9%). Nevertheless, AMS 2024 respondents still need regulatory support, especially related to relaxation for fintech investments and provision of incentives for investors.

The fintech industry applies the GRC principle to increase digital trust from consumers and the public. As many as 93.9% AMS 2024 respondents' data centers of AMS 2024 have been registered with the Ministry of Communication and Information. To mitigate cyber threats, 93.9% of respondents also have a Disaster Recovery Plan, with 65.6% stating that they can recover data in less than one day. The types of cyber-attacks that fintech companies face most frequently include phishing (33.6%), malware (12.9%), and hacking (6.8%). The AMS 2024 reflects that 97.7% of respondents follow international regulations and standards, including International Organization for Standardization (ISO) 27001 certification. In addition, respondents also stated they comply with the code of conducts developed by the Indonesia Fintech Association (AFTECH) to improve the company's reputation and consumer trust.

Continuous technological developments encourage the fintech industry to continue to adapt. As many as 55.0% of AMS 2024 respondents have utilized Artificial Intelligence (AI) in their operations, mainly data analytics (54.2%), facial recognition technology (44.1%), and fraud detection (35.6%). On the other hand, fintech companies' utilization of the latest technology is often still constrained by regulations, cost factors, and gaps in infrastructure equity in Indonesia.

The AMS 2024 specifically highlights ESG issues in the fintech industry environment. There are 26.7% of respondents who already have a corporate ESG report, indicating the awareness of fintech players to relatively new issues in the industry. ESG principles application in the future is expected to continue to increase as several studies assess that its implementation will increase engagement with workers, consumers, and investors. In addition to ESG, a form of corporate responsibility for the surrounding environment can also be realized by procuring Corporate Social Responsibility (CSR) programs, as seen to be implemented by 39.7% of survey respondents.

Overall, AMS 2024's results reflect Indonesia's fintech industry's continuous growth and adaptation to economic dynamics, regulatory changes, and infrastructure gaps. Innovation and technology adoption, sustainable business strategies, good governance, and increased awareness of ESG issues are key to maintaining this positive momentum. Collaboration with other LJKs and the Government strengthens the role of fintech in encouraging economic growth and financial inclusion in the future.

3 Methodology

- **Scope**
- **Data Collection**
- **Research Analysis**
- **Survey Design**
- **In-Depth Interviews Design**



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Scope

The World Bank defines financial technology (fintech) as an industry consisting of companies that use technology to make the financial system and the delivery of financial services more efficient. The Indonesian Law regulating fintech is Law Number 4 of 2023 on the Development and Strengthening of the Financial Sector (UU P2SK) with the term Technological Innovation in The Financial Sector (*Inovasi Teknologi Sektor Keuangan/ITSK*). The ITSK is a technology-based innovation that impacts the digital financial ecosystem's products, activities, services, and business models. Article 213 of UU P2SK states that the scope of ITSK includes payment systems, settlement of valuable transactions, capital raising, investment management, risk management, collection and/or distribution of funds, market support, activities related to digital financial assets (including crypto assets), and other digital financial services activities. Meanwhile, Article 216 mandates that Bank Indonesia (BI) and the Financial Services Authority (OJK) regulate and supervise ITSK according to the scope of their respective authorities.

Furthermore, Payment System Technology Innovation according to BI Regulation (PBI) Number 22/23/PBI/2020 on Payment Systems, includes products, activities, services, and business models that use innovative technology in the digital economy and financial ecosystem that can support the implementation of Payment Systems. Meanwhile, OJK Regulation (POJK) Number 3 of 2024 uses the term ITSK to define fintech. Both regulations contain the same essence and define fintech as any form of technological innovation that provides added value in the financial sector. Referring to UU P2SK, the AMS 2024 covers various business models as follows:

1. **Payment System**
Technological innovation in the payment transaction processing stage consists of pre-transaction, initiation, authorisation, clearing, settlement, and post-transaction activities supporting the digital economy and finance.
2. **Securities Transaction Settlement**
Technological innovations in the clearing, settlement, and recording of ownership and deposits in the money and foreign exchange markets, as well as securities in the capital market.
3. **Capital Raising**
Technological innovation in raising public funds through securities offerings by using the services of electronic system providers (securities crowdfunding) by using the services of electronic system operators and paying attention to the provisions of relevant laws and regulations, including in the capital markets field.
4. **Investment Management**
Technological innovations in investment management that use advanced algorithms (such as robo advisors), automated advice and management (such as digital financial planners), and retail algorithmic trading (such as forex trading).
5. **Risk Management**
Technological innovation in product development, risk selection (underwriting), claims handling, distribution, and sales.

6. Collection and/or Distribution of Funds
Technological innovations include digital banking, peer-to-peer lending, funding agents, financing agents, and project financing.
7. Market Supporter
Technological innovations to support LJK's needs, including credit scoring, aggregators, and e-Know Your Customer (e-KYC), which use technology including artificial intelligence/machine learning, machine-readable news, social sentiment, big data, market information platforms, and automated data collection and analysis.
8. Activities related to Digital Financial Assets
Financial assets that are stored or represented digitally, including crypto assets.
9. Other Digital Financial Services Activities
Technological innovation in digital financial services goes beyond the eight business model points above

Specifically, regarding the business model in number 2 to number 8, the following are the subclusters recorded by OJK:

1. Aggregator
A website or application that helps customers obtain information about financial products and services by collecting information, filtering, and comparing products and services between LJK digitally
2. Innovative Credit Scoring
Institutions or bodies that process data other than credit data or its derivatives by using certain algorithms through information technology to produce values or letters that show an assessment of a person's eligibility to receive services in the Financial Services Sector
3. E-KYC
A platform that helps provide identification and verification services carried out on prospective customers/customers using data from the Directorate of General of Population and Civil Registration (Dukcapil).
4. Financial Planner
A platform that assists individuals in financial planning by providing recommendations on matters related to financial products and services based on user profiles to achieve financial goals.
5. Financing Agent
Web-based services or applications that help LJK distribute financing to prospective customers and LJK customers.
6. Funding Agent
Web-based services or applications that help LJK as a marketing platform to get funding customers.
7. Insurance Hub
Infrastructure providers in the field of insurance can help with the distribution and submission of insurance claims.
8. InsurTech
A platform that collaborates with brokers and/or insurance companies to provide information services, purchase insurance products, and online insurance claim submission services by customers/the public and speed up the claim process.

9. Online Distress Solution
A platform that provides negotiation services for borrower customers who have difficulty paying off their debts to creditors.
10. Property Investment Management
A platform to raise funds from the community online in the form of a scheme for managing the rights to property without creating derivatives to be traded on the secondary market.
11. RegTech – eSign
The parent electronic certificate provider platform from the Ministry of Communication and Information Technology (Kemenkominfo) serves the financial services sector with output in the form of digital signatures.
12. RegTech – PEP
A service provider platform that can detect high-risk customers (Anti-Money Laundering/AML) by checking each customer's background (Politically Exposed Persons/PEP).
13. Tax & Accounting
A platform that helps individual consumers or companies by providing financial report preparation services following accounting standards or online tax reporting by tax provisions.
14. Authentication
Platforms that provide identification and verification services use data other than those from Dukcapil.
15. WealthTech
A platform that integrates various financial and supporting product services provided by a Conglomerate Group Company and its Business Partners in one mobile application to facilitate and assist users in accessing and managing their finances, including banking, financing, insurance, investment, and funding.

In addition to the business models covered by UU P2SK, PBI and POJK, AFTECH membership also includes other business models supporting the fintech industry, including:

1. Early Wage Access
A service that allows employees to access a portion of their salary before the official payday. This service helps overcome short-term financial problems without the need to apply for a traditional loan.
2. Software as a Service (SaaS)
A business model in which software services are provided online via the internet. SaaS includes solutions for accounting, risk management, compliance, and various other financial services that can be accessed online.
3. Cloud Computing
Technology that enables data storage and management in cloud computing, which supports real-time data processing and increases operational efficiency. Cloud computing services in fintech help companies in big data management and risk analysis.

Data Collection

The survey was conducted online among all AFTECH members from April 16, 2024 to May 10, 2024 to discover the fintech industry's latest developments. A total number of 131 AFTECH members filled out the survey, successfully covering respondents from all business models, representing the diversity of business models in AFTECH.

A total of 127 questions were filled out by respondents, where some additional questions appear based on a certain number of question logics. This means that responses to certain questions can cause respondents to have to answer or not answer the following questions. In addition, several questions allowed respondents to choose more than one answer. In this case, the percentage of some responses can be more than 100% when calculated cumulatively. The question categories include the fintech landscape, the implementation of good governance, views on regulations, infrastructure and technology, skills and gender gaps, the implementation of financial inclusion strategies, and Environment, Social, and Governance (ESG).

Furthermore, the AMS 2024 was also equipped with information from relevant stakeholders based on in-depth interviews with regulators and four selected AFTECH members to further sharpen the survey results on several relevant and important topics by providing the story and context behind the numbers obtained from the survey results. Therefore, the data from the survey and in-depth interviews are used as primary data.

In addition, various literature data and documents from multiple individuals or institutions are also used as material for writing AMS 2024. The regulatory documents that are used primarily as a reference for the initial writing include UU P2SK, PBI Number 22/23/PBI/2020 concerning Payment Systems, and POJK No. 3 of 2024 on the Implementation of ITSK. Thus, data and information from various documents are used as secondary data.

Research Analysis

The AMS 2024 uses descriptive and qualitative approaches to analyse various data derived from primary and secondary data. The descriptive approach is carried out by describing secondary data obtained from multiple sources. Meanwhile, a qualitative approach is used to analyze various data collected from surveys and in-depth interviews. Specifically, both approaches are used with the following objectives:

- 1.To show the rapid development of the Indonesia's fintech industry and its impact on financial inclusion, literacy, and economic development in the country.
- 2.Discuss various problems AFTECH members face in balancing innovation, growth, and consumer protection/security to optimize the impact of digital finance and fintech for financial inclusion and faster economic growth.
- 3.To increase awareness about digital finance and fintech as well as to increase digital financial inclusion and literacy.
- 4.To find out the current regulations and their impacts on Indonesia's fintech industry's development.
- 5.To capture thematic issues, such as gender equality and ESG developments, in Indonesia's fintech industry.

Survey Design

The survey is an ongoing initiative that serves as the basis for evidence-based policy advocacy that allows AFTECH to stay abreast of industry trends and advocate for policies that support the dynamic needs of its members. To obtain information on the development of industry trends and the need for policy advocacy information, this survey is designed through 8 (eight) themes, specifically:

1. Fintech Landscape

This chapter aims to show the landscape of Indonesia's fintech industry in line with the rapid growth of digital economy, which is leading to stable fintech growth and investment. The questions include details of the company's information, years of operation, number of employees, market penetration, business model expansion, transaction value, and investment.

2. Implementation of Good Governance

This chapter aims to determine the current implementation of how companies manage good governance, risk management, and compliance and their challenges. The scope of questions in this chapter relates to data management, disaster recovery plans, cybersecurity and fraud identification, consumer protection, the implementation of international standards and regulations, and the application of codes of conduct or industry standards.

3. Regulatory Outlook

This chapter examines industry players' perceptions of the dynamics of regulations and policies that affect them at present and in the future. The scope of the questions in this section concerns regulatory and policy support for innovation, investment, and growth in the fintech industry.

4. Infrastructure and Technology

This chapter seeks to determine the condition and development of each fintech company's infrastructure and technology in Indonesia. The questions in this section include the use of technology that is key to the company's operations, its infrastructure and technology based on its location in the country and abroad, and the implementation of artificial intelligence.

5. Skills Gap

This chapter examines the human resource landscape, especially the skills. It will focus on identifying and understanding the gap between today's workforce's skills and the skills needed by the tech industry's ever-evolving needs.

6. Implementation of Financial Inclusion Strategy

This section aims to learn about fintech companies' initiatives for financial inclusion and how they overcome their challenges. It also seeks information on the target segment without a bank account.

7. Gender Equality

This section focuses on assessing the level of gender diversity and inclusion in the fintech industry. Aspects of female worker participation in companies, female leadership, investment decisions, product and service design, employment policies, and strategies in targeting the female market are examined to capture a picture of gender inclusion in the Indonesia's fintech industry.

8. Environmental, Social, and Governance

This chapter aims to capture the development landscape of the application of ESG principles in the fintech industry in Indonesia. The focus of questions in this section regards ESG Environmental, Social and Governance reporting and the implementation of CSR programs.

In-Depth Interviews Design

The in-depth interviews were carried out as an effort to dig deeper into the story behind the numbers obtained from the survey results as several aspects in the development of the fintech industry cannot be quantified or found in various documents or other literature sources. The in-depth interviews were designed based on 6 topics, namely:

1. ESG
2. GRC
3. Gender Equality
4. Policies and Regulations
5. Artificial Intelligence (AI)
6. AFTECH's Role and Support

Selected regulators for in-depth interviews were those overseeing and regulating ITSK business models written as per UU P2SK. Hence, in-depth interviews were conducted with OJK and BI. Meanwhile, selection of AFTECH were based on several criteria, namely business model differentiation, company age, ESG report ownership, the existence of CSR programs, the type of funding series, and participation in filling out surveys. Therefore, in-depth interviews were conducted with four AFTECH members of the payment system, innovative credit scoring, and P2P lending business models.

4 Overview of the Fintech Industry

Industry Recap

- Number of Members
- Business Model

Growth Drivers

- Working-Age Population
- Internet Penetration in Indonesia
- Digital Economy in Indonesia
- Investment
- Financial Inclusion
- Digital Financial Literacy

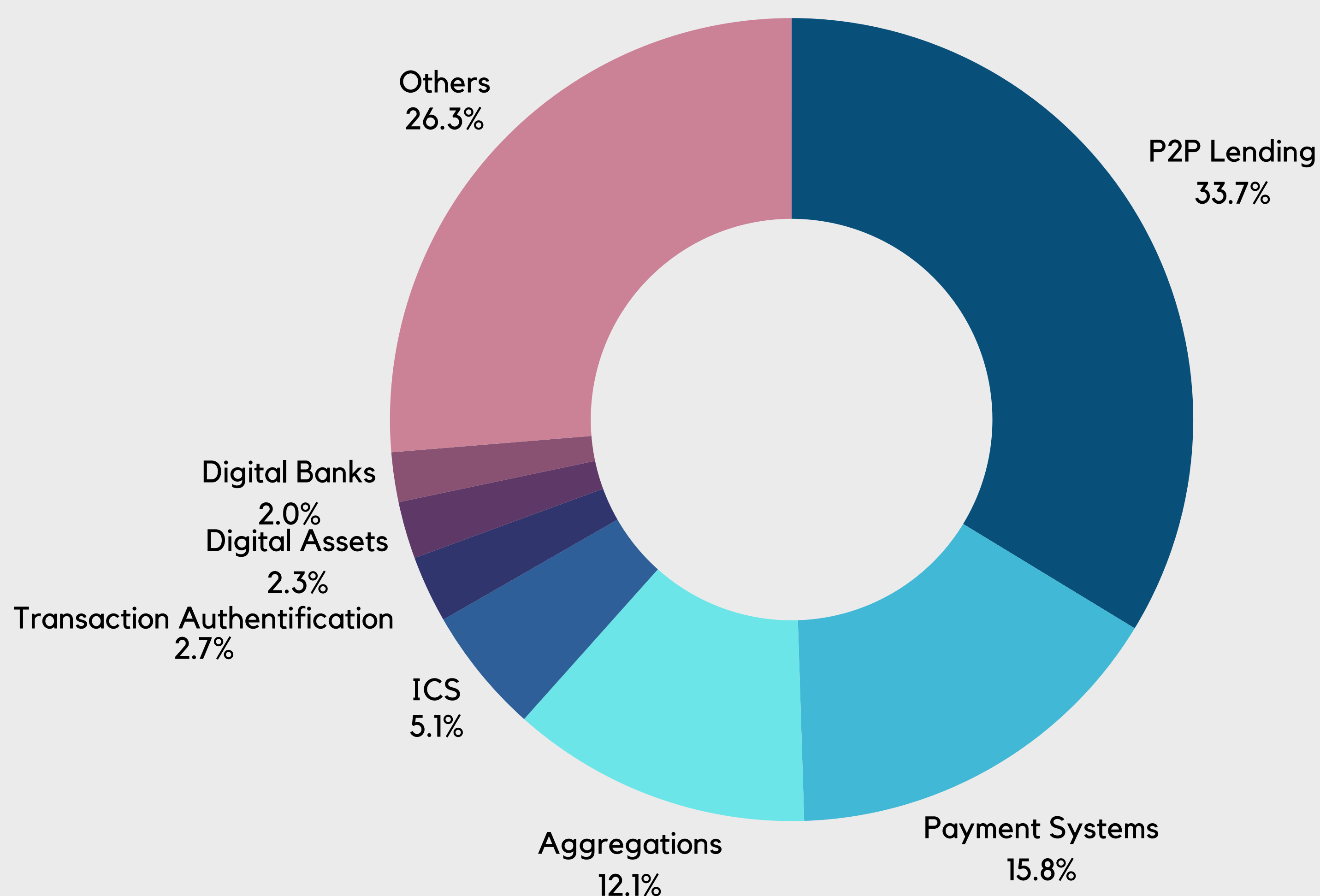
Fintech Landscape



Industry Recap

AFTECH's membership per 1st quarter of 2024 reached a total of 297 member companies consisting of 101 fintech lending companies or P2P lending/LPBBTI, 47 payment systems, 36 aggregation fintech, 15 innovative credit scoring fintech, 8 transaction authentication fintech, 7 digital asset fintech, 6 digital banks, and 78 other fintech companies. Therefore, the three largest business models of AFTECH members are P2P lending (33.7%), payment systems (15.8%), and aggregation (12.1%). In addition, there are 6 member companies with unicorn status out of the total 13 unicorn companies in Indonesia. Meanwhile, the space and/or facilitation of trials/development (sandbox), which was previously part of the Digital Financial Innovation (IKD) cluster, has now been altered to ITSK due to the existence of UU P2SK related to ITSK. It has now been broken down into innovative credit scoring, aggregators, financing agents, funding agents, and wealth tech business models.

Figure 4.1 AFTECH Members



Source: AMS 2024

Growth Drivers

Growth trend of recent years indicate that Indonesia's fintech industry's growth has been influenced by several factors, such as (i) the working-age population, (ii) internet penetration in Indonesia, (iii) digital economy in Indonesia, (iv) investments; (v) financial inclusion; (vi) digital financial literacy.

Working-Age Population

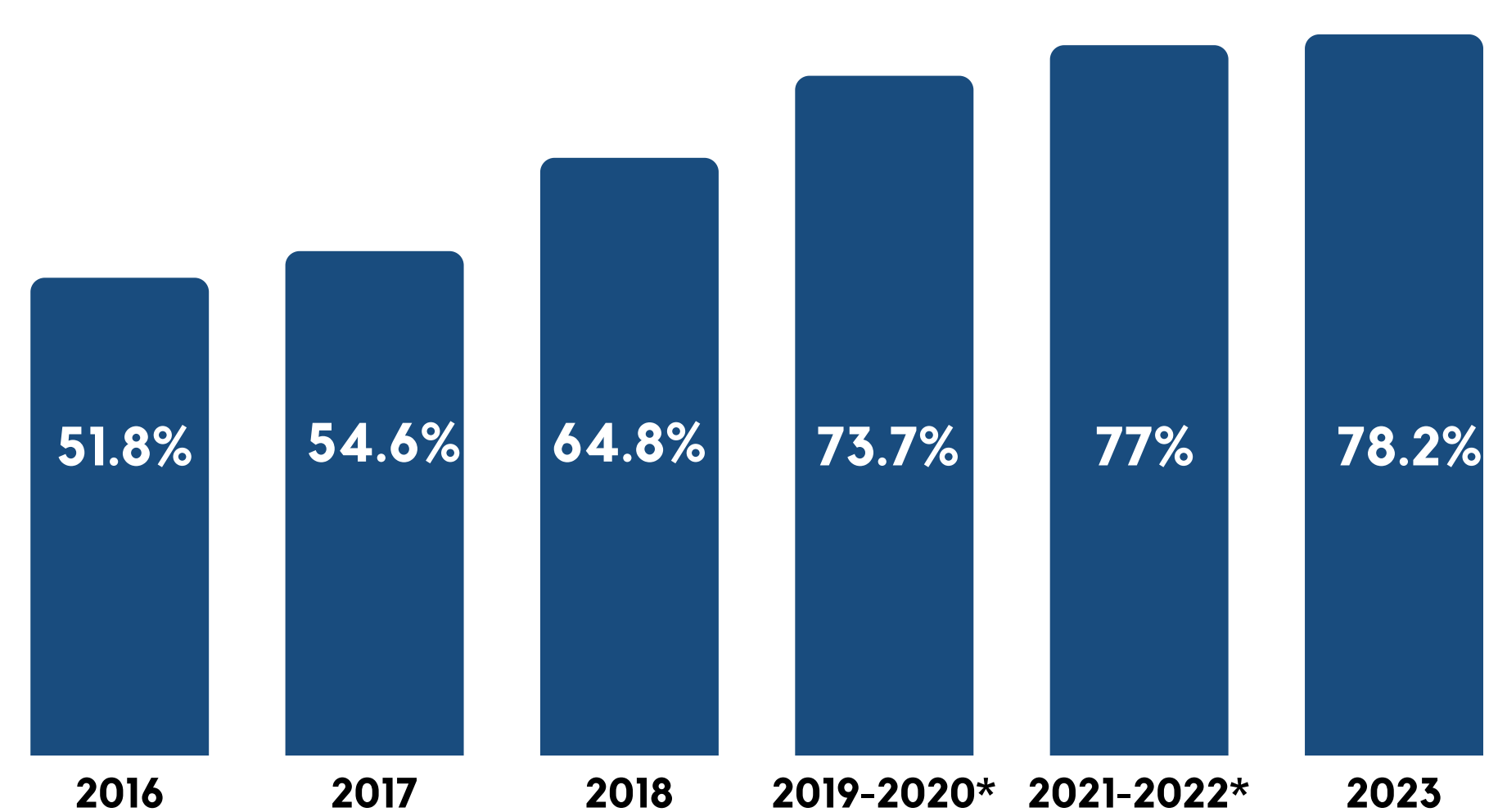
Indonesia's demographic bonus peak is predicted to occur between 2020-2024, with the dependency ratio reaching its lowest point. In line with the demographic bonus, the Central Statistics Agency (BPS) also recorded a significant increase in the labor force. It was recorded that there was an increase from 138.2 million people in the labor force in August 2020 to 147.7 million in the labor force in August 2023. The proportion of the working-age population to the total population of Indonesia has also continued to increase every year since 2020; this is marked by the value of the Labor Force Participation Rate (TPAK), which continues to rise and reach 69.4% in 2023. The increase in TPAK and the peak period of the demographic bonus have great potential for fintech companies, both as a resource and market share

Internet Penetration in Indonesia

A survey carried out by the Indonesian Internet Service Providers Association (APJII/2023) revealed that Internet penetration rate in Indonesia continues to increase significantly from 2016 (51.8%) to 2023 (78.2%). Meanwhile, a report issued by We Are Social titled Digital Indonesia Report 2024 stated that there are 353 million mobile phones that have internet connection. Although Indonesia's internet penetration percentage has significantly increased, its equitable distribution has not been realized comprehensively.

Based on the APJII report (2023), four provinces still have an internet penetration value below 65%, where one province only had 42.5% penetration value. The government's efforts to inequitable distribution of internet penetration continue to be carried out by developing ICT infrastructure and encouraging telecommunication companies to build network infrastructure in remote areas actively.

Figure 4.2 Development of Internet Penetration Rate in Indonesia (2016-2023)

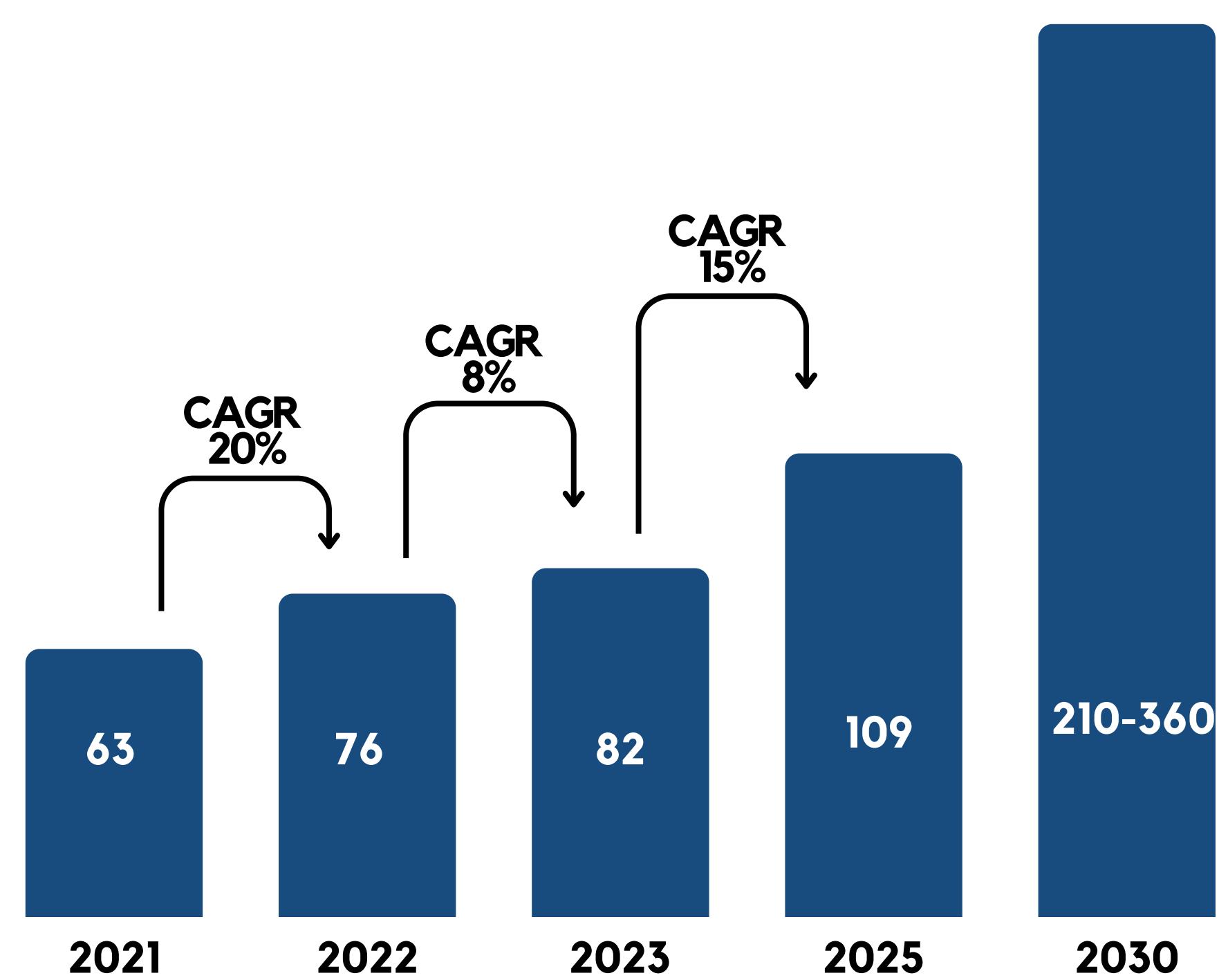


Source: APJII (2016; 2017; 2018; 2022; 2023)
Description: *) is included in the 2022 report

Digital Economy in Indonesia

Based on a report by Google, Temasek, and Bain (2023), Indonesia's internet Gross Merchandise Value (GMV) reached USD82 billion in 2023, growing 8% compared to the previous year. This value is expected to reach USD210-360 billion by 2030. Furthermore, the report also indicates several products from the fintech industry are also experiencing growth. Digital payments experienced an increase of 10% in 2023 compared to the previous year and are expected to grow by 15% in 2025. In fact, the overall fintech industry, including P2P lending, is also expected to grow.

Figure 4.3 Development of Indonesia's GMV Digital Economy, in USD billion (2021-2030)



Source: Google, Temasek, and Bain (2023)

Investment

The performance of fintech investment as part of financial service providers still needs to improve. As recorded in the Tracxn Geo Annual Report (2023), the trend of fintech funding has decreased by 22.3% over the last five years. The highest peak of fintech investment in Indonesia occurred in 2021 at USD3 billion. Among reasons for this decline in investment performance is the slowdown in the global macroeconomy and geopolitical issues. However, Indonesia occupies the second highest position for fintech investment in the 6 countries of the Association of Southeast Asian Nations (ASEAN-6) after Singapore. The Fintech in ASEAN 2023 Report released by the Singapore Fintech Association, Price Waterhouse Cooper and UOB indicated that with this achievement, Indonesian fintech investment still has an excellent opportunity to rise.

This development, coupled with the development of Indonesia's financial inclusion that is experiencing a positive trend accompanied by rapid technological advancements, will be one of the drivers for increasing domestic fintech investment.

Financial Inclusion

The 2022 National Survey on Financial Literacy and Inclusion (SNLKI) published by OJK shows a positive trend in the level of financial inclusion. In 2022, the financial inclusion index in Indonesia reached 85.1% of the total adult population. This achievement is higher than in 2019 (76.2%), and 2016 (67.8%).

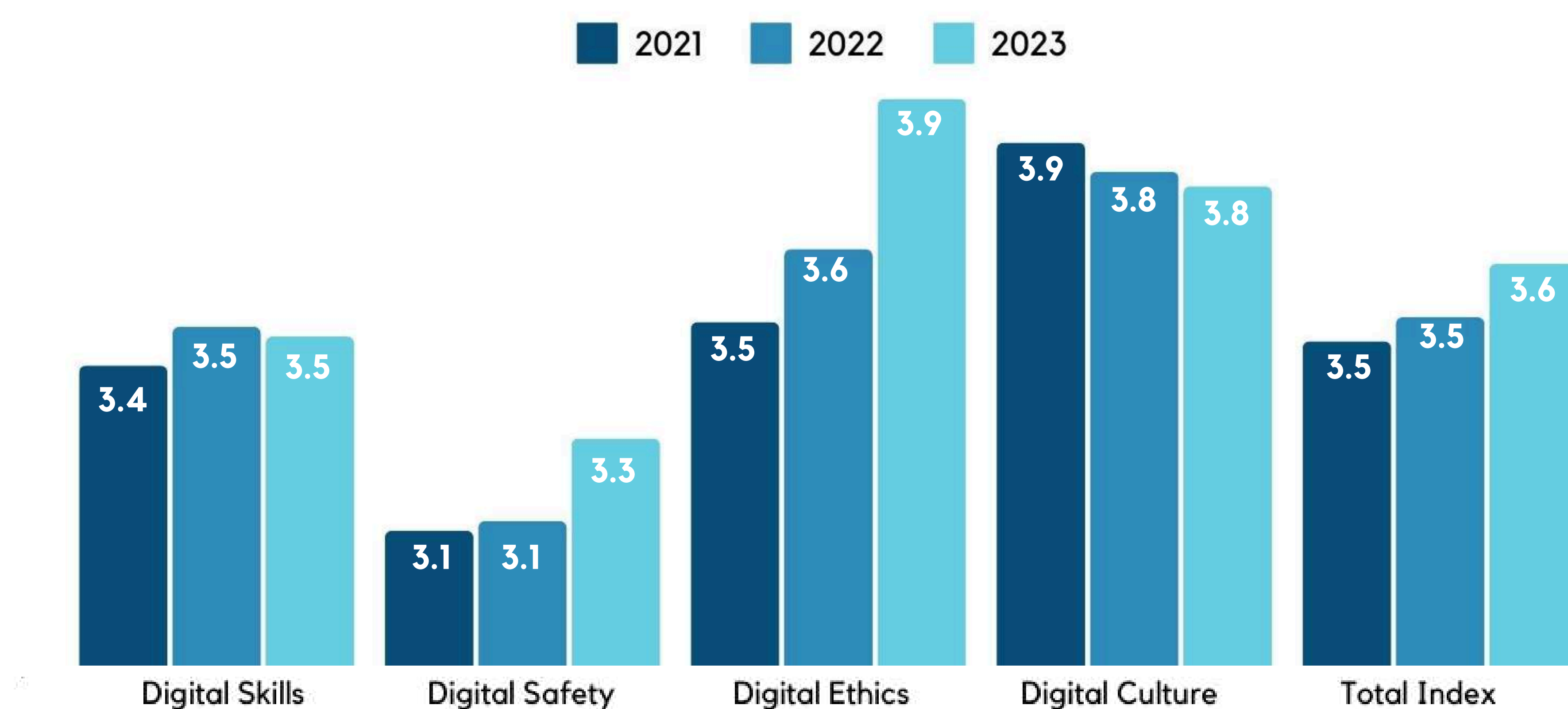
On the other hand, fintech still has the lowest inclusion rate of all financial services sectors at 2.5 points in 2022, although it has significantly increased from 0.1 in 2019. The World Bank also noted that 97.7 million people, or 48.0% of Indonesia's population, are still unbanked.

This condition can be a strong impetus for the fintech sector to continue expanding its market share until it reaches an optimal level of inclusion. As many as 31% of the Indonesian population are individuals aged 15 to 35 still economically productive and technologically literate. In addition to the national level, financial inclusion must be encouraged at the regional level.

Digital Financial Literacy

Literacy is related to individual knowledge, skills, beliefs, and behaviors in managing certain aspects such as finance or digital. The Katadata Insight Center (KIC) published Indonesia's financial literacy index in 2023 at 69.7, an increase of 3.2 compared to 2020. Meanwhile, a digital literacy status report developed through the collaboration between the Ministry of Communication and Informatics and KIC in 2023 indicated that the level of Indonesia's digital literacy in 2023 is 3.6 on a scale of 1-4 (see Figure 4.4). This increase shows the increasing level of digital skills and knowledge of Indonesians. Digital literacy is the main foundation for supporting digital financial inclusion in Indonesia and the initial capital for forming a digital society in Indonesia.

Figure 4.4 Indonesia's Digital Literacy Index (2021-2023)



Source: Ministry of Communication and Information & KIC (2023)

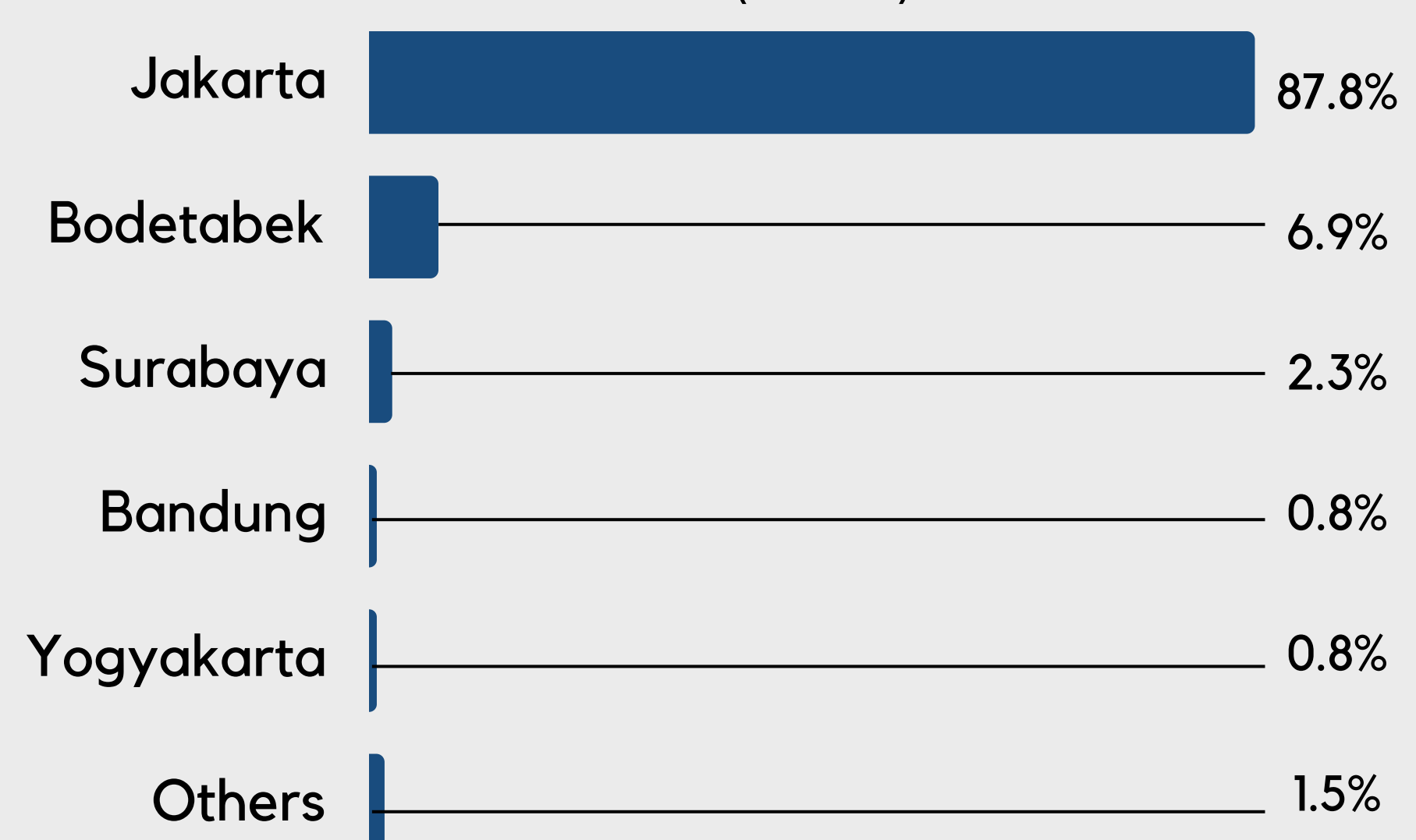
Fintech Landscape

Broadly speaking for the fintech landscape, the results of the AMS 2024 show that the majority of AFTECH members are in Jakarta with the longest operating time between 6-10 years. For this reason, the market coverage is still dominated in the Jakarta area, with a segment of consumers under 35. Until now, AFTECH members are still dominated by companies that have employees under 50 people. With this condition, there are still many opportunities to increase recruitment in the fintech industry for the future. It is recorded that most AFTECH members have a transaction value of less than IDR50 billion. The high need for new investment supports this because, until now, most of the sources of funds for AFTECH members still come from Indonesia. Although many have yet to expand their business models, AFTECH members still consider partnerships with other parties important to maintain their business.

Business Location

The location of fintech players is important because it is closely related to access to markets, resources, technological infrastructure, and innovation ecosystems. As illustrated in Figure 4.5, the majority of fintech players in Indonesia, namely 94.7%, are in Jakarta, Bogor, Tangerang, and Bekasi (Jabodetabek). The Jabodetabek is still the country's economic, political, and cultural center, providing access to large consumer and business markets, advanced technological infrastructure, and a vibrant innovation ecosystem, including digital talent, universities, research centers, and a startup community. Other locations that are also big cities, such as Surabaya, have increased from 1.3% to 2.29% compared to last year. Surabaya has experienced an increase because it is Indonesia's second-largest economic center city, with a strong business sector. However, some have decreased, such as Yogyakarta, which was 1.3% to 0.76%.

Figure 4.5 Locations of AFTECH Members' Main Office (n=131)



Source: AMS 2024

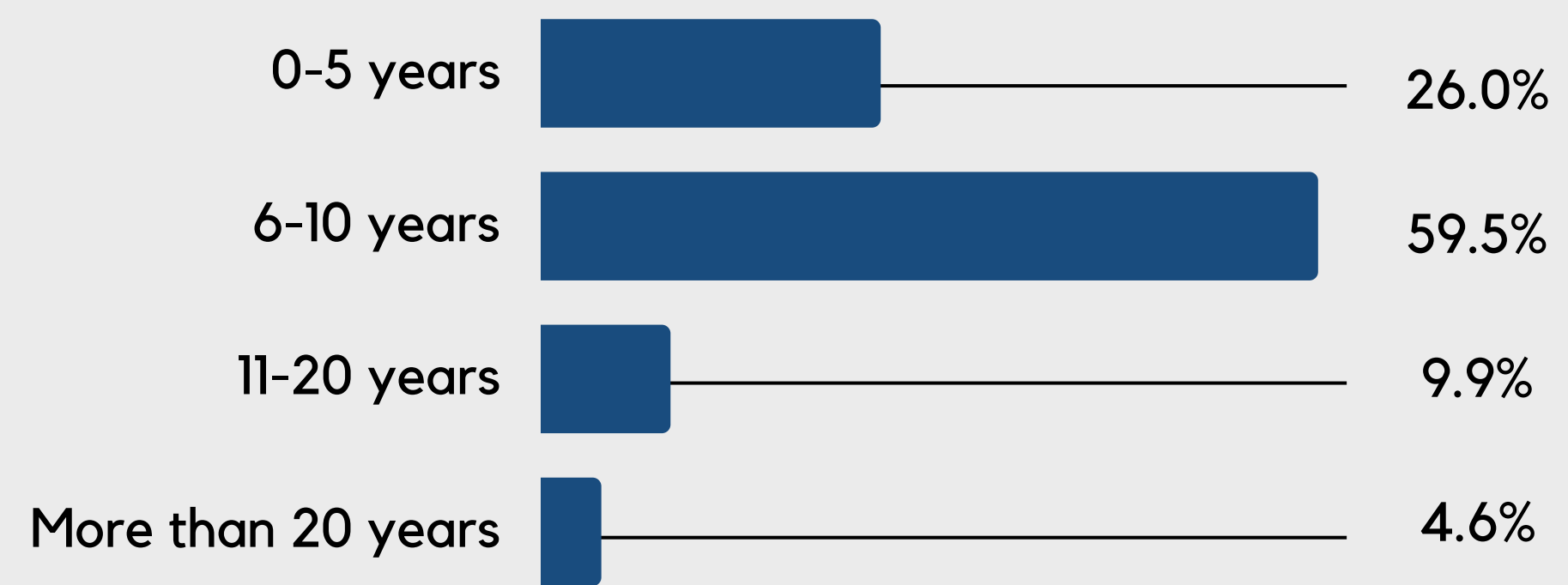
Meanwhile, fintech players outside Java have decreased compared to last year, which is 1.53%. This condition further shows the geographical disparities in the fintech ecosystem in Indonesia. This is due to various factors, including equitable distribution of technological infrastructure, limited access to markets and resources, and regulatory barriers. Therefore, there is a need to increase support and incentives for developing the fintech ecosystem outside Java, including infrastructure development, training and education programs, and regulatory relaxation. This support can encourage the growth and diversification of the fintech ecosystem throughout Indonesia and help achieve broader financial inclusion.

Length of The Operation

Information about the age of fintech companies is crucial in understanding the fintech industry's growth stage and potential development. Figure 4.6 illustrates that 59.5% of fintech players who are members of AFTECH have been operating in the last 6-10 years. This shows that most fintech companies in Indonesia are in the growth stage (scale-up). The company usually already has a proven product or service and focuses on market expansion and operations. Fintech players in the mid-phase may need different support, such as access to new markets or assistance addressing more complex operational challenges. This growth stage must also be supported by the government, especially in terms of regulations, to make it easier for fintech companies to grow.

In contrast, fintech companies established within 0-5 years, as much as 26%. This condition shows that the fintech company is still in the early phase or as a startup. This phase is usually characterized by increased innovation and experimentation in creating products or services and finding the most appropriate business model. Fintech players in the early stages typically have greater flexibility in adapting to technological changes and market developments. They are often the drivers of change in the industry. They are also more focused on developing products or services and need help accessing funding and regulatory support.

Figure 4.6 Operational Periods of AFTECH Members (n=131)



Source: AMS 2024

Employment

In addition to the length of operation, the number of workers is also one of the indicators of the growth of the fintech industry. The initial phase of fintech players in Indonesia is also reflected in most of the workforce, which is as much as 55%, amounting to less than 50 of the workforce, as reflected in Figure 4.7. Meanwhile, 19.1% of fintech industry players have 51-100 workers, and 26% have >100 workers. By looking at this condition and understanding the age of fintech companies, which is inversely proportional to the number of workers in the fintech industry, this industry should get help from regulators, investors, and other stakeholders to provide the proper support according to the needs and challenges faced by companies in different phases of business growth.

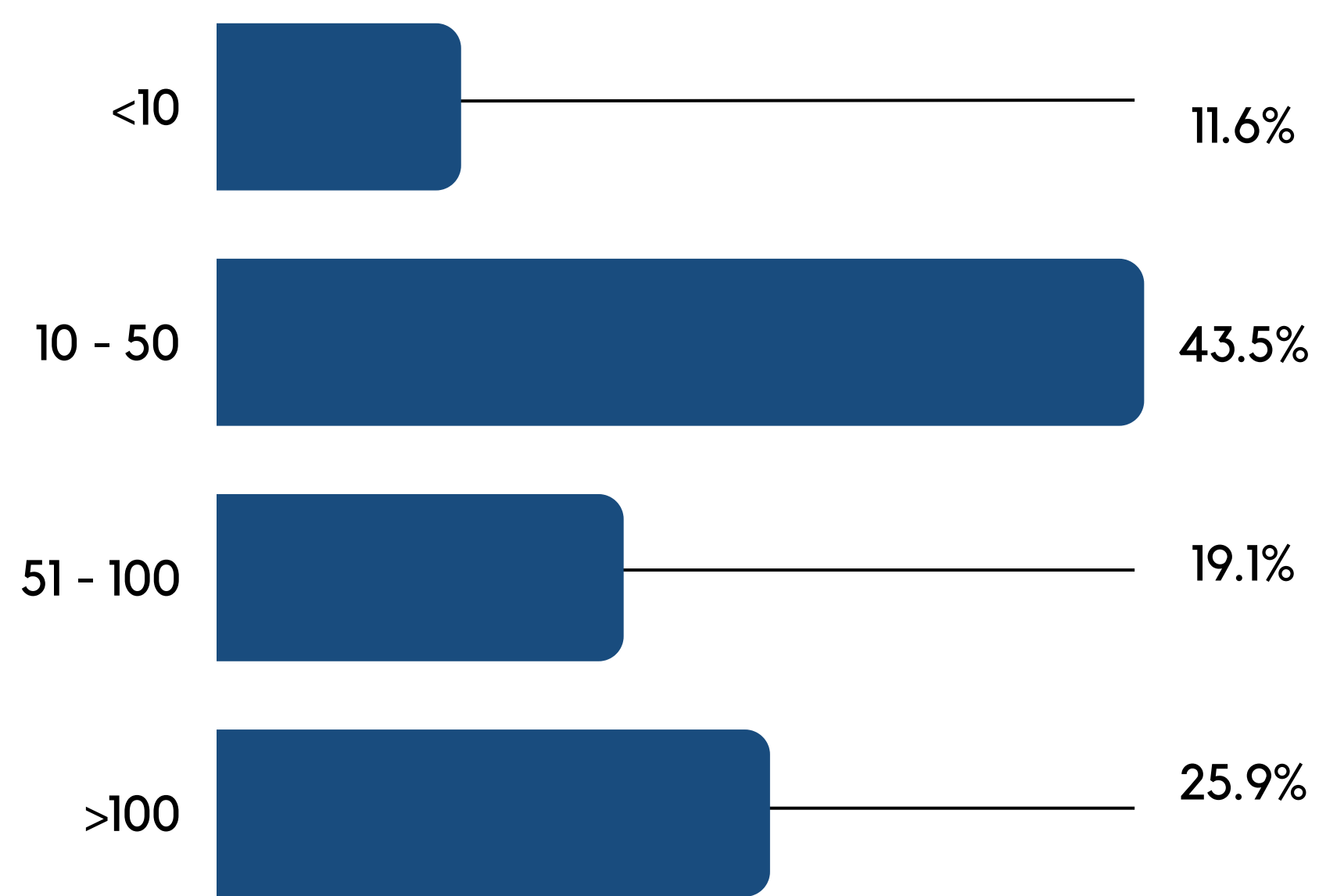
Regarding gender, male employees dominate many work fields in AFTECH member companies, with the highest proportion in marketing (81%), followed by Information Technology (75%), as seen in Figure 4.8. Meanwhile, the field of Financial Literacy is dominated by female employees, with 65% working in this field.

Furthermore, Figure 4.9 shows that the fintech industry has downsized its employees in the past year. From the survey results, only 22.1% of respondents said they had recently downsized. Even if the downsizing of employees or termination of employment is carried out, 65.6% of AFTECH members surveyed said they planned it in the next 1-2 years, and 28.2% may add new employees, as described in Figure 4.10. All AFTECH members who plan and allow to add new employees will recruit employees permanently or in a combination of outsourcing and permanent. This is a positive thing in the world of work because it will open jobs.

The survey also asks about the preferences of fintech industry players regarding hiring additional employees in the future. For the increase in the employee in the next 1-2 years, 61.79% of respondents plan to hire permanent and non-permanent employees, while 38.21% will only hire permanent employees (see Figure 4.11).

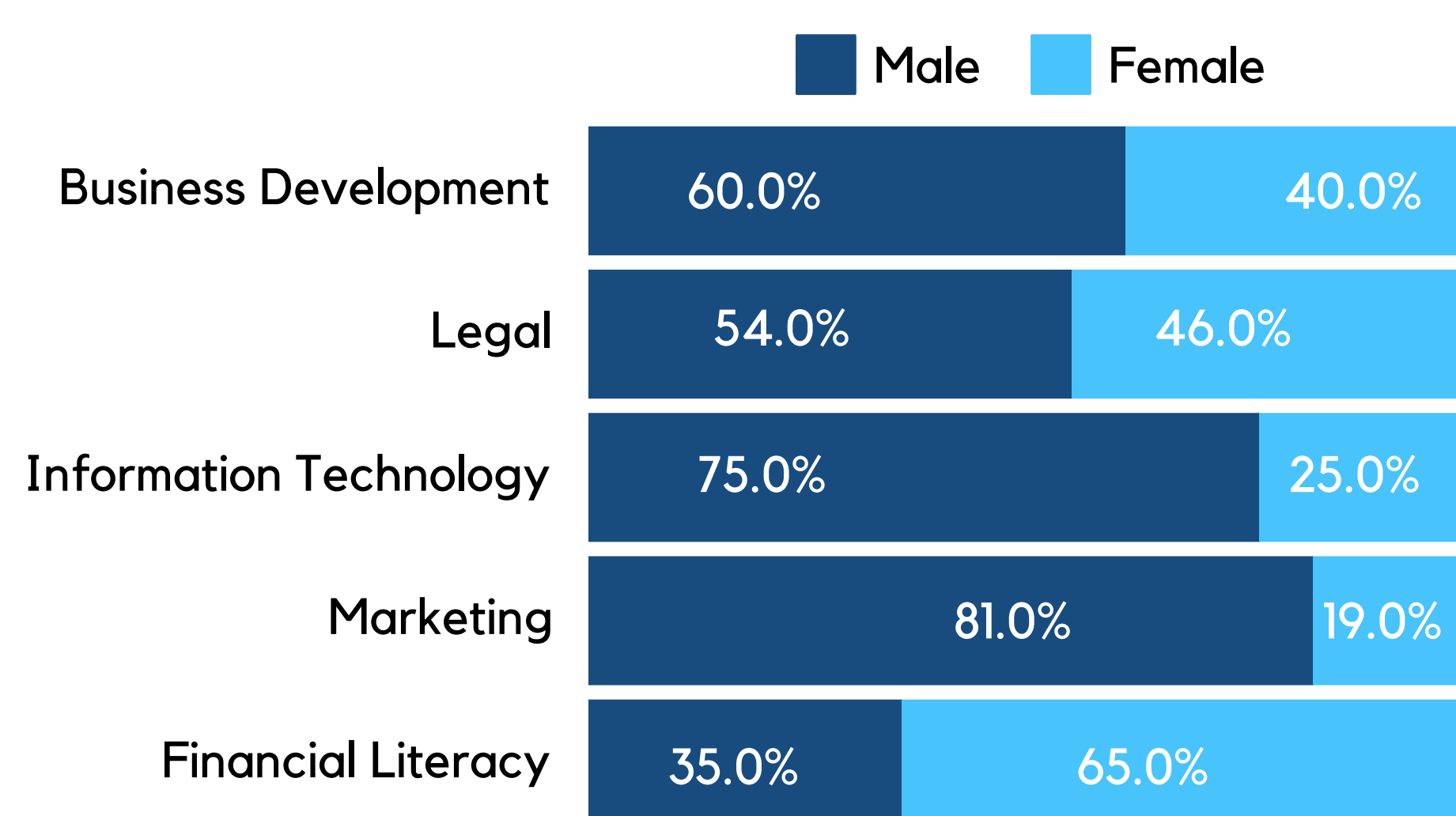
Next, related to the needs of employees based on their fields, AFTECH members showed that there are employee needs that tend to be greater in three areas, namely product development (23.6%), business development (22.9%), and sales and marketing (20.7%). In this case, the application of science and skills related to business management science is vital for job seekers to have. Some other areas that are also needed with a smaller percentage are the fields of law and compliance (8.2%), customer service (6.8%), finance and accounting (6.1%), and design (2.5%). This means that the fields of work needed by the fintech industry are pretty varied, as seen in Figure 4.12.

Figure 4.7 Number of AFTECH Member Employees (n=131)



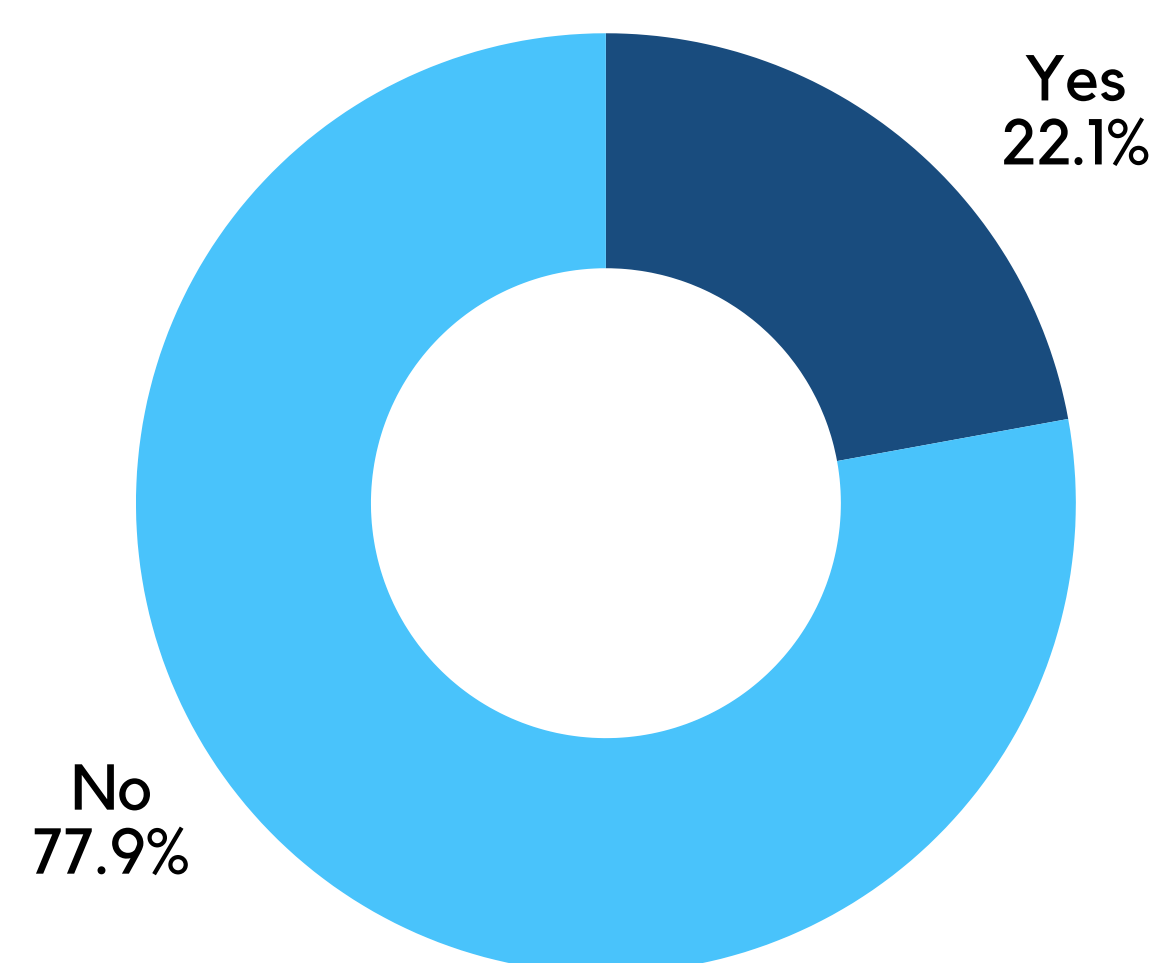
Source: AMS 2024

Figure 4.8 Proportion of AFTECH Member Employees by Gender (n=131)



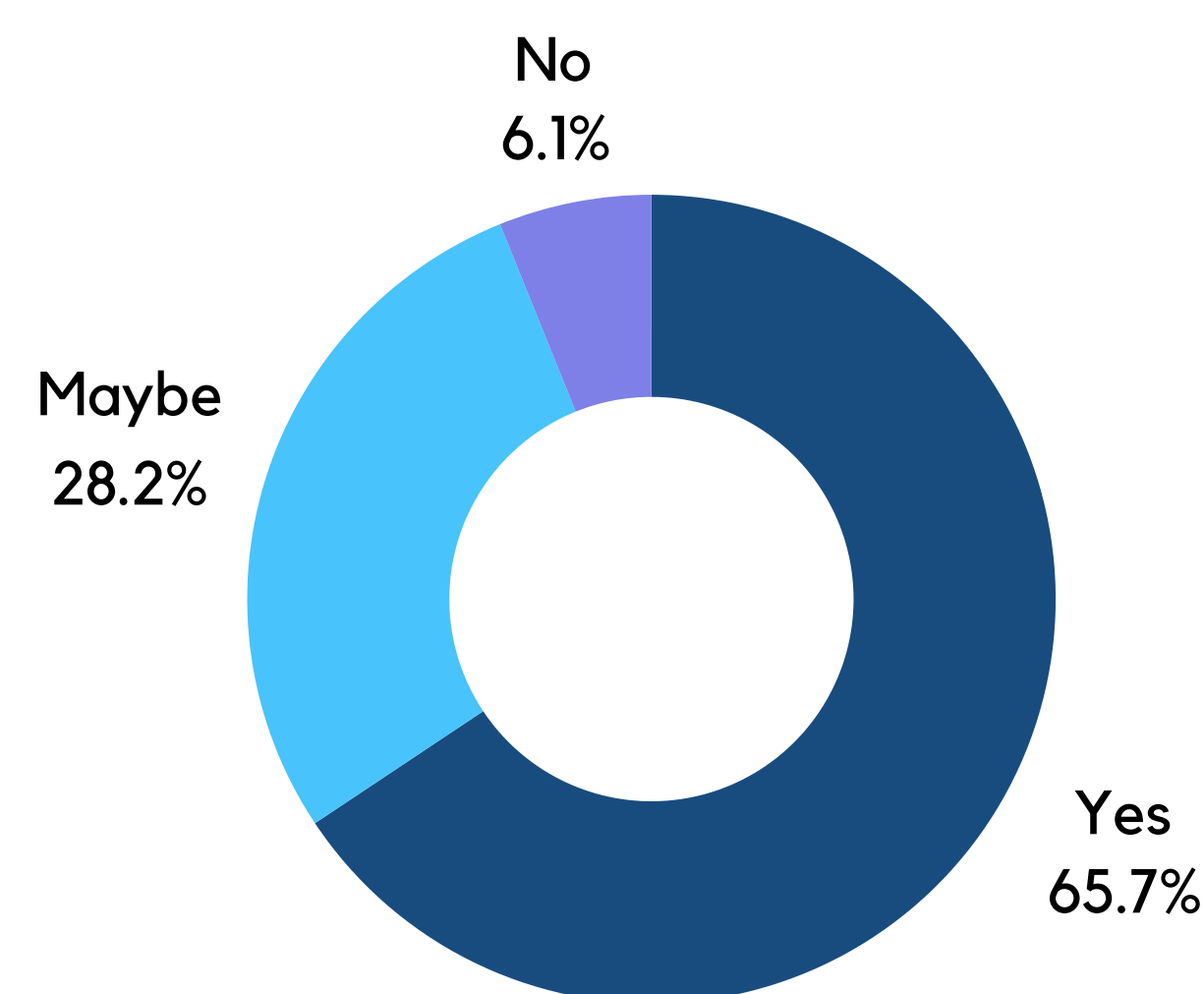
Source: AMS 2024

Figure 4.9 AFTECH Members Downsizing (n=131)



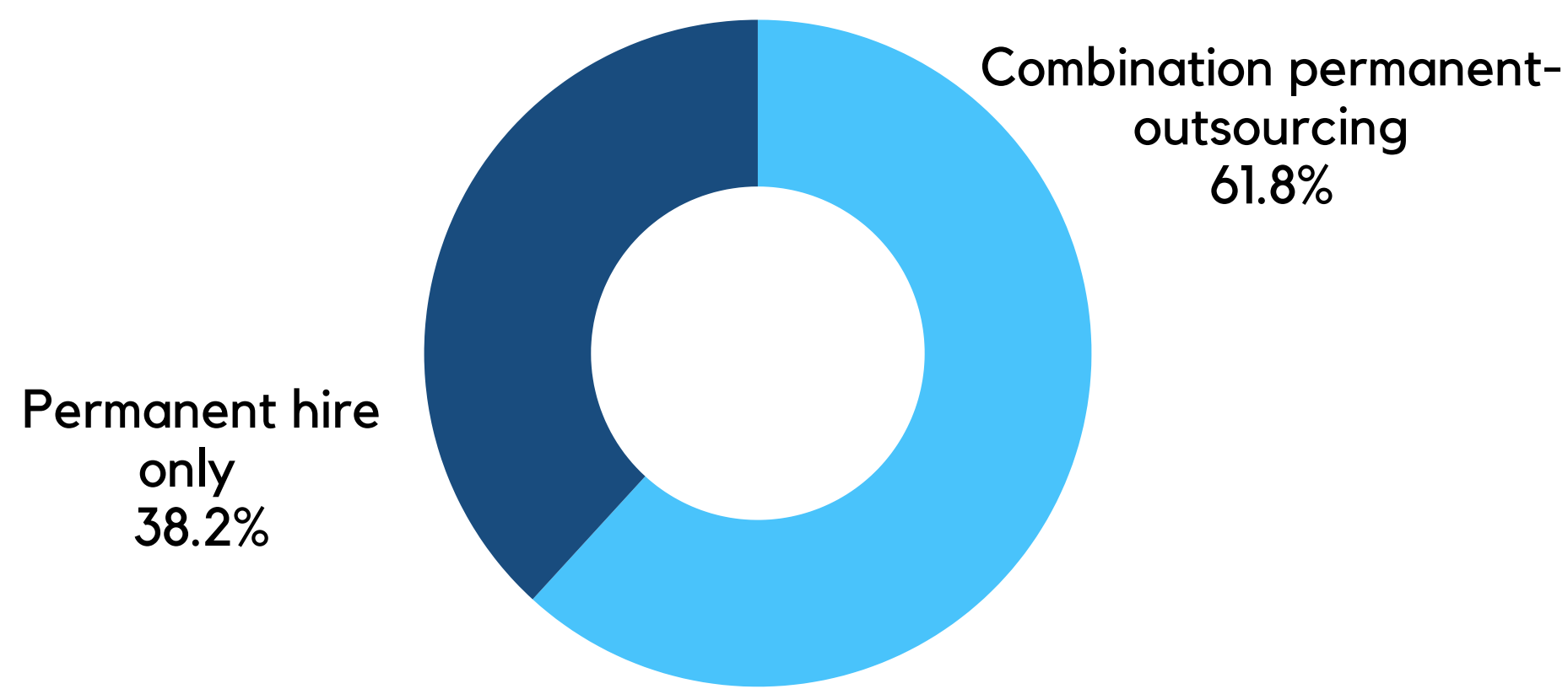
Source: AMS 2024

Figure 4.10 AFTECH Members Planning to Increase Employee Recruitment (n=131)



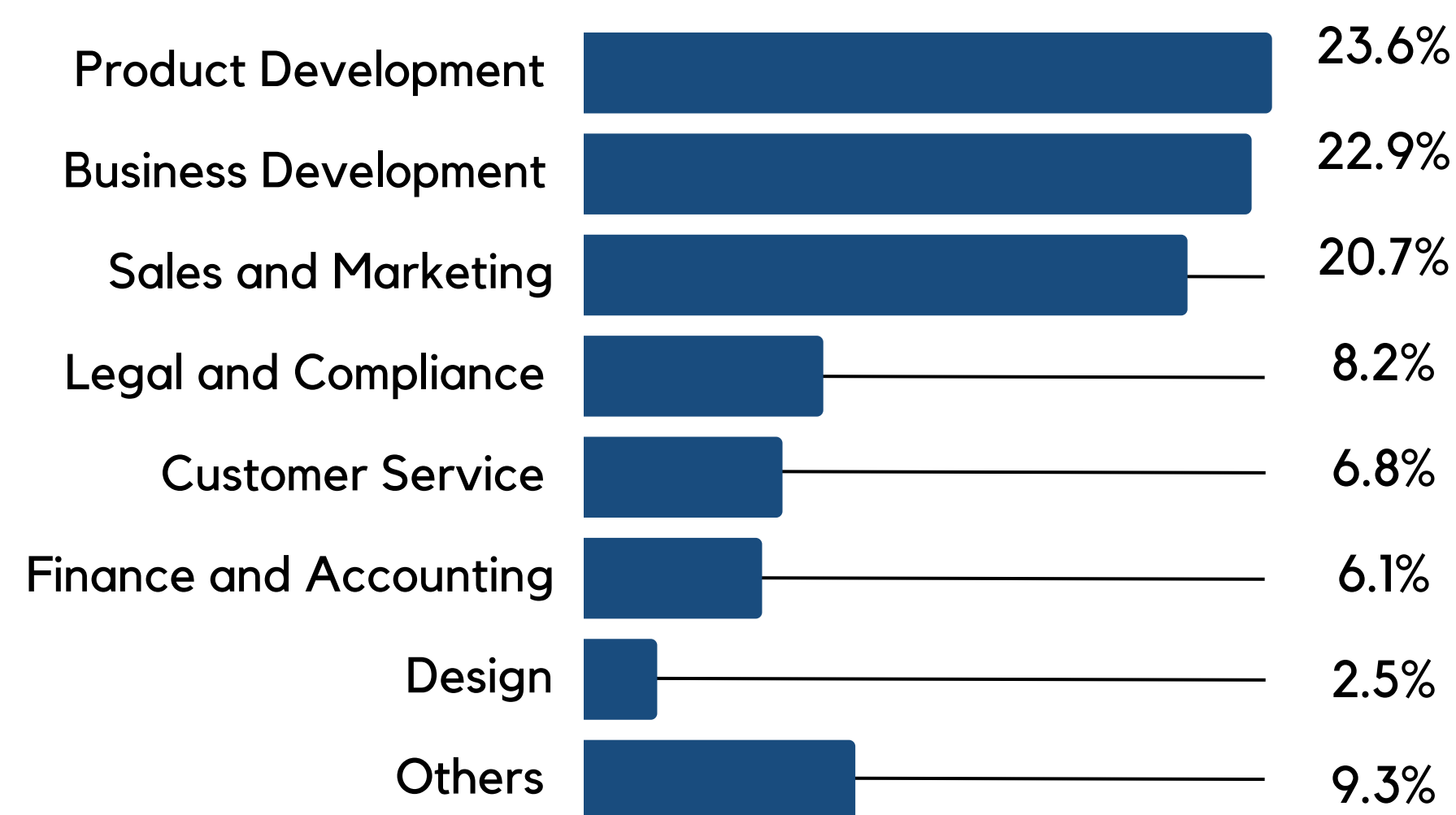
Source: AMS 2024

Figure 4.11 AFTECH Members Workforce Structure Plan (n=123)



Source: AMS 2024

Figure 4.12 Field Priorities for AFTECH Members' Employee Needs (n=280)

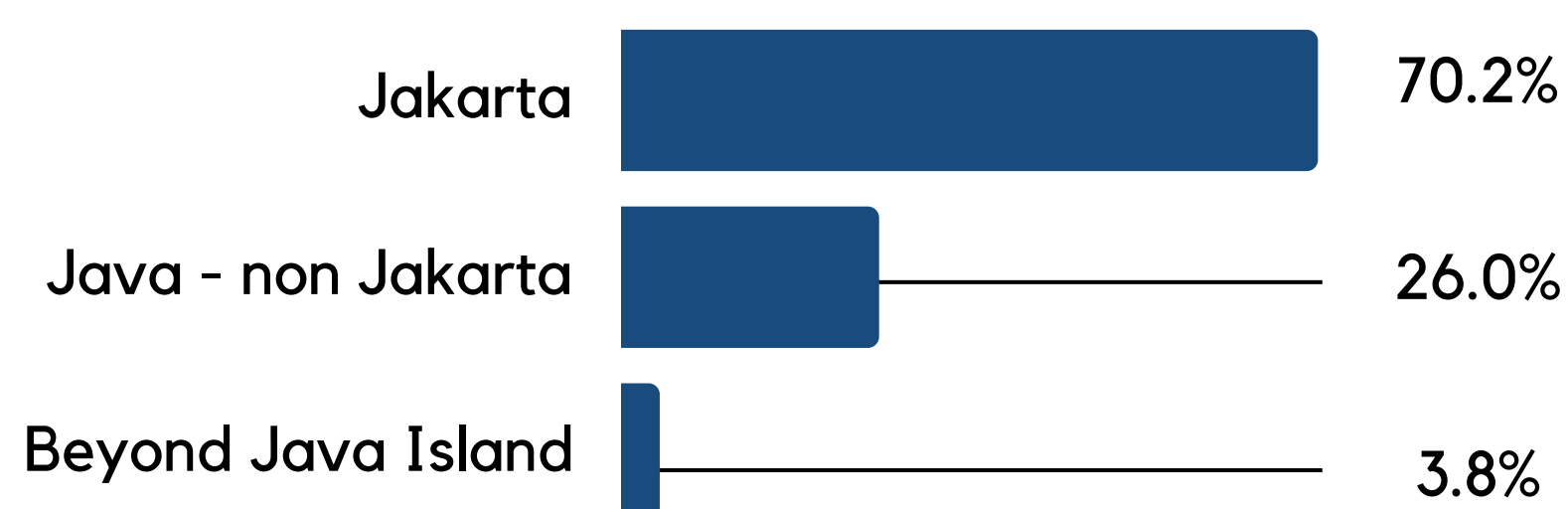


Source: AMS 2024

Market Penetration

Most fintech companies in Indonesia are still concentrating on the island of Java. The AMS 2024 recorded that the top three market shares of fintech players are Jakarta (70.2%), Java excluding Jakarta (26%), and markets outside Java (3.8%) (see Figure 4.13).

Figure 4.13 Market Share Distribution of Fintech Players (n=131)



Source: AMS 2024

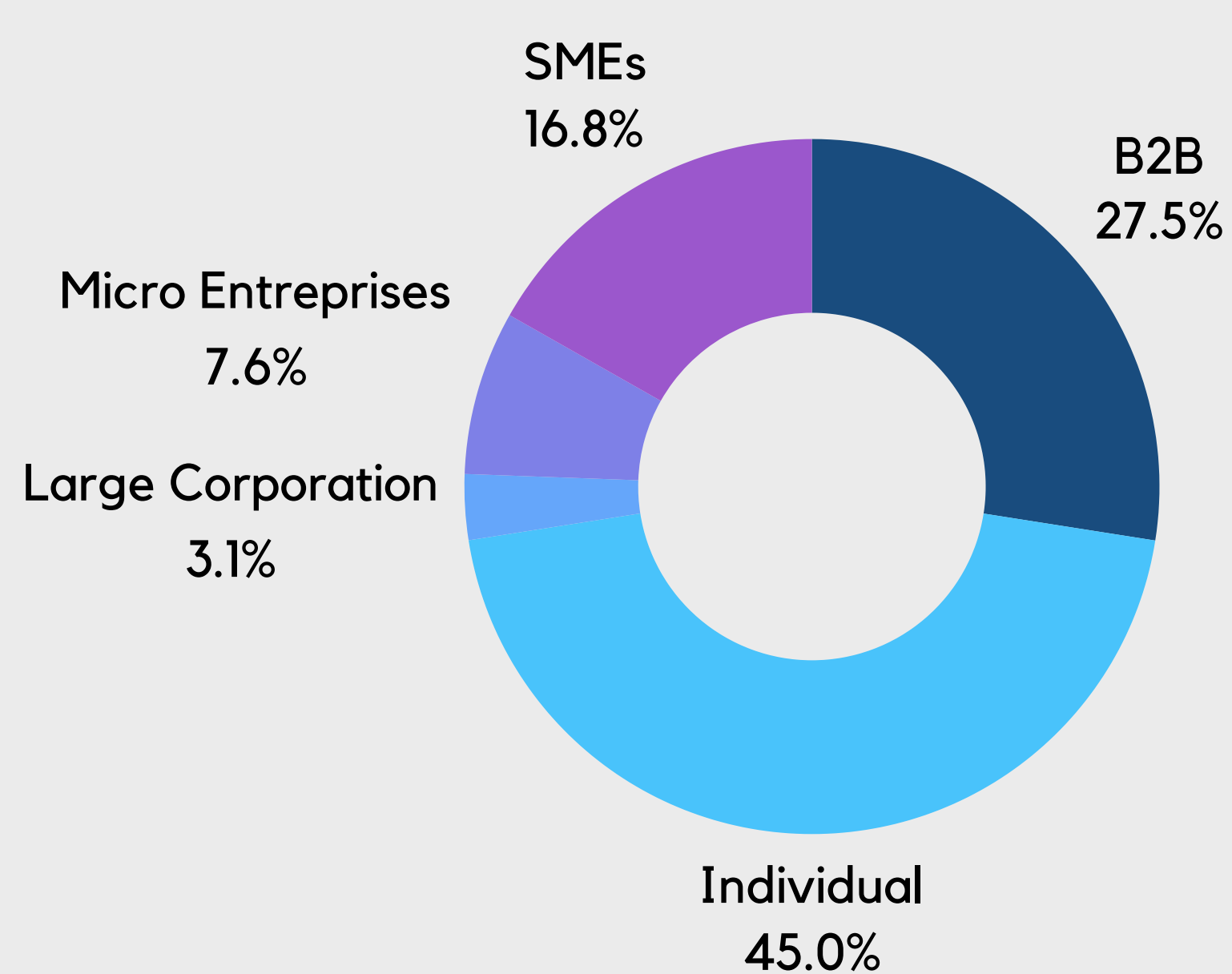
Increasing wider market penetration requires geographical expansion and a deep understanding of consumer needs and behaviors in different regions. For example, the financial needs of users in rural areas may differ from those of urban users. Tailoring products and services based on the specific needs of local consumers can be an effective strategy. In addition, collaboration with local governments and institutions is also vital to promote fintech adoption and create an ecosystem that supports financial inclusion.

When viewed from the perspective of the main users of fintech, the number of Small and Medium Enterprises (SMEs) and business are 16.8% and 27.5%, respectively. SMEs and business use fintech for various reasons, including making it easier to transact with consumers and manage business finances. In addition, as many as 45.0% of respondents indicated that the primary users of fintech services are individuals, which has increased slightly compared to AMS 2022/23 (42.7%). Meanwhile, business users accounted for 27.5%, highlighting the role of fintech as a supporter and enabler of both financial and non-financial industries.

Regarding age, 55.7% of users are in the 26-35 age range, followed by 30.5% in the 36-55 age range. This age range usually includes young people familiar with technology who need a quick and convenient financial solution. Fintech is an important innovation in serving the tech-savvy demographic of the younger generation and has the potential for even higher fintech growth and adoption.

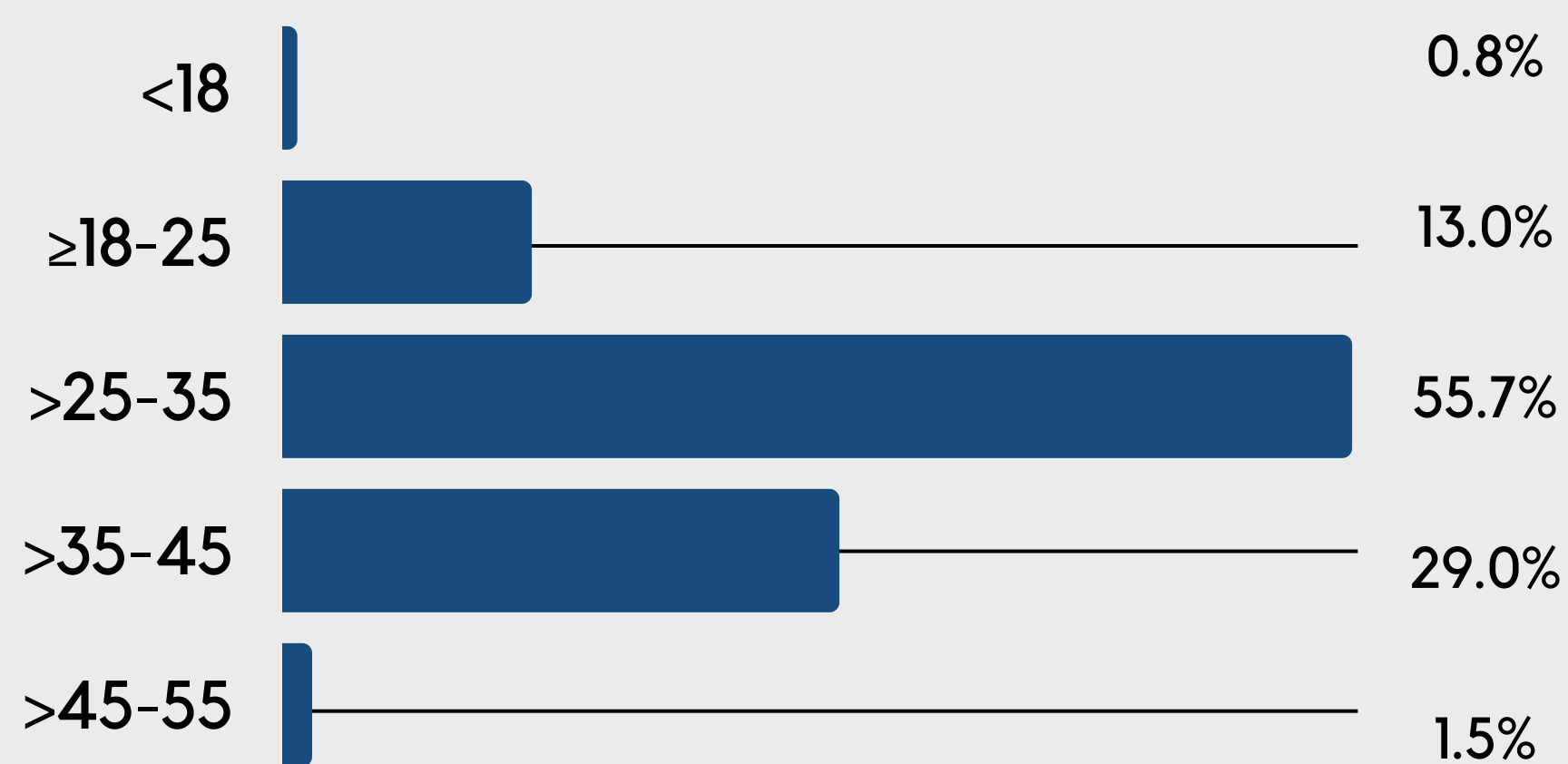
In terms of revenue, most users of fintech services have revenues between IDR5-10 million, accounting for 38.2% of users. Furthermore, fintech service users come from groups with IDR 2.5-5 million revenues at 19.1%. The large number of users of fintech services from income groups in both categories indicates that fintech services are an alternative financial service for underbanked communities. This means that fintech services have contributed to increasing financial inclusion in Indonesia.

Figure 4.14 Main Users by Segment (n=131)



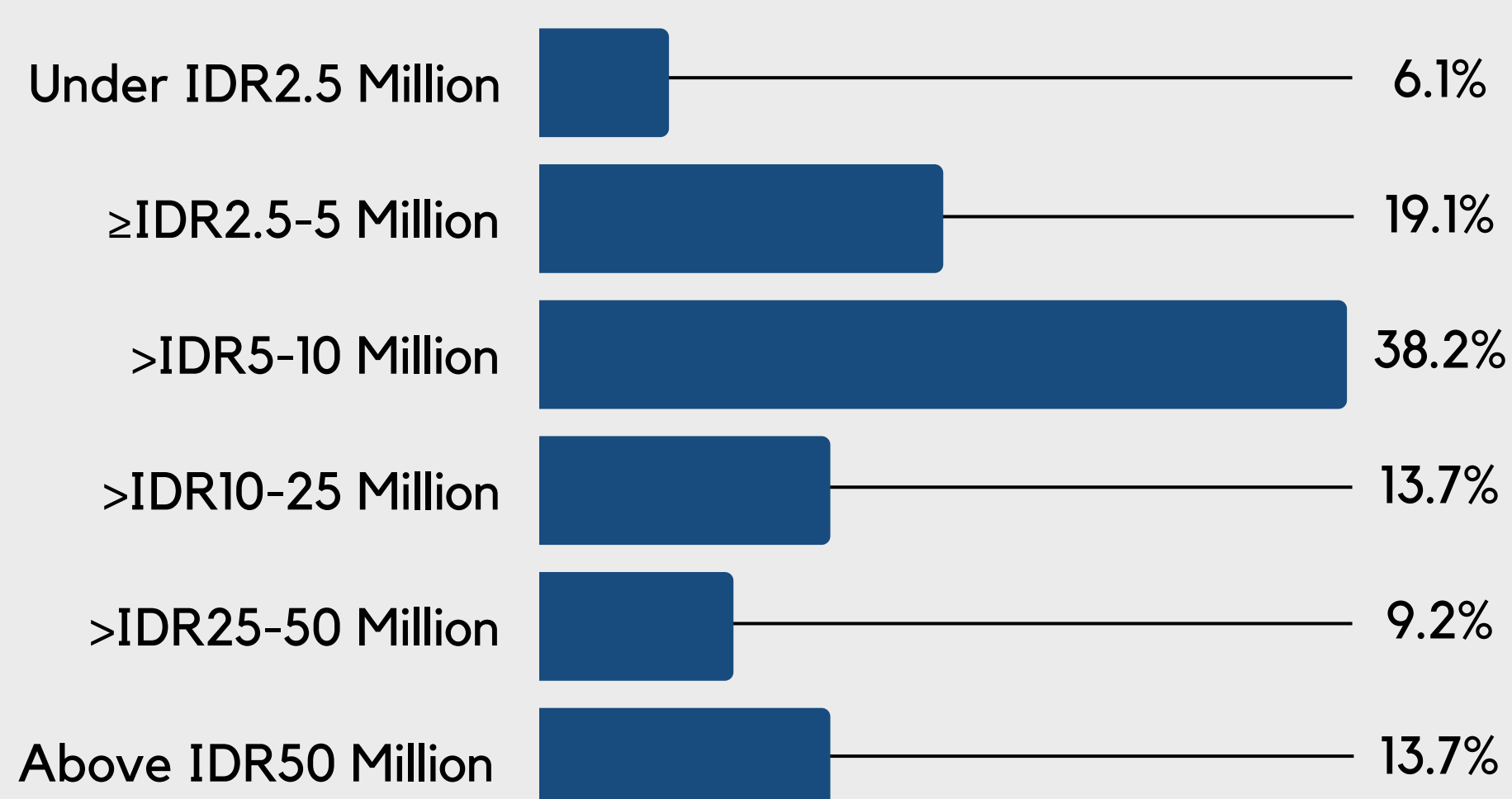
Source: AMS 2024

Figure 4.15 Main Users by Age Group (n=131)



Source: AMS 2024

Figure 4.16 Main Users by Revenue (n=131)



Source: AMS 2024

Market Expansion and Business Models

The AMS 2024 also looks at the operational strategies of fintech players related to the market and their business models. In response to the tech winter, many fintech players adapt strategies to remain competitive and maintain revenue growth amid global economic challenges. As seen in Figure 4.17, the respondents' top three strategies to increase revenue are focusing on high-income products (39.4%), exploring new business lines (32.1%), and entering new markets, including overseas and rural areas (22.8%).

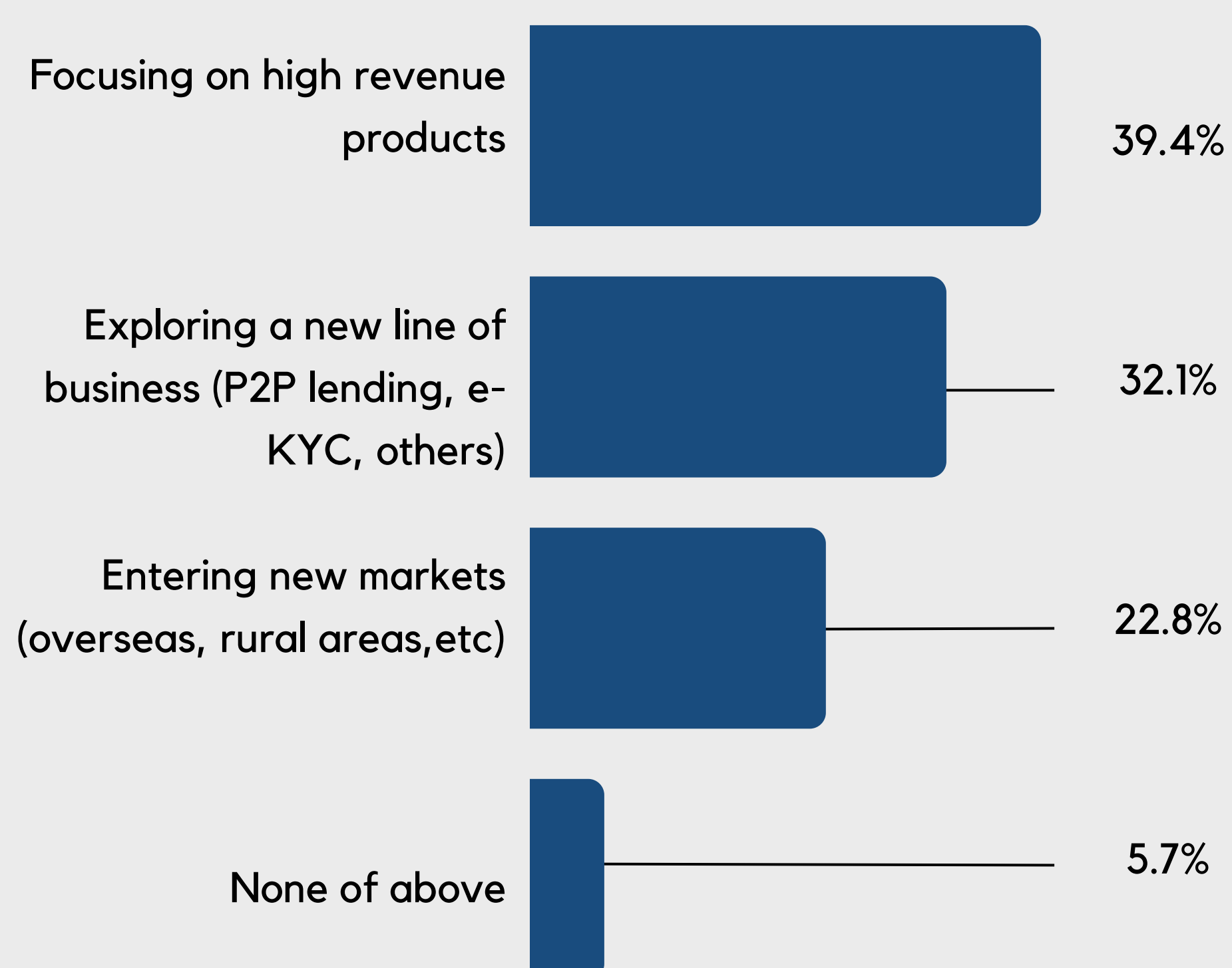
Regarding new business lines, several fintech companies have expanded their business models. The survey showed that 20.6% of respondents changed their business model and expanded their business. This condition is slightly different compared to the results of the AMS 2022/23, where only 12% of respondents changed their business models and expanded their businesses because there was still a slight impact of the pandemic felt by the fintech industry. This indicates that fintech companies are responding to economic recovery after tech winter and the adaptability of fintech companies to external dynamics.

On the other hand, 65.6% of respondents in the fintech industry have yet to plan to expand abroad. As many as 22.1% of respondents plan to expand their business abroad, and another 12.2% only plan to expand overseas within 1 year.

With these findings, fintech industry players who want to expand abroad experienced a slight increase compared to the previous year. Namely, 21.3% of respondents plan to expand their business abroad, and the other 9.3% only plan to expand overseas after one year.

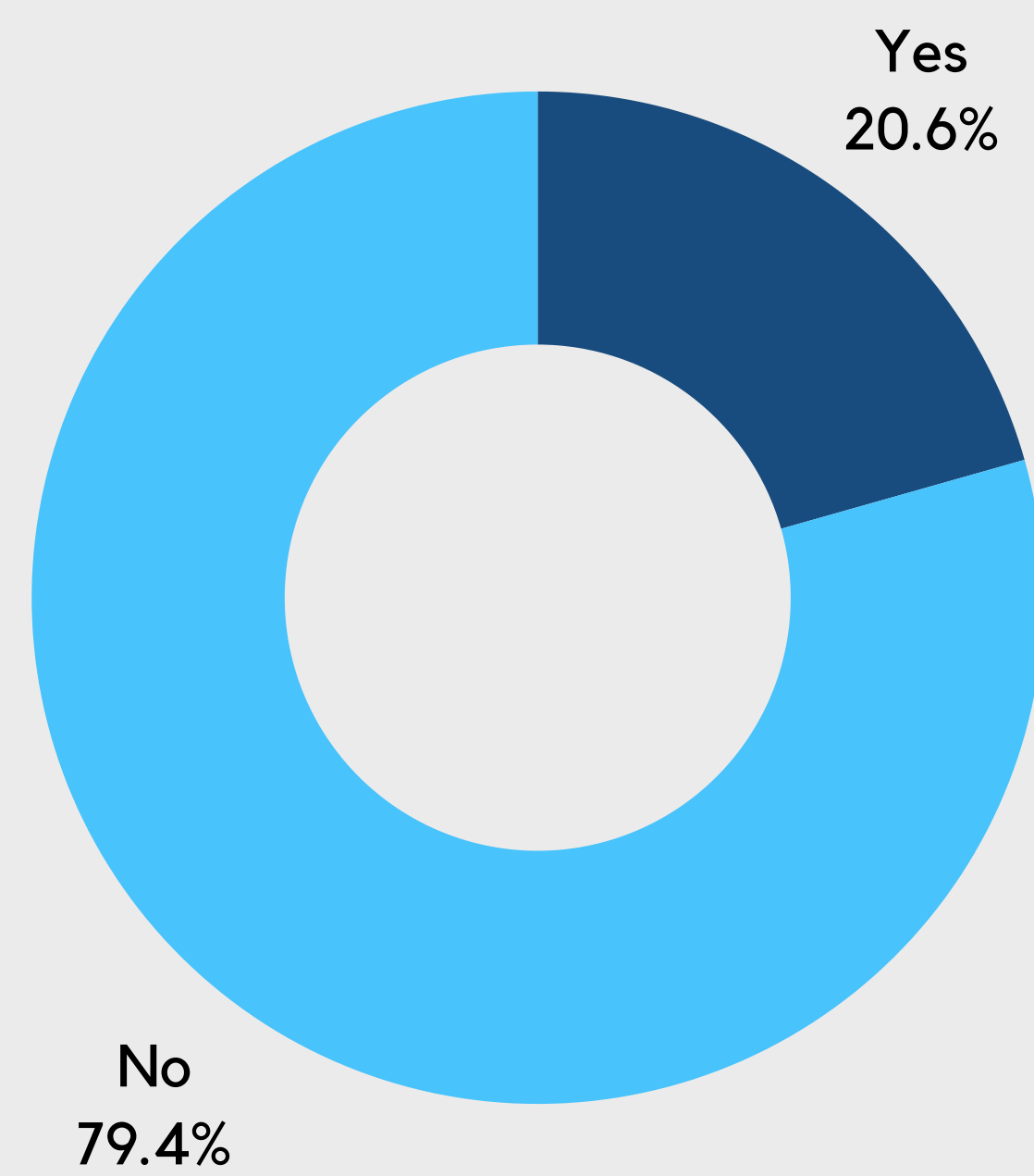
Although business expansion abroad has not become a priority, as many as 24.1% of AFTECH members who have branches or services abroad have served users who are foreign citizens (Warga Negara Asing/WNA), and 55.2% of respondents stated that they serve foreign users and Indonesian citizens (WNI) abroad at the same time. Meanwhile, another 20.7% serve the Indonesian diaspora living abroad. Currently, borderless fintech services are increasingly encouraging the use of fintech by the wider community, including people abroad (see Figure 4.20).

Figure 4.17 Efforts to Increase Fintech Companies' Revenue (n=131)



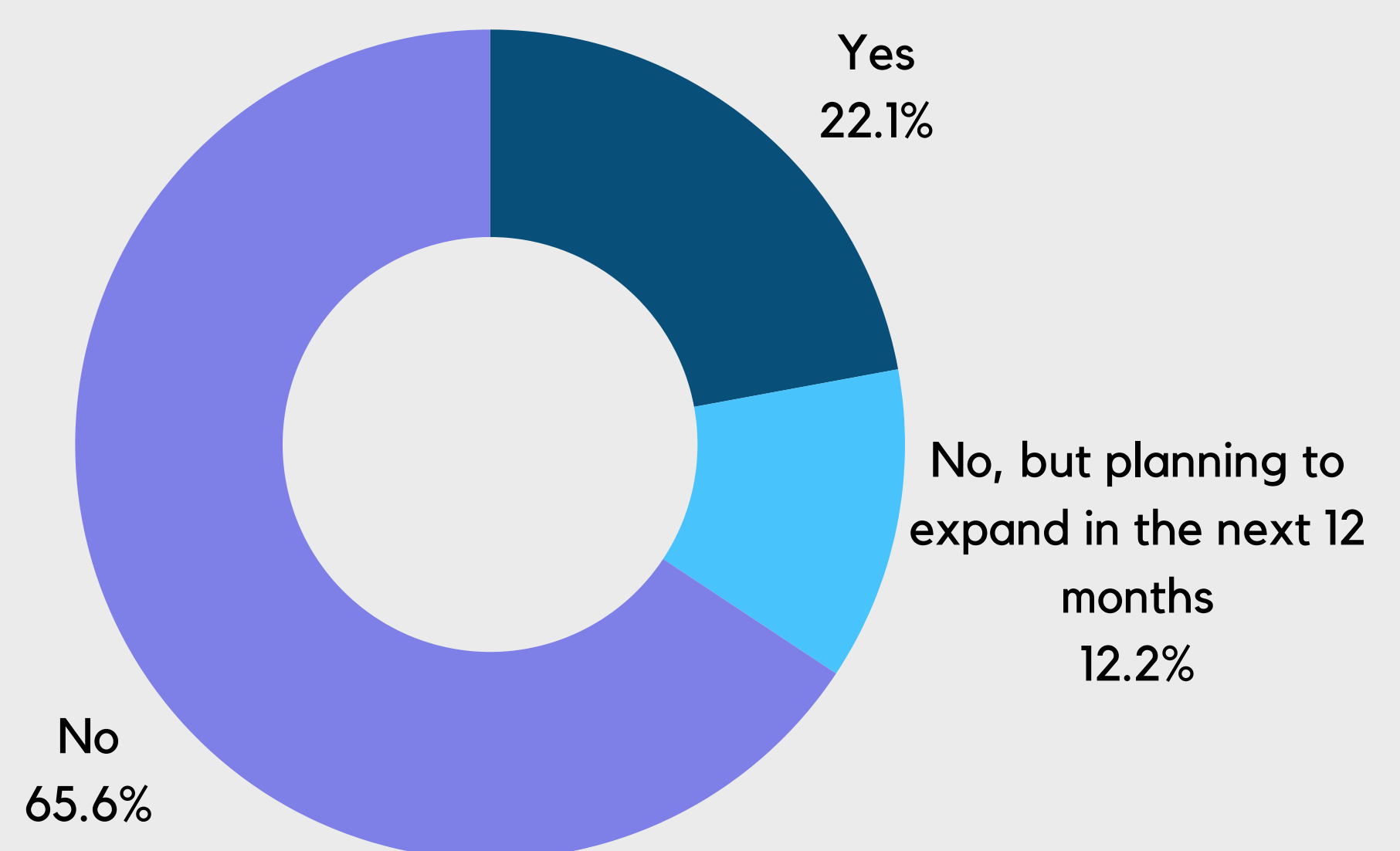
Source: AMS 2024

Figure 4.18 Business Model Expansion/Changes (n=131)



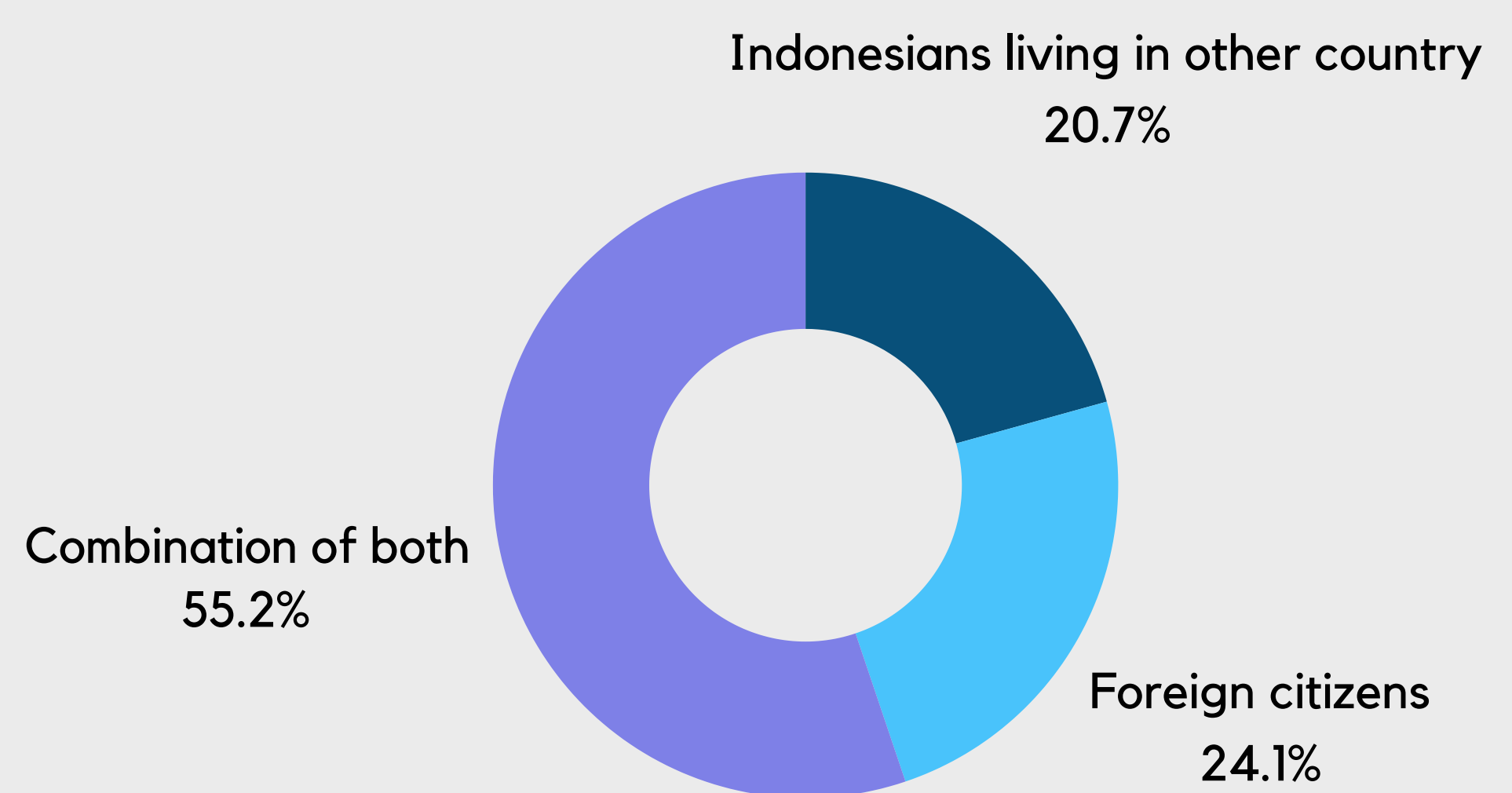
Source: AMS 2024

Figure 4.19 Plan for Overseas Expansion (n=131)



Source: AMS 2024

Figure 4.20 Foreign and Overseas Indonesian Fintech Service Users (n=29)



Source: AMS 2024

Partnership

Partnerships between companies in the fintech ecosystem have an essential role in growing and strengthening the fintech industry in Indonesia. In Figure 4.21, as many as 89.31% of respondents in AMS 2024 stated that they had partnered with other companies in the fintech ecosystem and experienced an increase in the previous year, which was only 79%. The increase in partnerships indicates the improvement of the fintech ecosystem through strengthening collaboration between fintech companies. The benefits of partnerships between companies in the fintech ecosystem include exchanging knowledge and technology, sharing risks, access to new markets, and increased operational capacity. Partnerships can sometimes open opportunities for better product and service synergies, such as integration between payment services and P2P lending.

In addition, partnerships between fintech companies can also help support financial inclusion in Indonesia. For example, a fintech company that focuses on payments could partner with a company that focuses on lending to provide more comprehensive financial services to consumers, especially those who are underserved or underserved by traditional financial institutions.

Therefore, partnerships between companies in the fintech ecosystem promote industry growth and innovation and potentially increase financial inclusion across Indonesia.

Transaction Value

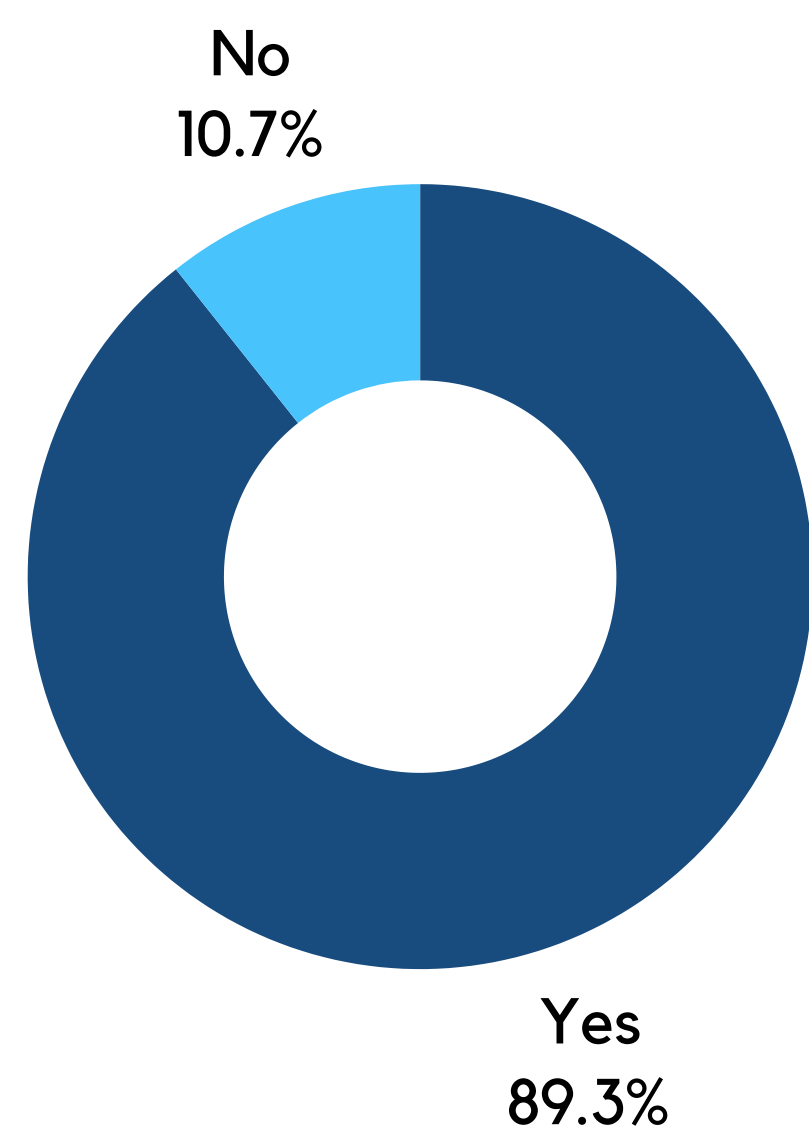
Transaction value is an essential indicator in assessing the performance and growth of fintech companies.

Fintech companies with low and medium transaction values are observed to experience performance improvements, but fintech with high transaction values are indicated to experience challenges.

AMS 2024 found that 23.7% of respondents had a transaction value of less than IDR5 billion per year, and 50.3% reported a transaction value of between IDR5-500 billion per year (see Figure 4.22). The proportion of groups with a transaction value of less than IDR5 billion was recorded lower than the results of the AMS 2022/2023, which was recorded at 25.4%, while the proportion of groups with a transaction value of IDR5-500 billion per year was recorded to increase from the previous survey which was recorded at 49.2%. This development indicates improvement from the group of fintech companies in the small group that has succeeded in increasing their transaction value to the medium group.

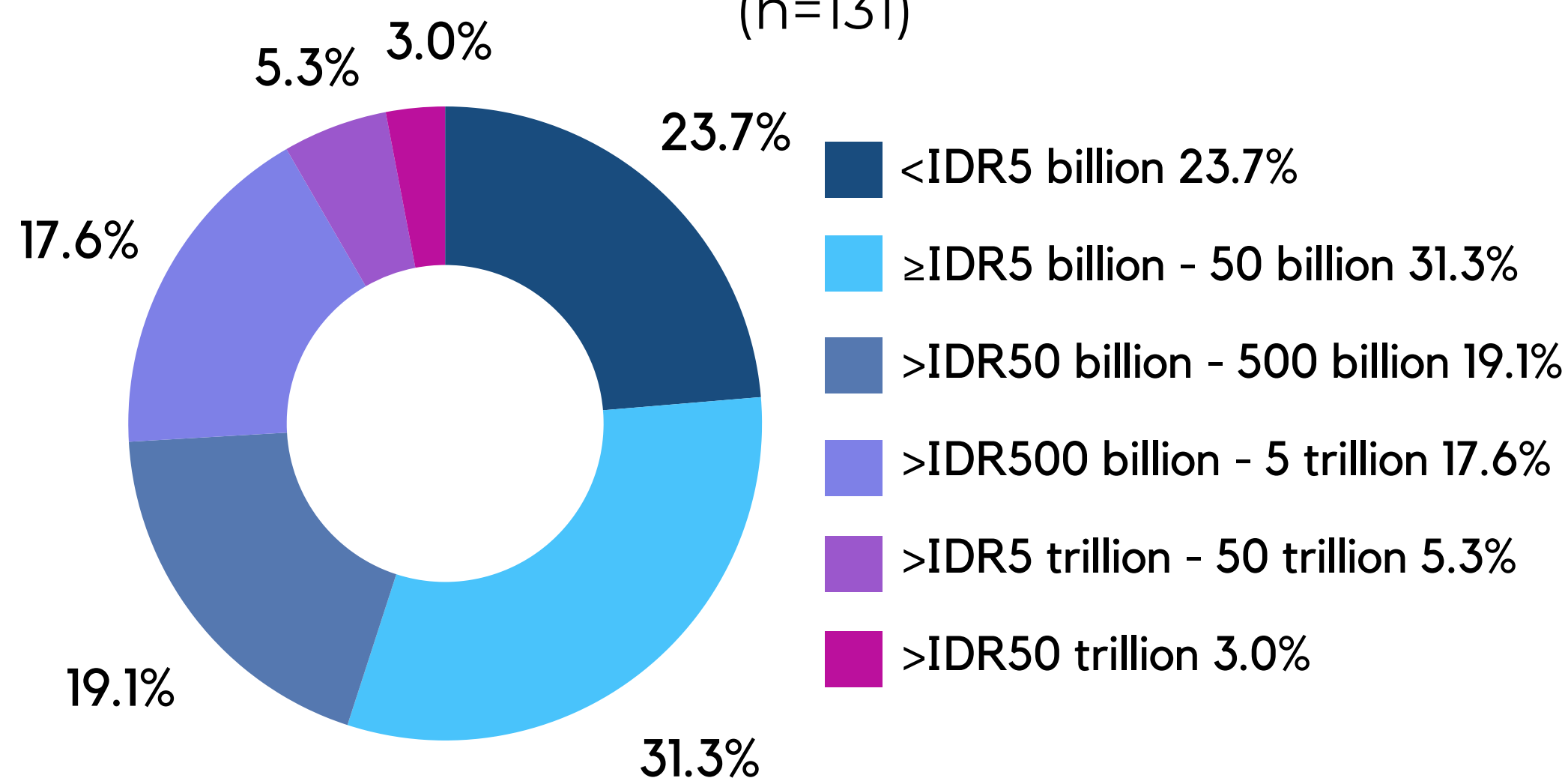
The AMS 2024 also recorded that the proportion of groups with a transaction value of IDR0.5-5 trillion increased to 17.6%, compared to the results of the AMS 2022/2023, recorded at 8.5%. However, this increase is indicated to be the result of a decrease in the proportion in the group with a transaction value of IDR5-50 trillion from 13.6% in AMS 2022/2023 to 5.3% in AMS 2024, as well as a decrease in the proportion in the group with a transaction value of more than IDR50 trillion from 3.4% to 3.0% in the same period, so that it is different from fintech in the small transaction value group which has succeeded in improving its financial performance. Fintech in the high transaction value group is indicated to be moderated.

Figure 4.21 Fintech Companies' Partnerships with Other Companies in the Ecosystem (n=131)



Source: AMS 2024

Figure 4.22 Transaction Value of Fintech Members (n=131)



Source: AMS 2024

Investment

The 2023 and early 2024 are good years for the fintech industry's growth. Several important notes need to be considered by the fintech industry, namely the ratification of the Law on the Development and Strengthening of the Financial Sector (UU P2SK) and its various implementing regulations, Law number 1 of 2024 which is the latest law regarding the regulation of Information and Electronic Transactions (ITE), the 2024 General Election, the transition of crypto assets oversight, the development of the cross-border Quick Response Code Indonesia Standard (QRIS), and developments artificial intelligence (AI), as well as the implementation of anti-fraud strategies. These dynamics also affect the movement of the fintech industry, and the results of the AMS 2024 show this trend through respondents' views on funding needs.

The survey results revealed that all respondents said they could get enough funding. 3.0% of respondents considered that they had received funding that exceeded their needs. As many as 19.9% of respondents stated that they had collected an investment considered sufficient, as illustrated in Figure 4.23. As many as 38.2% of respondents said they plan to raise funds shortly. On the other hand, more than a third of respondents, or 38.9%, felt that they did not need additional aid. Followed by 3.05% who stated that they had enough of their current funding.

Regarding funding stages, most fintech companies use self-funding (bootstrapping), which is 46.6%. The fintech group with the second funding stage, namely the pre-seed and seed stages, is the largest and covers 6.1% and 16.8%, respectively (see Figure 4.24). On the other hand, companies that have reached the mature stage and conducted an initial public offering (IPO) were only recorded at 3.8%, followed by the pre-IPO stage, which also covered 3.8%.

The AMS 2024 respondents in the funding stages of Series A to Series D were recorded at 22.9% cumulatively, with many of them actively increasing business scale, developing products and services, and expanding markets. Expansion is a strategy for companies at this funding stage to implement funding results and efforts to find additional investor funding.

Figure 4.23 Investment Status of AFTECH Members (n=131)

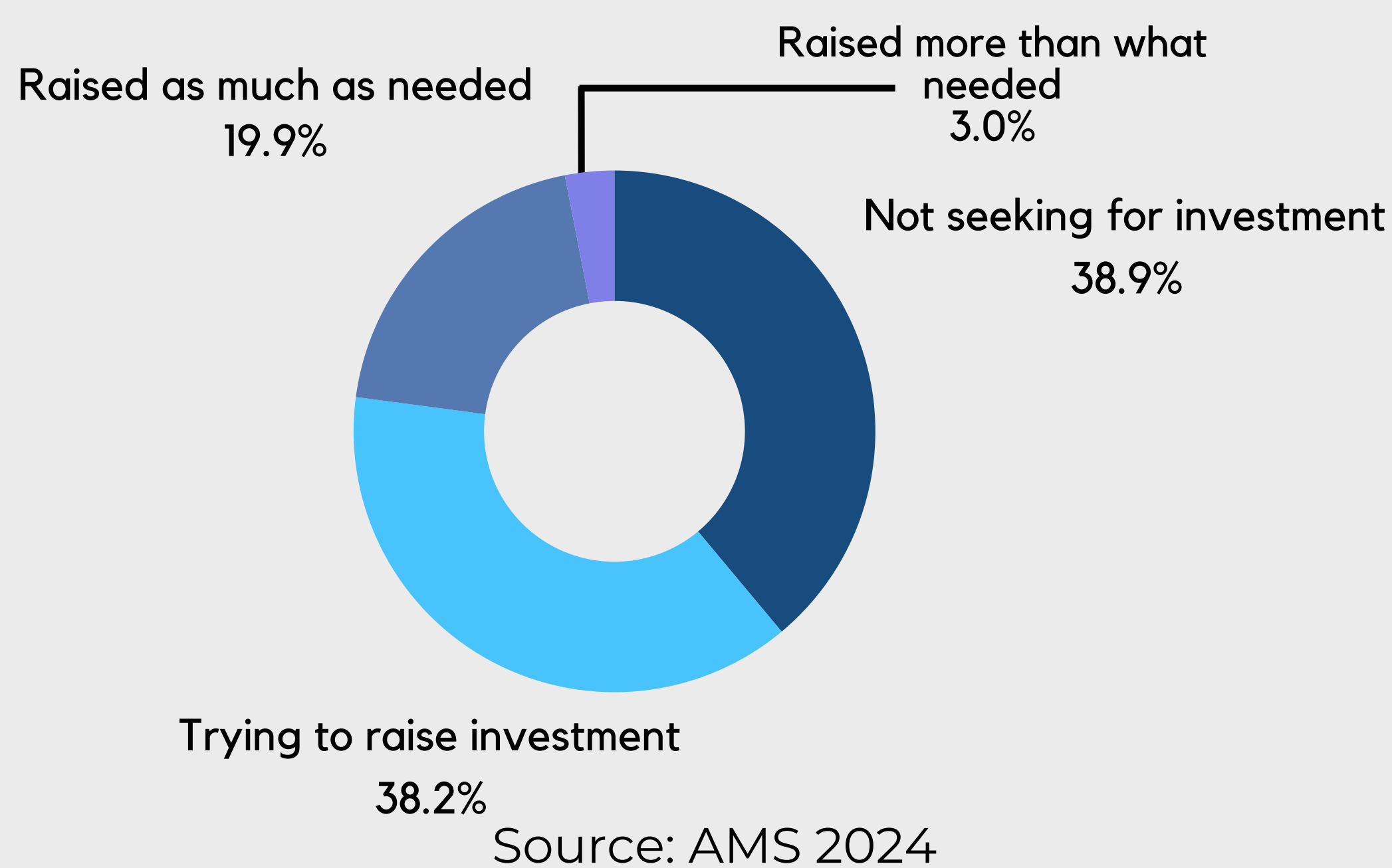
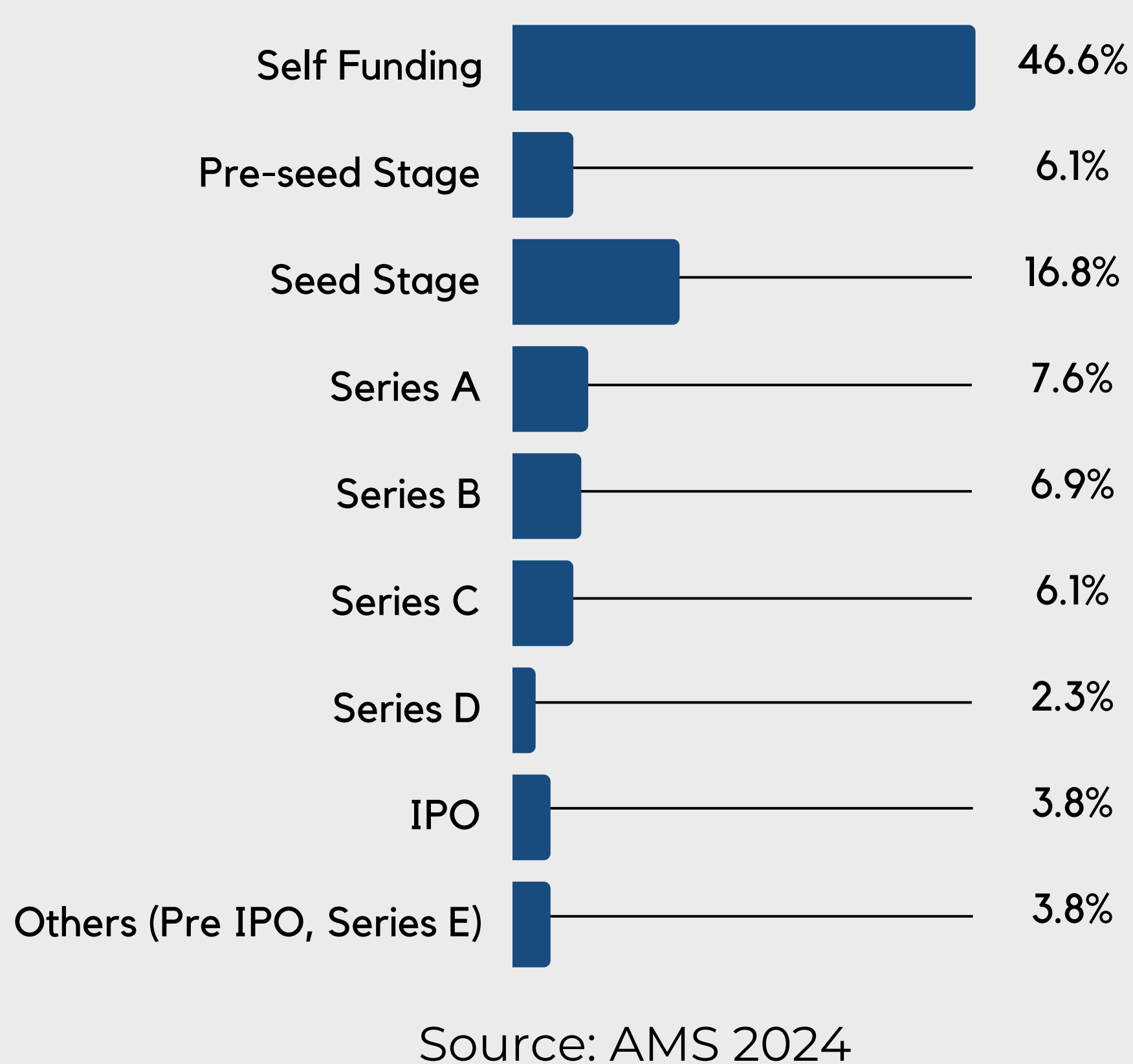


Figure 4.24 Funding Stages of AFTECH Members (n=29)



Source of Funds

Amid the dynamic growth of the digital economy in Indonesia, the fintech industry has made various sources of funding the main support for the growth and sustainability of this sector. The AMS 2024 recorded that 45.0% of respondents received funding from venture capital companies, which illustrates the high investor interest in the potential and opportunities in the fintech industry in Indonesia despite the challenges of the prolonged tech winter and volatile global economic conditions. Meanwhile, 35.9% of respondents used independent funding sources, reflecting the dedication and confidence of fintech towards their business models (see Figure 4.25).

The AMS 2024 also identifies the country of origin and source of funds for the fintech industry in Indonesia. The survey shows that most of the funds still come from domestic investors, with a proportion of 50.4%, showing a slight decrease compared to the results of the AMS 2022/2023, which reached 57.3%. Foreign investors are important in funding Indonesia's fintech industry, with Singapore (26.7%) and China (6.9%) being the main sources. With the first, second, and third positions being Indonesia, Singapore, and China, the three positions are still the same as the previous year's AMS. In this case, the government has a role in helping the fintech industry to obtain funding from other countries through various diplomatic efforts in international forums.

Figure 4.25 Sources of Funding for AFTECH Members (n=131)

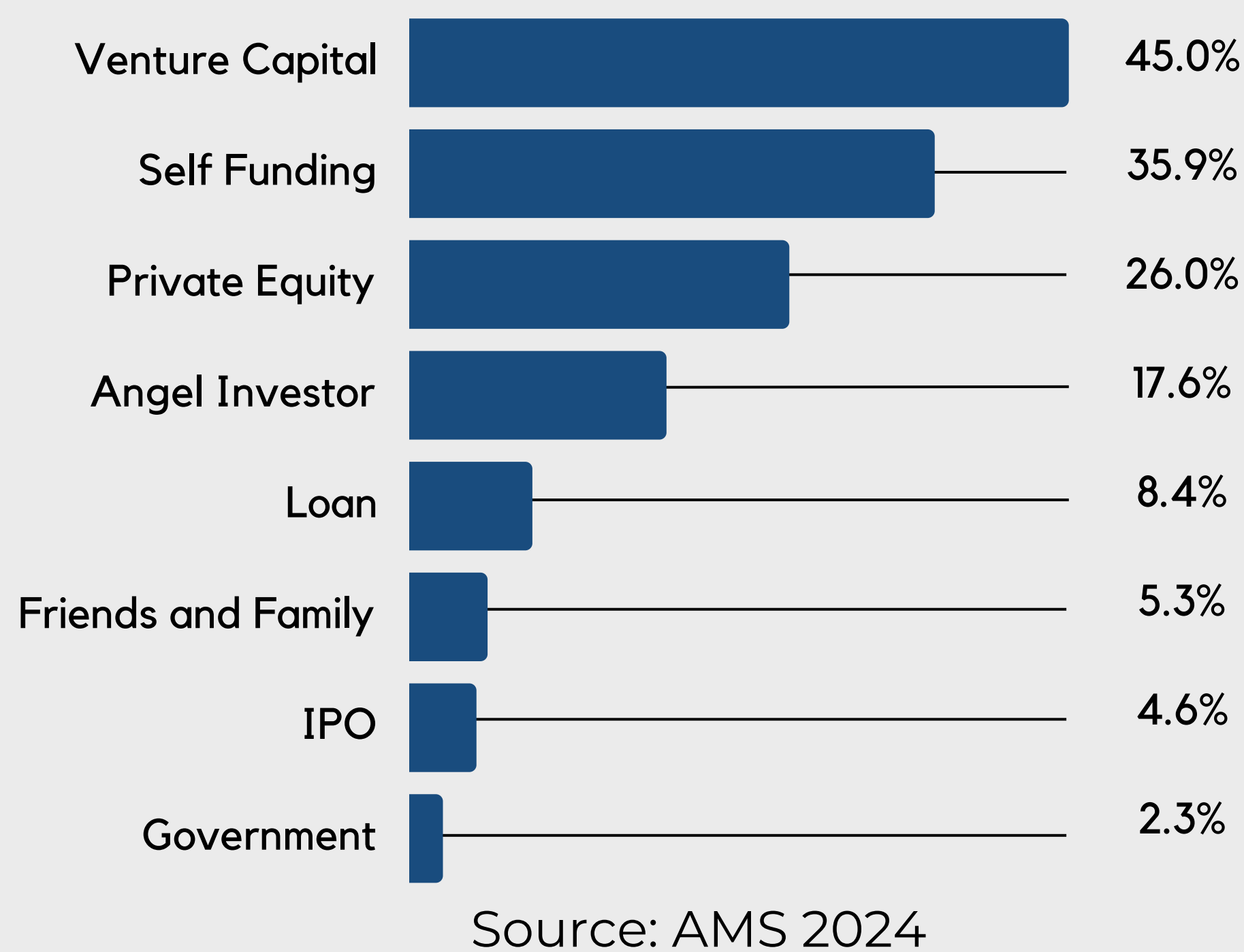
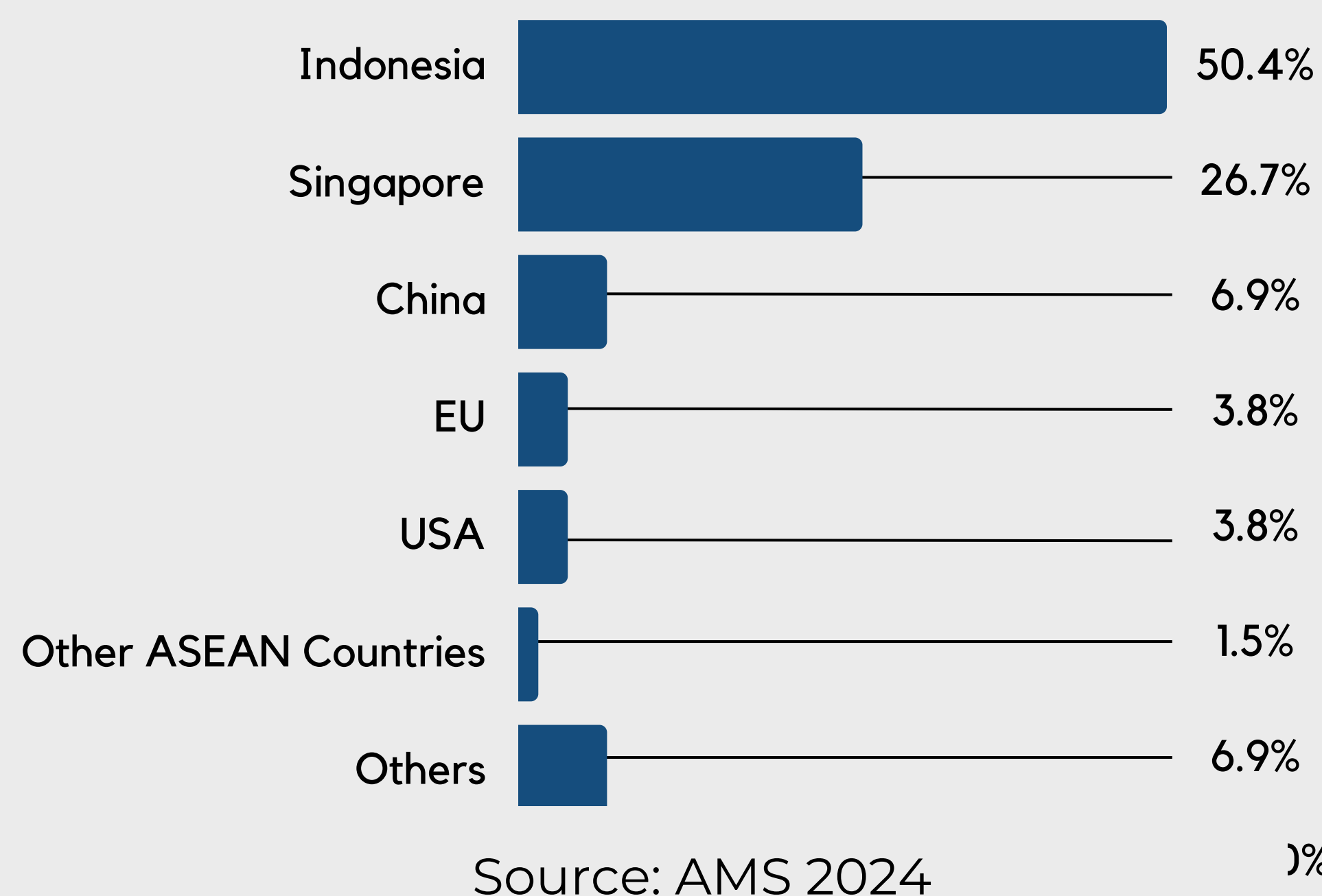


Figure 4.26 Country of Funding Sources (n=131)





fintech
indonesia



5 Innovation, Investment, and Industry Policy

- **Government Support**
- **Regulatory Framework**

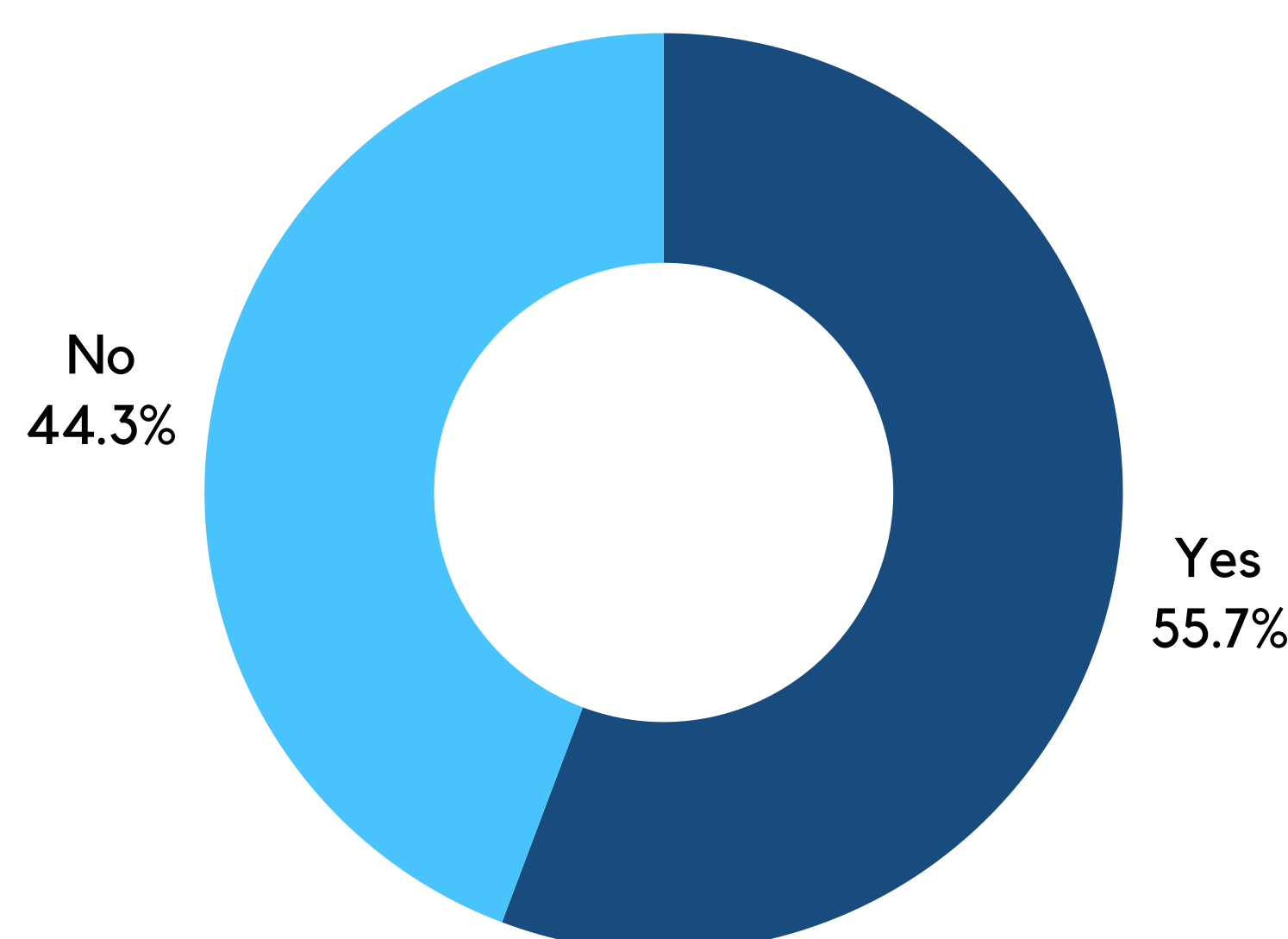
Innovation, Investment, and Industry Policy

The innovation, investment, and industry policy section explained fintech players' perception of government support and regulatory frameworks in the past year. The majority agreed that the government had issued policies supporting innovation, investment, and the fintech industry's growth. In addition, fintech players also conveyed the next form of support that can be obtained from the government to make this industry more advanced.

Government Support

Regarding the Government's support for fintech players, the majority of AMS 2024 respondents, namely 55.7% agreed that there had been adequate support from the Government for developing the fintech industry (see Figure 5.1). Nevertheless, further support from the Government to accelerate the fintech industry's growth is still needed. The Government's expected support broadly includes the facilitation of fintech regulations that support innovation and collaboration between fintech and other ecosystems, investment in supporting infrastructure for information and data technology facilities, and human resource education at various levels that can encourage the increase of digital talent supply in Indonesia (see Figure 5.1).

Figure 5.1 AFTECH Members Who Stated that the Government Has Provided Support for Fintech Industry



Source: AMS 2024

Regulatory Framework

From 2023 to mid-2024, the government has issued several regulations related to fintech business actors in Indonesia. Law number 4 of 2023 on the Development and Strengthening of the Financial Sector (UU P2SK) is a regulation that significantly impacts the financial technology industry. One of the regulatory aspects in the UU P2SK contains Financial Sector Technology Innovation (ITSK), or fintech or financial technology. After the existence of the law, regulators gradually issued several implementing regulations as policies and technical guidance for all relevant stakeholders, including players in the fintech industry. This means that fintech activities in the community have gained legitimacy from the state.

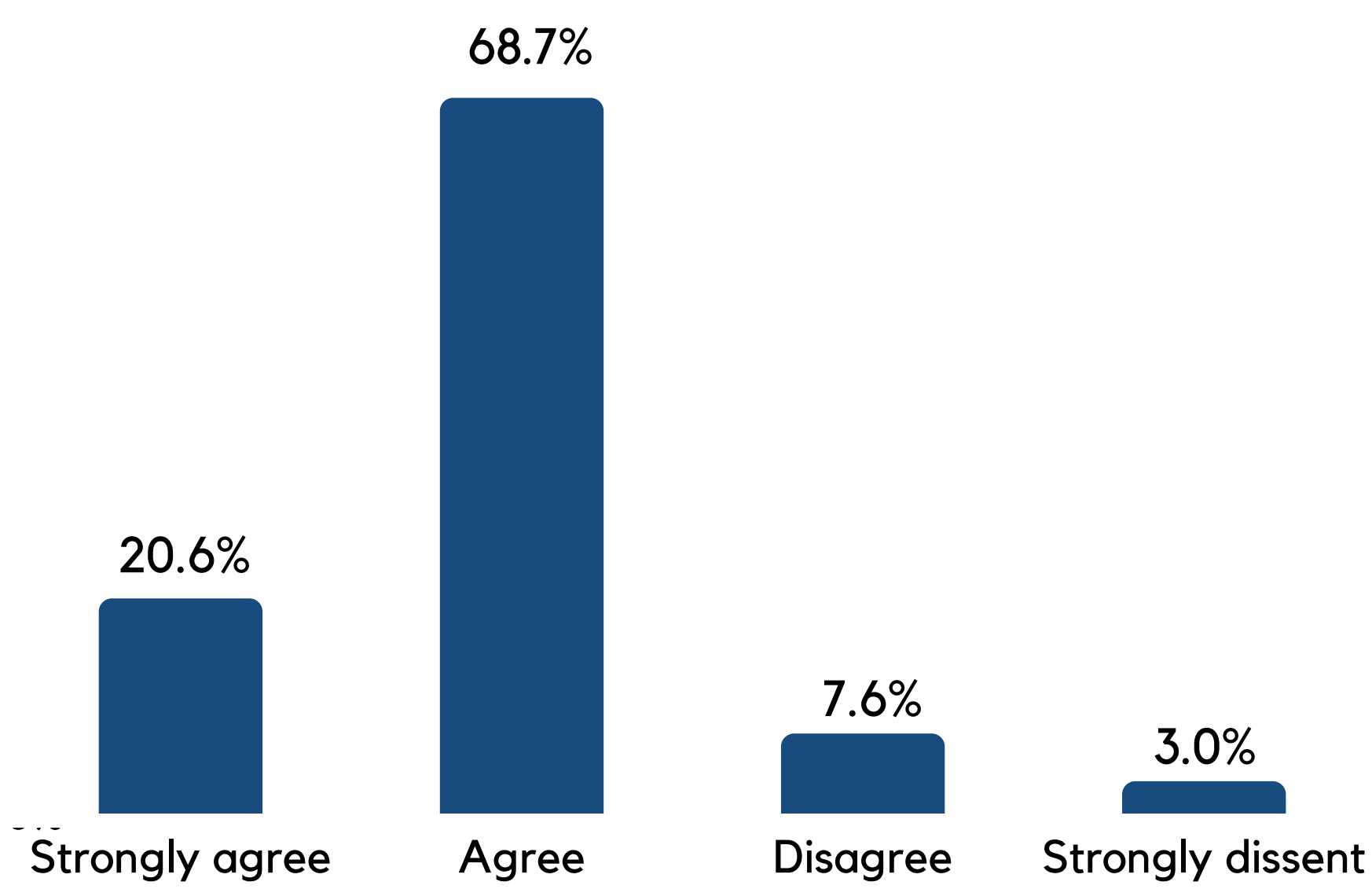
In addition, several other existing regulations related to fintech are Law Number 27 of 2022 on Personal Data Protection, Financial Services Authority Regulation Number 3 of 2024 on the Implementation of Technological Innovation in the Financial Sector, Bank Indonesia Regulation Number 22/23/PBI/2020 of 2020 on Payment Systems, and Law Number 1 of 2024 on the Second Amendment to Law Number 11 of 2008 on Electronic Information and Transactions.

In Figure 5.2, the AMS 2024 shows that more than 89.3% of respondents, consisting of 20.6% who Strongly Agree and 68.7% who Agree, state that the current government regulatory framework can support innovation. In addition, many respondents noted that the current Government regulatory framework positively supports the growth of the fintech industry, namely 16.0% strongly agree and 70.9% agree, as shown in Figure 5.3.

The AMS 2024 also shows a positive perspective from fintech business actors to the government regarding regulatory framework support for investment. 87.0% of respondents, consisting of 15.3% Strongly Agree and 65.7% Agree, stated that the current regulatory framework can support investment developments (see Figure 5.4).

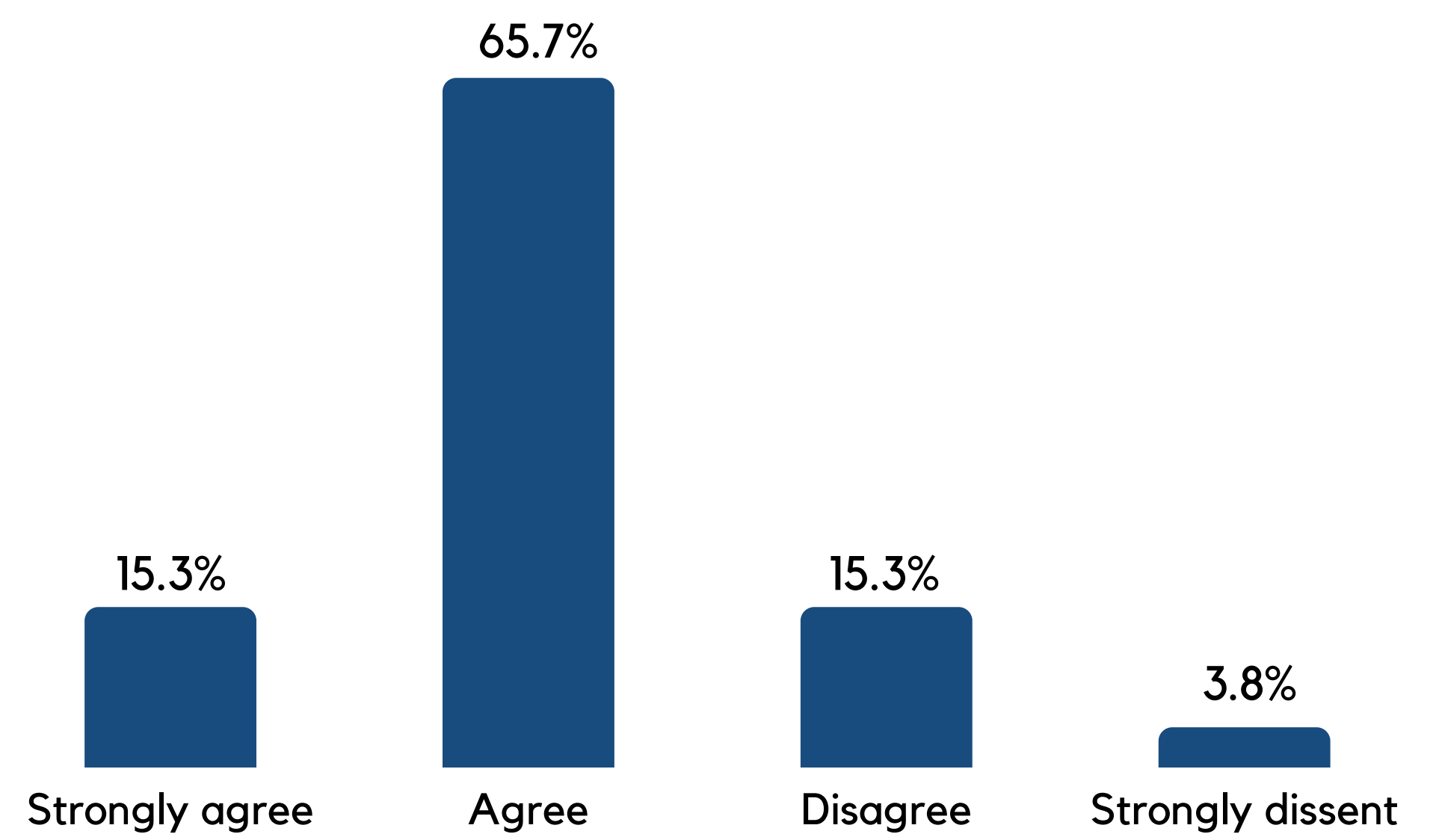
The AMS 2024 also explores the support needed from the Government. As many as 61.8% of respondents admitted needing regulatory relaxation in the future. Regulatory relaxation is required for the fintech industry to grow and compete with similar conventional industries without ignoring consumer protection. Other support needed is incentives for investors and alternative support schemes, with survey results of 9.9% each. In addition, 6.8% of respondents consider the government to allocate more budget for fintech investment.

Figure 5.2 AFTECH Members Who Stated the Government's Current Regulatory Framework Supports Innovation



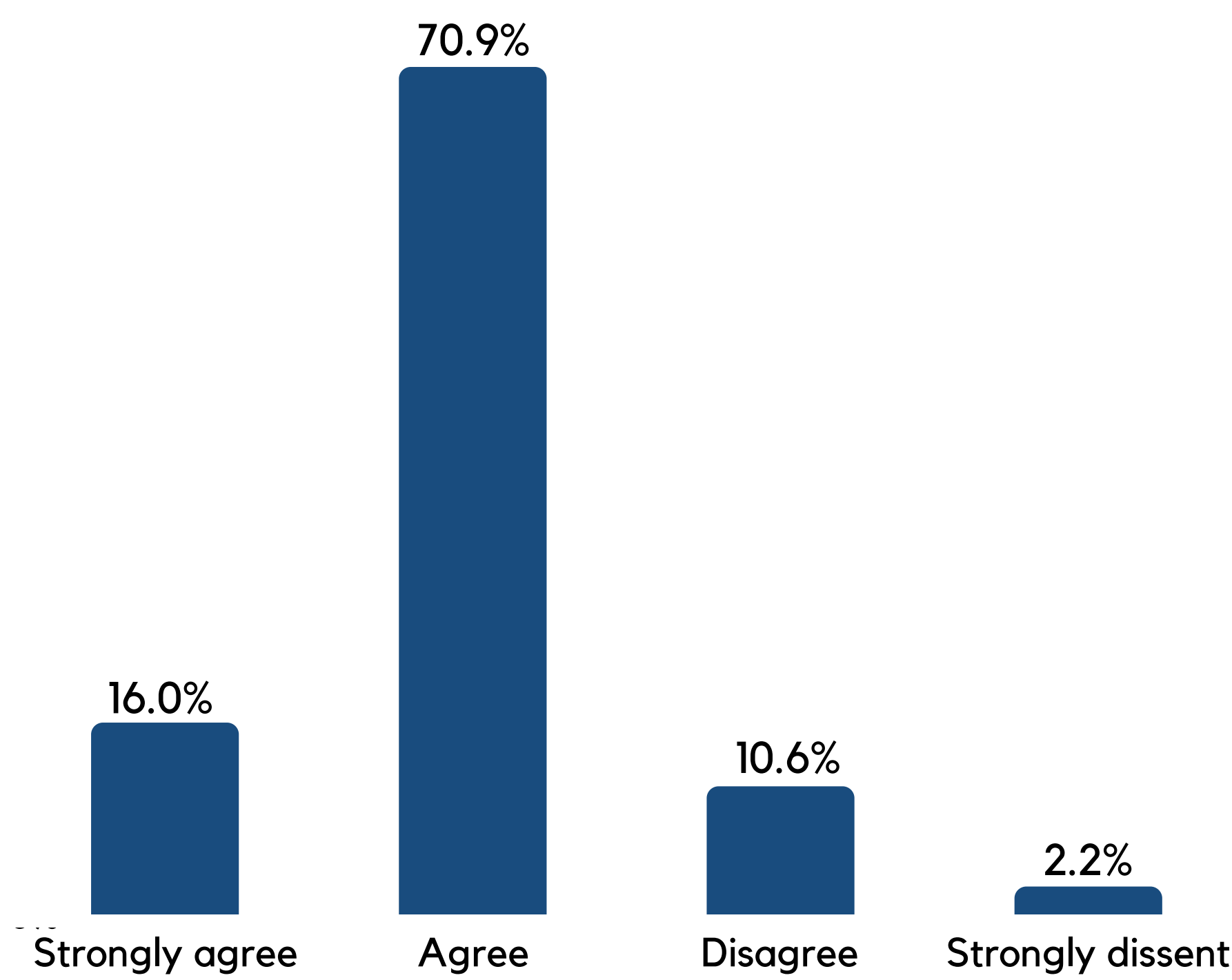
Source: AMS 2024

Figure 5.4 AFTECH Members Who Stated the Government's Current Regulatory Framework Supports Investment



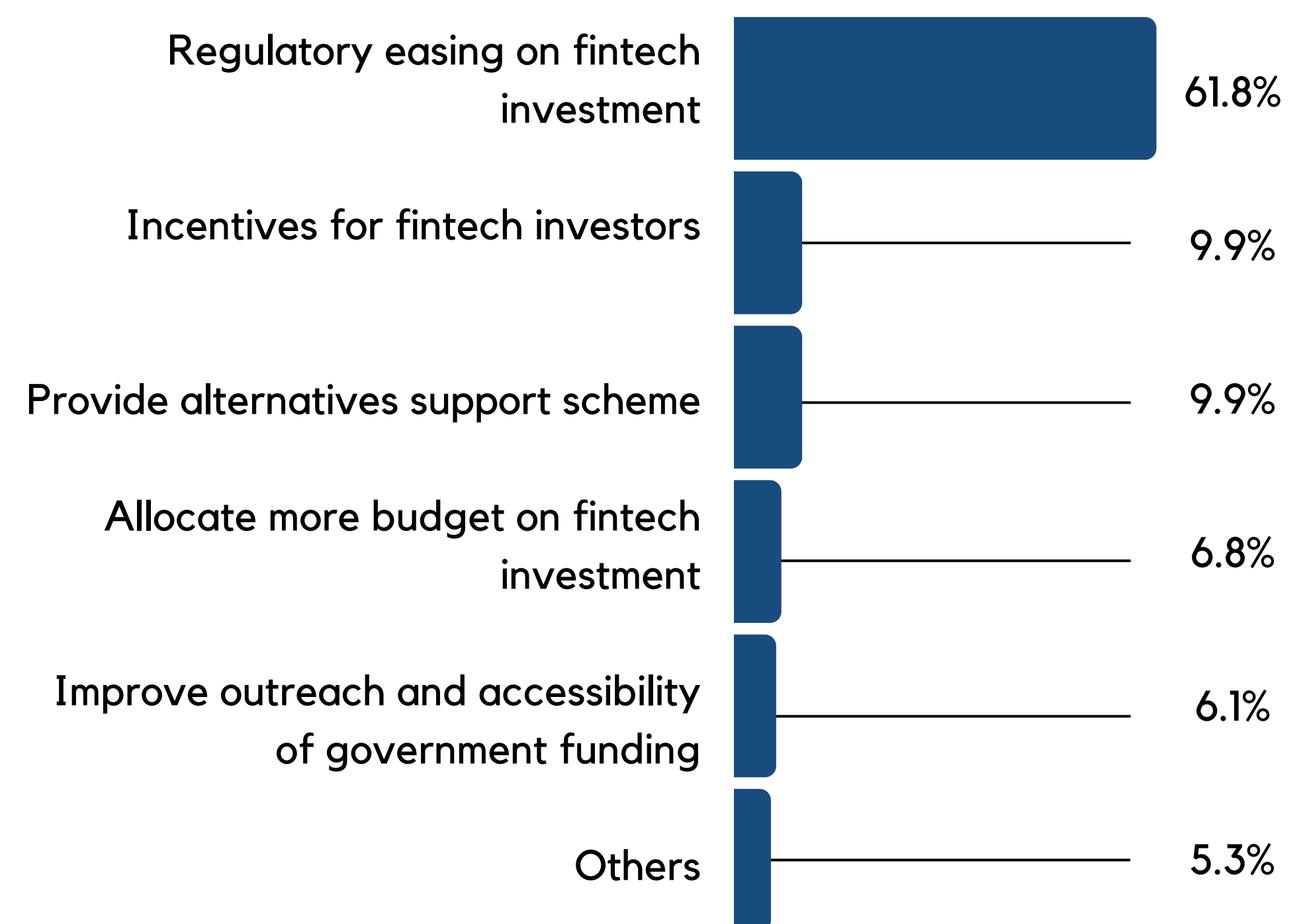
Source: AMS 2024

Figure 5.3 AFTECH Members Who Stated the Government's Current Regulatory Framework Supports the Fintech Industry Growth



Source: AMS 2024

Figure 5.5 Types of Government Support (n=131)



Source: AMS 2024

Table 5.1 Summary of Government Support Needs

| | Regulations | Infrastructure | Education |
|----------------------|--|---|---|
| Regulatory Framework | Promoting Innovation Regulations require increased flexibility to foster growth. | Investment in Physical Infrastructure Expanding financial and digital access across Indonesia. | Skilled Personnel Highly skilled HR talent management |
| | Prioritize Consumer Protection Avoid bureaucratic rules. | Minimizing Discrepancies Improving infrastructure in underserved areas. | Utilization of Cutting-Edge Technology Reskilling and upskilling to meet the demand for new skills. |
| | Synchronization of Policies Regulators must consistently promote synergy. | Security of Data Ensure proper storage and management of data. | Accelerating Literacy Enhancing financial literacy and digital literacy requires acceleration. |
| | Diverse Ecosystem Reduce obstacles to market entry. | Incentivizing Digital Infrastructure Reducing high costs associated with supporting infrastructure fulfillment. | Scholarly Digitalism Expansion of scholarship provision in the digital sector. |
| | Continuous Monitoring Standardization of treatment among business entities. | Collaboration Promoting local and international fintech collaborations. | Campaign for Digital Peace Raising public awareness about personal data is essential. |

6 Good Governance Implementation

- **Data Management**
- **Disaster Mitigation**
- **Cybersecurity and Fraud Identification**
- **Consumer Protection**
- **International Standards and Regulation**
- **Code of Conduct and Industry Standards**



Good Governance Implementation

This section attempts to capture the implementation of good corporate governance from AFTECH members. Firstly, the majority of fintech businesses ensure that they have good data management. Two things indicate this: First, most fintech players with private data centers are registered with the Ministry of Communication and Information. Then, many fintech players that entrust their private data centers to third parties also entrust them to credible parties. Secondly, almost all fintech business players have procedures related to disaster mitigation so that, when an incident occurs, the majority of them can return the operational system to normal in less than a day. Third, most fintech businesses have a Computer Emergency Response Team (CERT) to maintain cyber security and anticipate fraudulent activities. Fourth, most fintech companies already have various consumer protection programs, such as data security and privacy programs and customer service training and have various media so consumers can easily submit their complaints, including via email and call centers. Fifth, almost all fintech business actors participate in regulations, codes of ethics and standards at national and international levels.

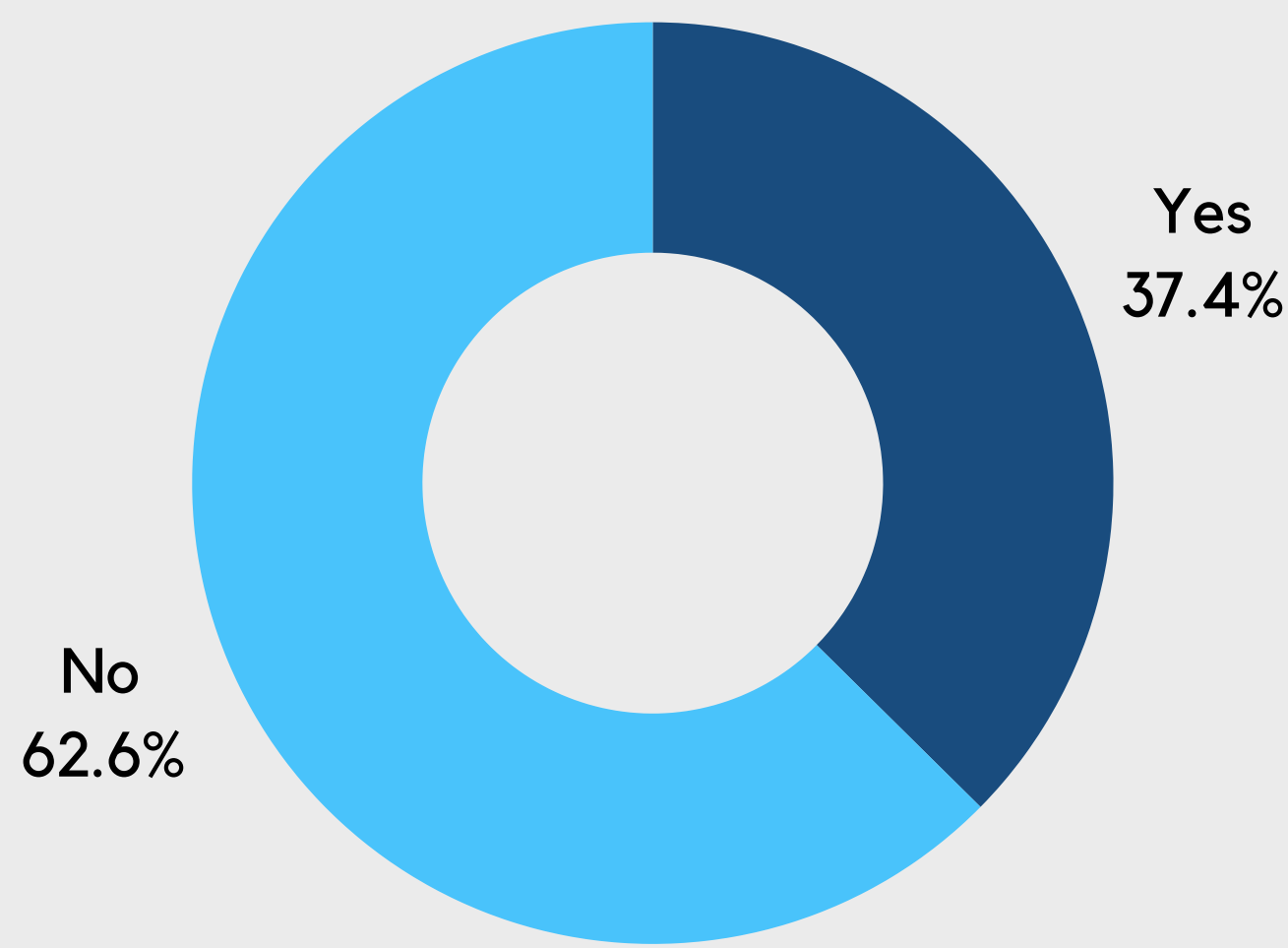
Data Management

Data management is an important part that business actors need to do to protect consumers. Data management consists of collecting, storing, protecting and processing data. To create good data management, it is necessary to have a data center as a physical space that accommodates computer servers to store and process large amounts of data.

AMS 2024 shows that 62.6% of the 131 respondents prefer to use third-party data centers. A small portion, 37.4% of companies, already have and use their own data centers. This means that the company has more control over the data collected, resulting in more efficient data processing in terms of time and cost.

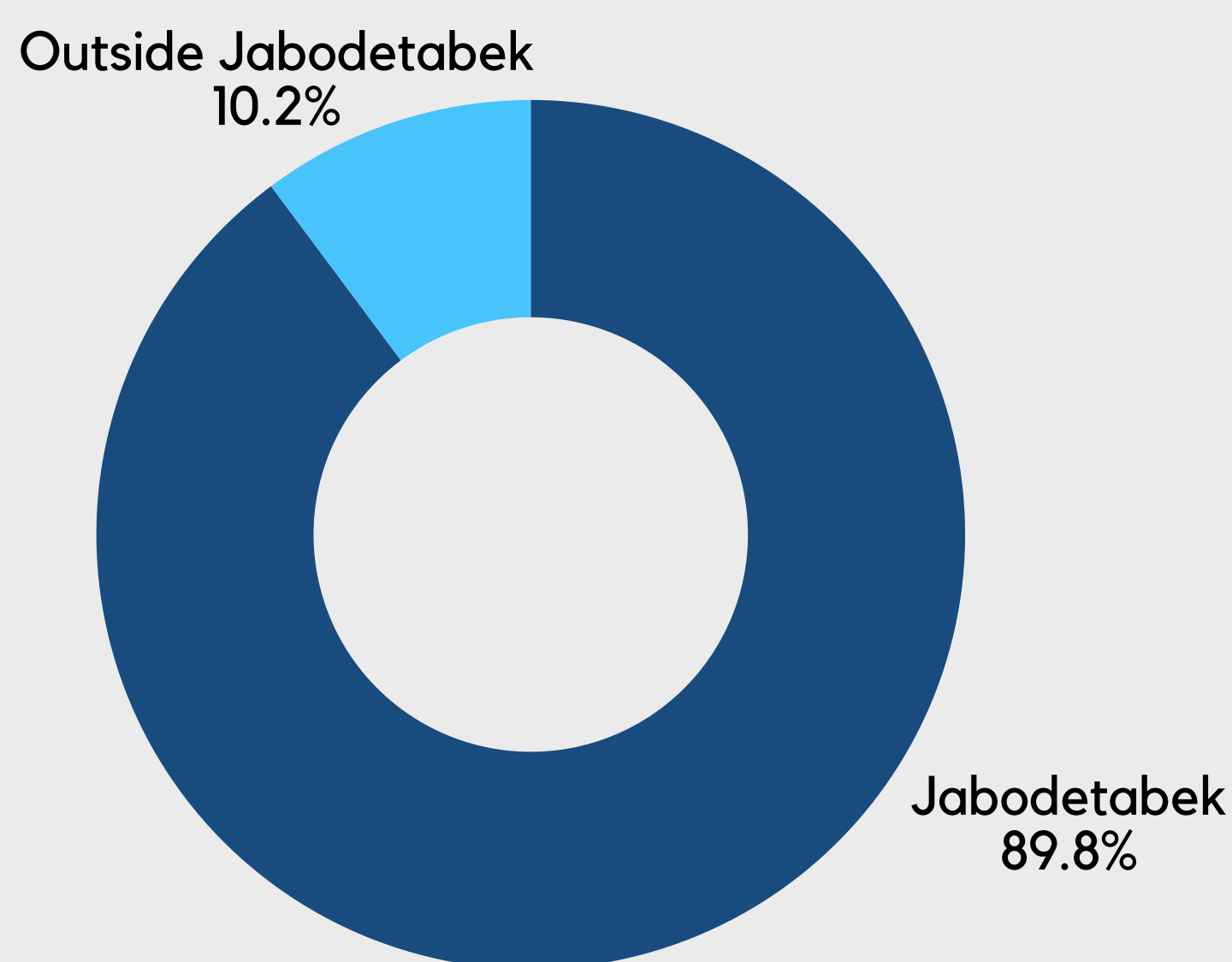
Forty-nine respondents owned and used private data centers; most of the data centers were in Jakarta, Bogor, Depok, Tangerang and Bekasi (Jabodetabek) at 89.8%. This is in line with the location of the respondents' head offices, most of which are in Jabodetabek. The remaining 10,2% are outside Jabodetabek. Of the 49 companies, 93.9% of their data centers have been registered with the Ministry of Communication and Information, and only 3 companies still need to be registered. Thus, the high proportion of data center registrations shows that company awareness of data center ownership regulations is very high.

Figure 6.1 Private Data Center Ownership (n=131)



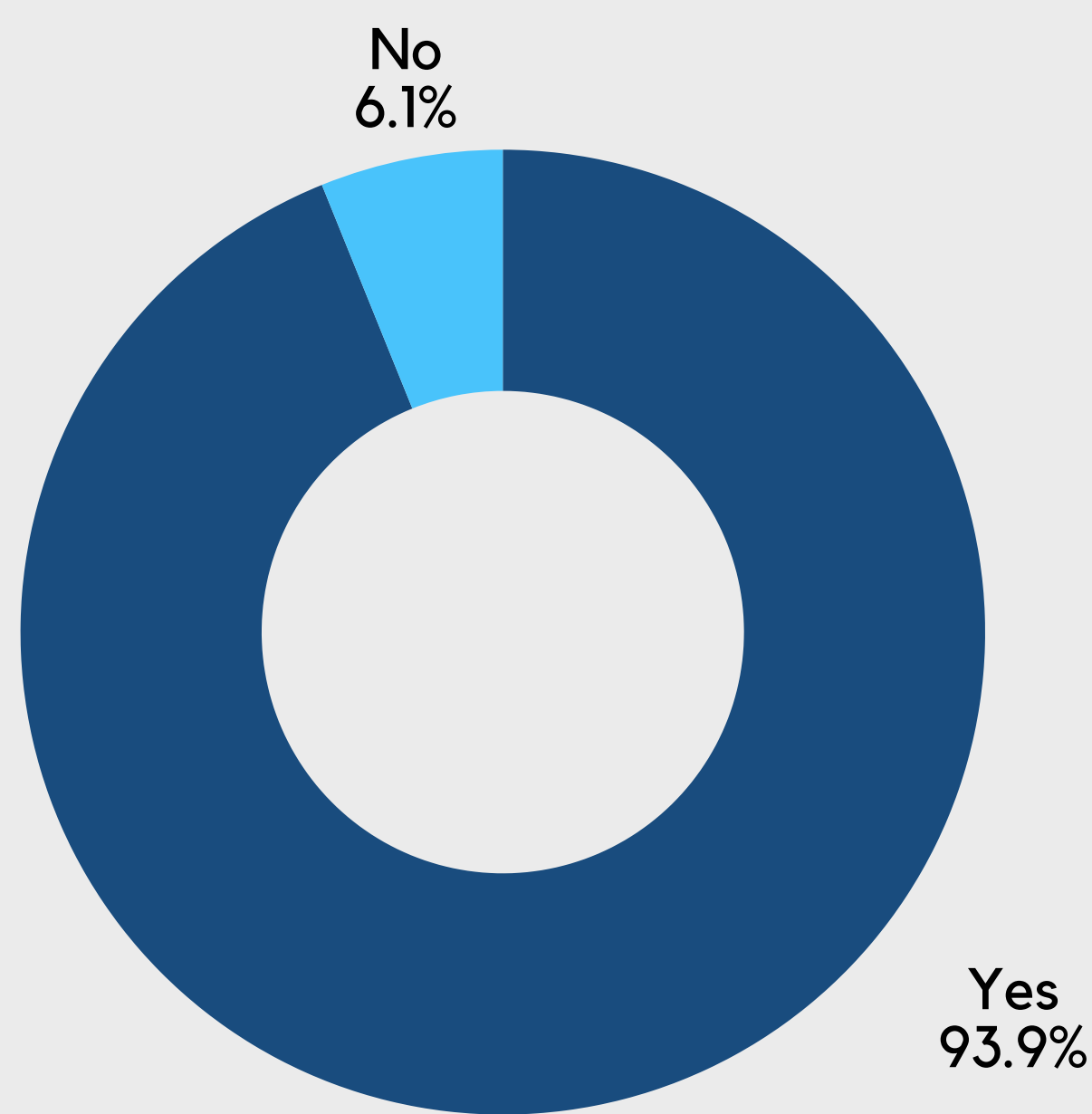
Source: AMS 2024

Figure 6.2 Location of Private Data Center (n=49)



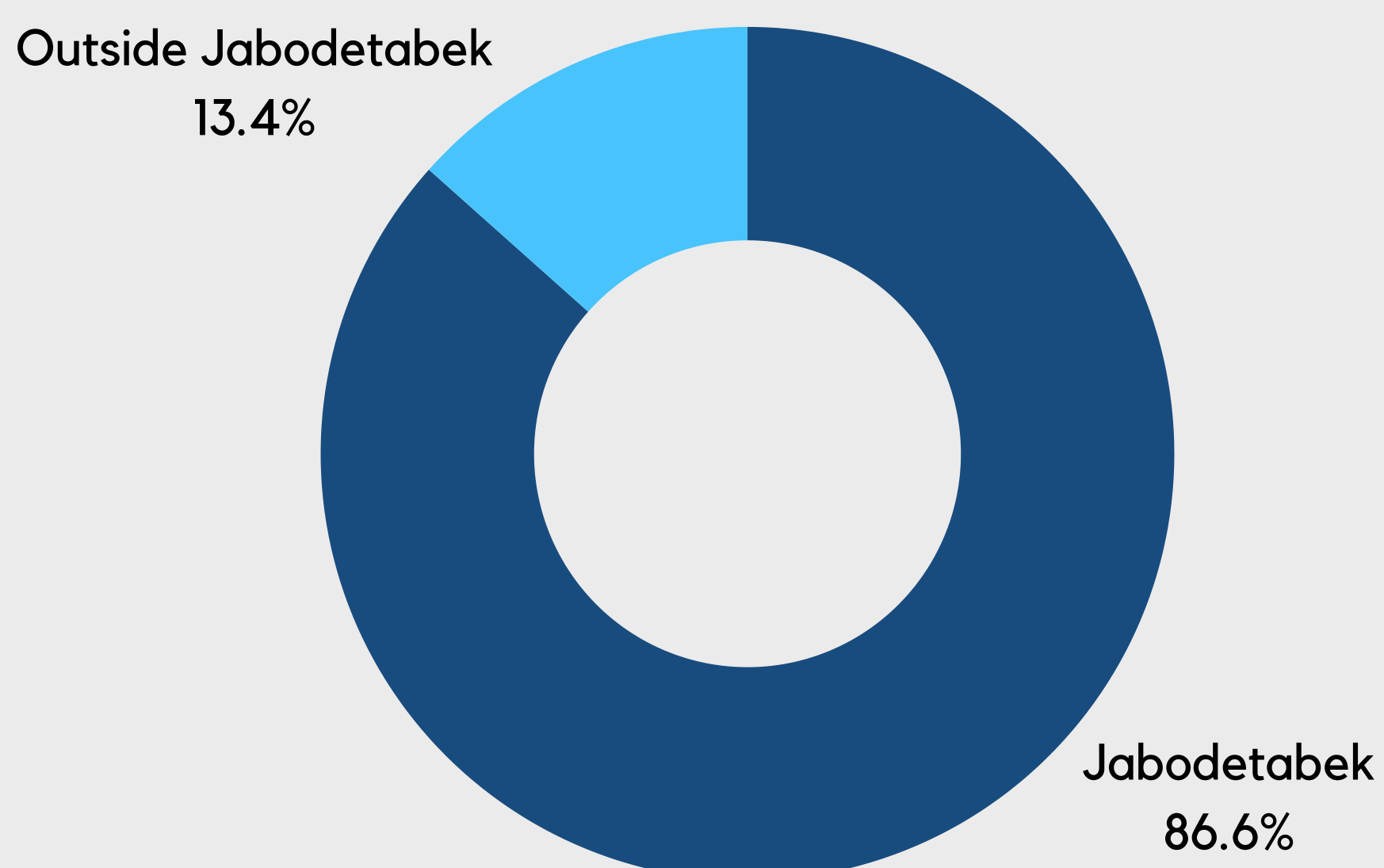
Source: AMS 2024

Figure 6.3 Registration Status by the Ministry of Communication and Information (n=49)



Source: AMS 2024

Figure 6.4 Third-Party Data Center Locations (n=82)

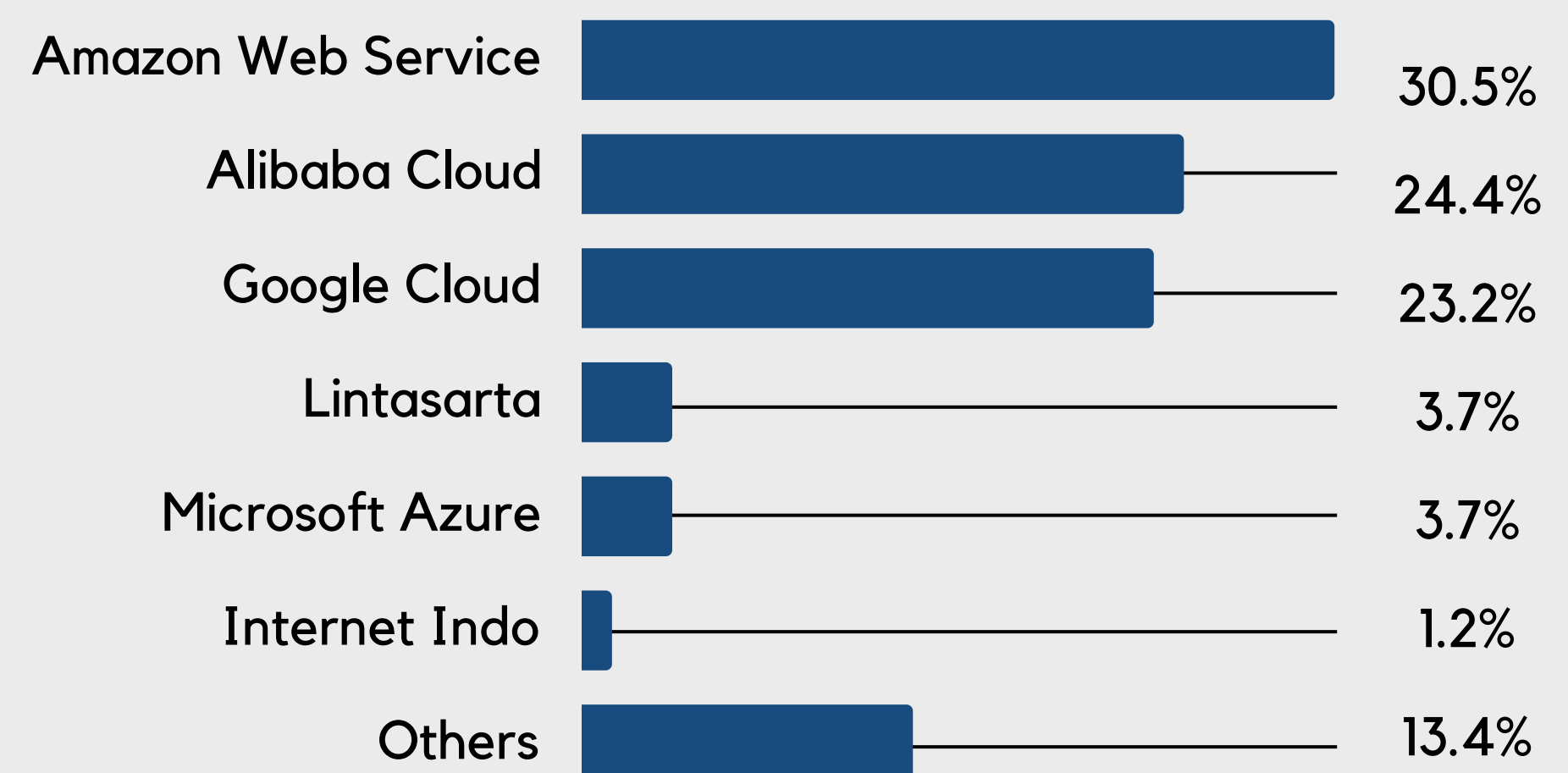


Source: AMS 2024

The survey results also showed that 30.5% of 82 companies with third party data center chose Amazon Web Services as their provider. These results prove that Amazon Web Service is considered to have high credibility in the eyes of AFTECH member companies, so it is still trusted as a data center provider. The second and third positions are occupied by Alibaba Cloud (24.4%) and Google Cloud (23.2%). Of these data center providers, 86.6% are located in Jabodetabek, while another 13.4% are outside Jabodetabek (see Figure 6.4).

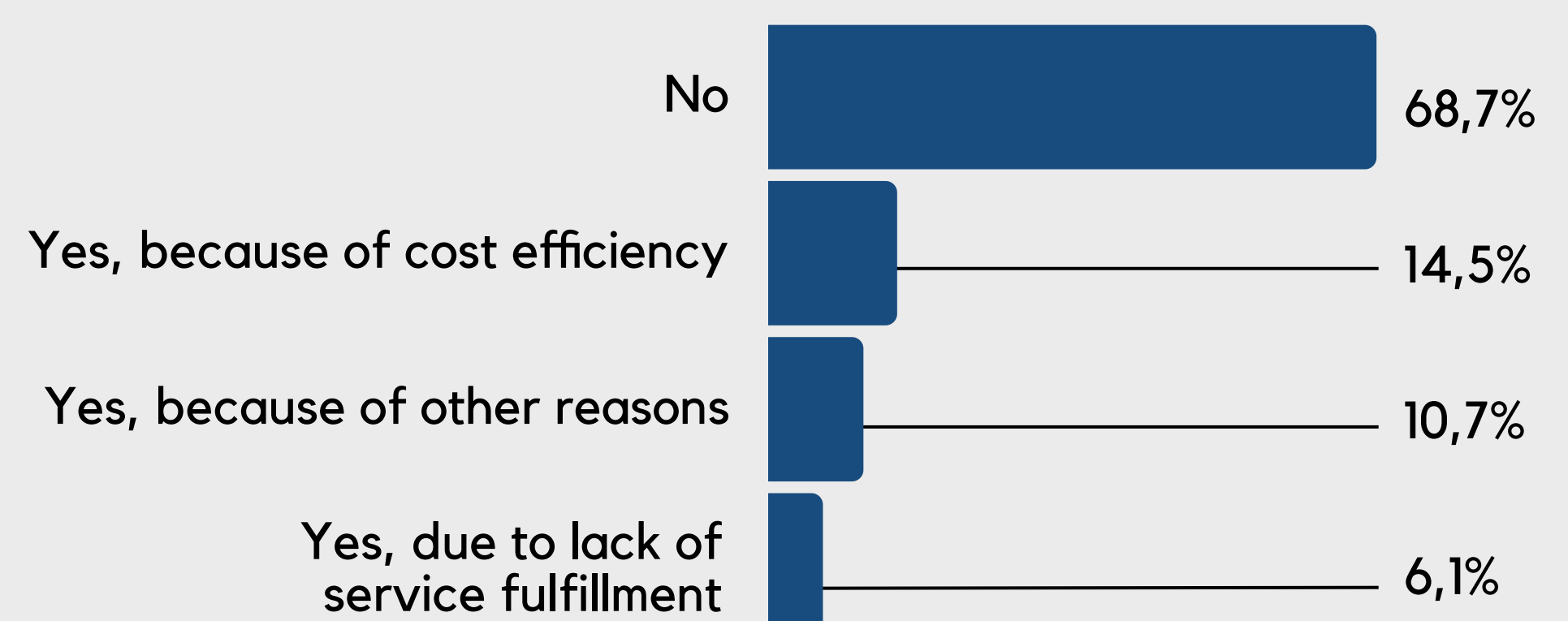
Regarding the use of data centers, the majority of the total respondents, 68.7%, stated that they had never changed data centers for certain reasons. However, a small portion admitted that they had changed data centers for reasons of cost efficiency (14.5%), lack of service fulfillment (6.1%), and other reasons (10.7%), as seen in Figure 6.6.

Figure 6.5 Third Parties Used for Data Centers (n=82)



Source: AMS 2024

Figure 6.6 Data Center Replacement for Certain Reasons (n=131)

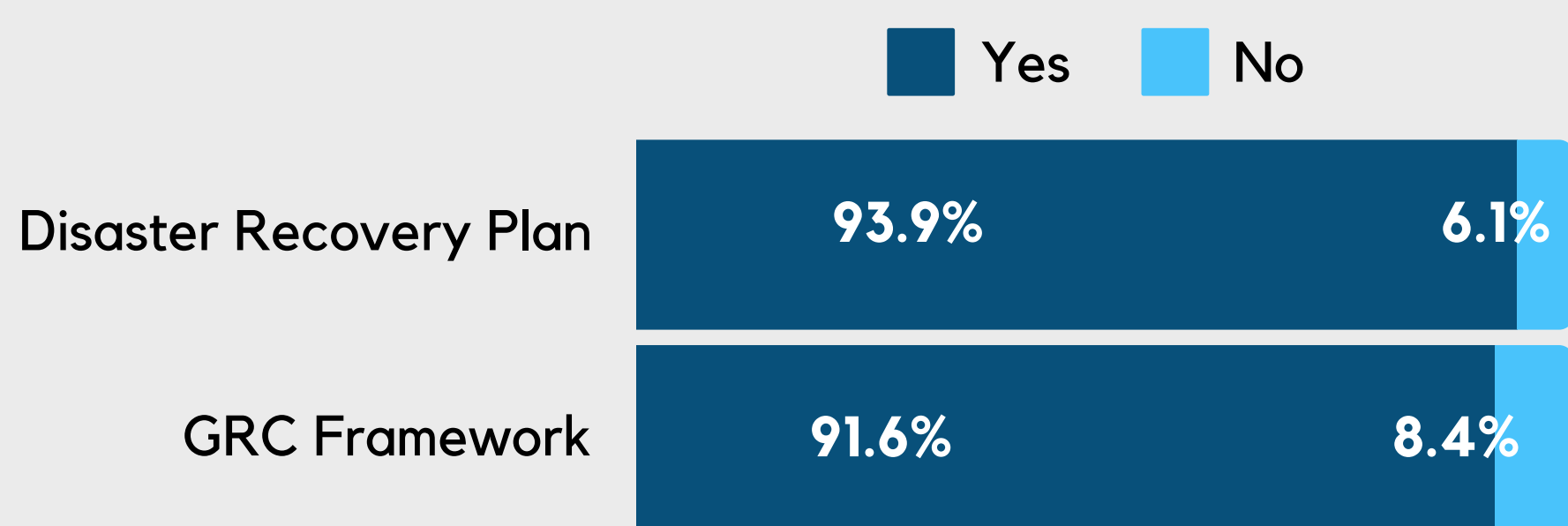


Source: AMS 2024

Disaster Mitigation

The Disaster Recovery Plan (DRP) is designed to deal with natural disasters or unexpected incidents. This DRP aims to mitigate disasters by ensuring system operations are not disrupted due to the incident. Common incidents in fintech companies can include data leaks, cyber-attacks, system failures, and the risk of fraud, which can harm producers and consumers. For this reason, to strengthen disaster mitigation, the government has ratified OJK Regulation Number 4 of 2021 concerning implementing Risk Management in the Use of Information Technology by Nonbank Financial Services Institutions. The 2024 AMS results show that 93.9% of respondents have DRP. Apart from DRP, 91.6% of respondents also have a Governance, Risk Management, and Compliance (GRC) framework.

Figure 6.7 Availability of a Disaster Recovery Plan and Governance, Risk Management, and Compliance Framework (n=131)

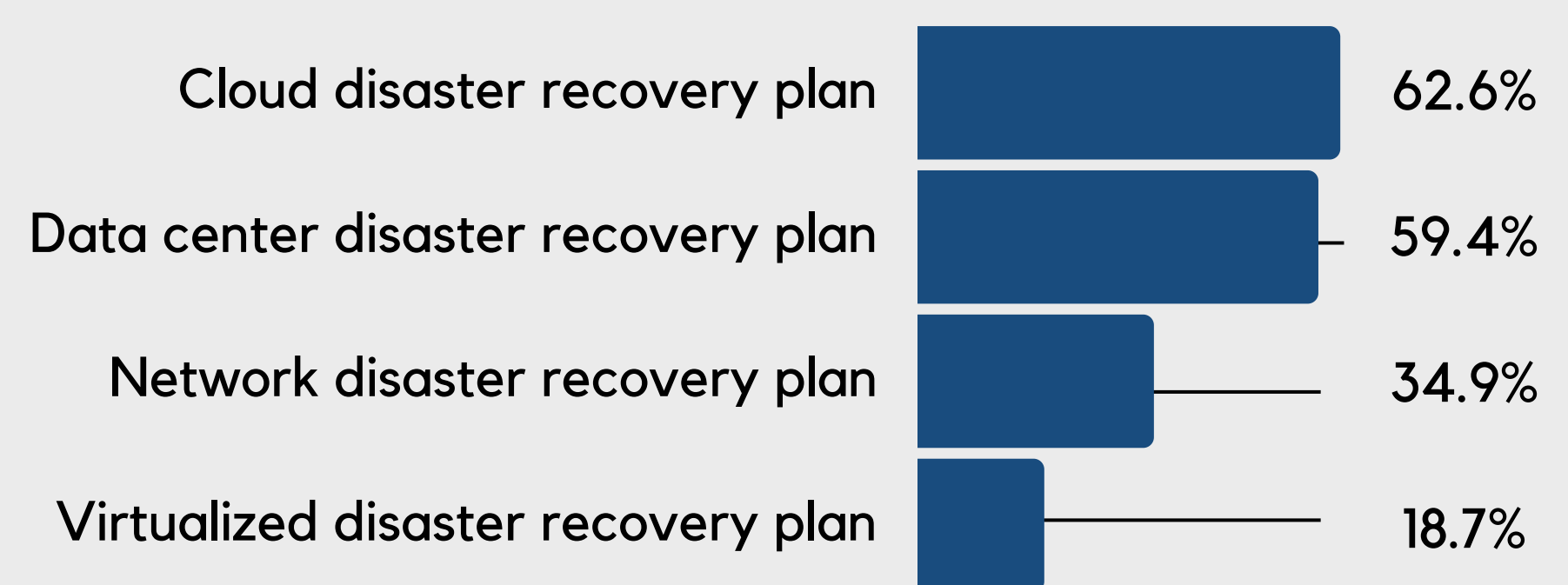


Source: AMS 2024

Of the 123 respondents with DRP, 62.6% use the Cloud DRP type. The following positions for the type of DRP most used by AFTECH members are Data Center DRP (59.4%), Network DRP (34.9%), and Virtualized DRP (18.7%).

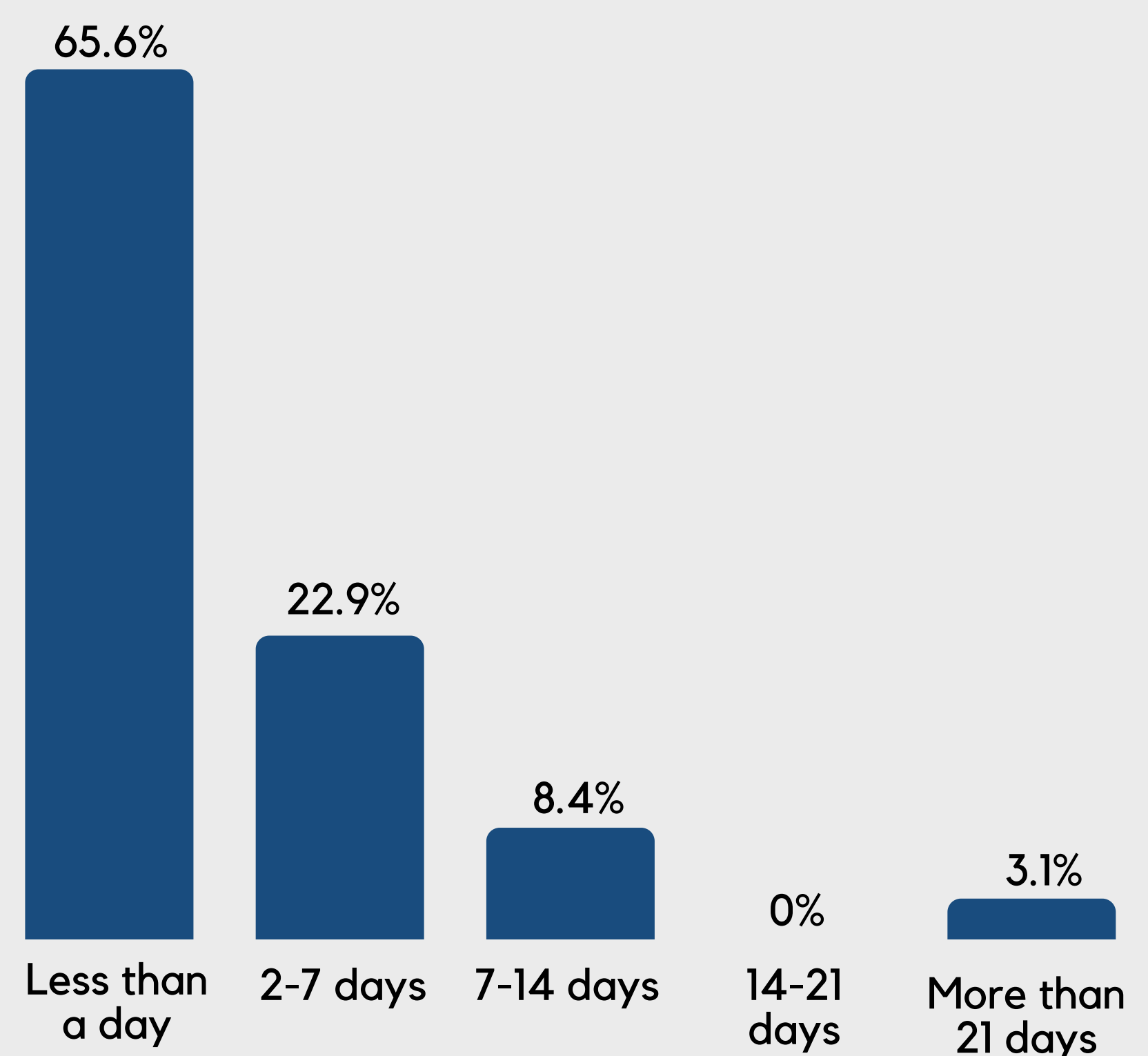
When an incident occurs, 65.6% of respondents need less than a day to return to a normal operational system with the implementation of DRP. This proves that the DRP implemented has functioned very well and can help the company return to business as usual. The remaining 34.4% took more than a day. Even a tiny portion takes more than 21 days to return to normal conditions.

Figure 6.8 Types of Disaster Recovery Plan (n=123)



Source: AMS 2024

Figure 6.9 Time Required to Return to Normal with DRP (n=131)

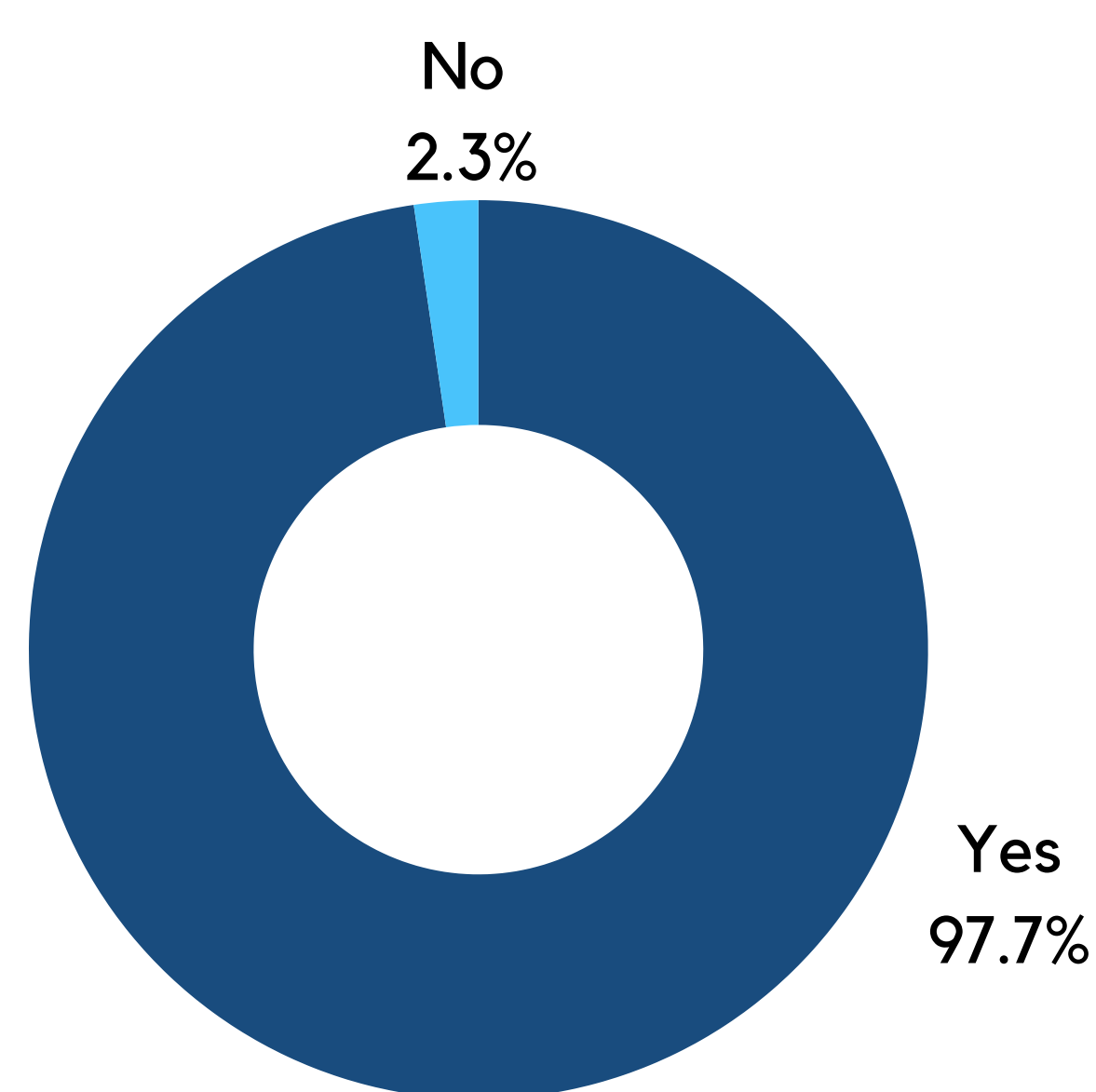


Source: AMS 2024

Cybersecurity and Fraud Identification

In this era of digitalization, cyber security is an aspect that needs to be considered in efforts to achieve good governance for the fintech industry. Various efforts can be made as prevention, including implementing DRP. As many as 97.7% of respondents believe owning DRP can help companies deal with cyber-attacks and system failures. The remaining 2.3% of respondents did not agree regarding the vital role of the DRP.

Figure 6.10 Disaster Recovery Plan Helps Companies Deal with Cyber Attacks and System Failures (n=131)

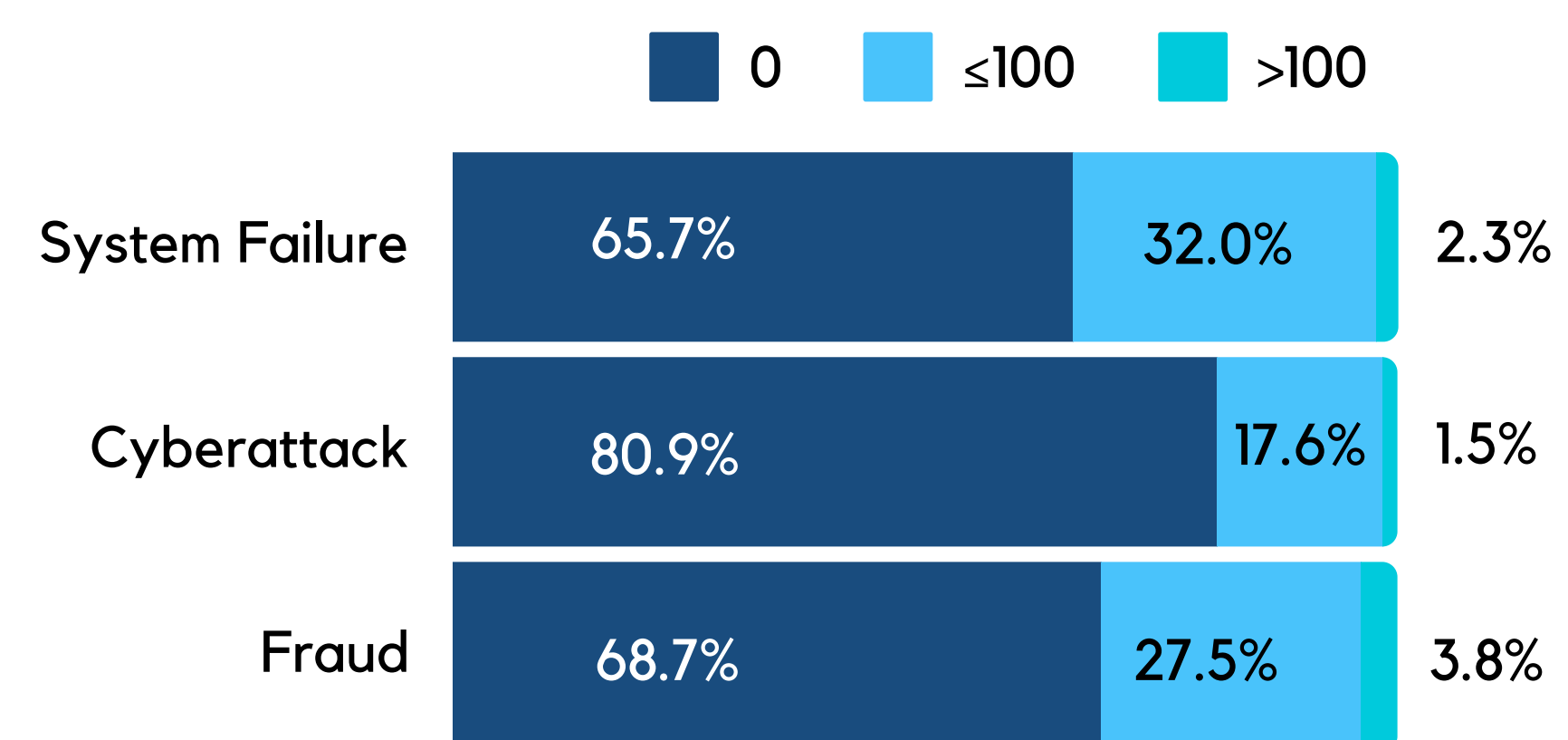


Source: AMS 2024

In AMS 2024, throughout 2023, it was recorded that more than half of the total respondents had never experienced system failure (65.7%), cyber-attacks (80.9%), and fraud (68.7%). However, there will still be a small number of respondents in 2023 who have experienced these three incidents, even more than 100 times. In interviews with several AFTECH members, it was explained that the impact of system failures could be significantly minimized through strict and regular system maintenance and monitoring.

Investments in reliable IT infrastructure and business continuity plans also help mitigate the impact of system failures so that financial losses can be minimized.

Figure 6.11 Companies that Have Experienced System Failure Incidents, Cyber Attacks, and Fraud (n=131)



Source: AMS 2024

AMS 2024 also identifies the types of cyber-attacks and fraud experienced by respondents. As many as 33.6% of respondents stated that they had experienced a phishing-type cyber-attack, as seen in Figure 6.12. The remainder experienced cyber-attacks in the form of Malware (12.9%), Hacking (6.8%), Botnets (4.5%), and other types. The results of in-depth interviews show that cyber-attacks are part of business as usual, meaning they are very likely to occur and cannot be avoided. However, with adequate infrastructure and security levels, the risk of cyber-attacks can be managed well so that it rarely causes enormous financial losses. Apart from internal mitigation, other approaches to reduce the risk of cyber-attacks can be done through campaigns and education for the broader community. Cyber-attacks often occur not only because of the weak defense systems, but also because of consumer negligence, for example, carelessly sharing personal data. To strengthen defenses against cyberattacks, it is also common for companies to conduct penetration testing or ethical hacking of company systems to find vulnerabilities so that they can be actioned immediately.

As for fraud, as many as 28.2% respondents admitted to having experienced incidents of fraudulent applications. A small portion of these fintech companies have faced identity theft (16.7%), data privacy fraud (16%), and data and intellectual property theft (2.2%).

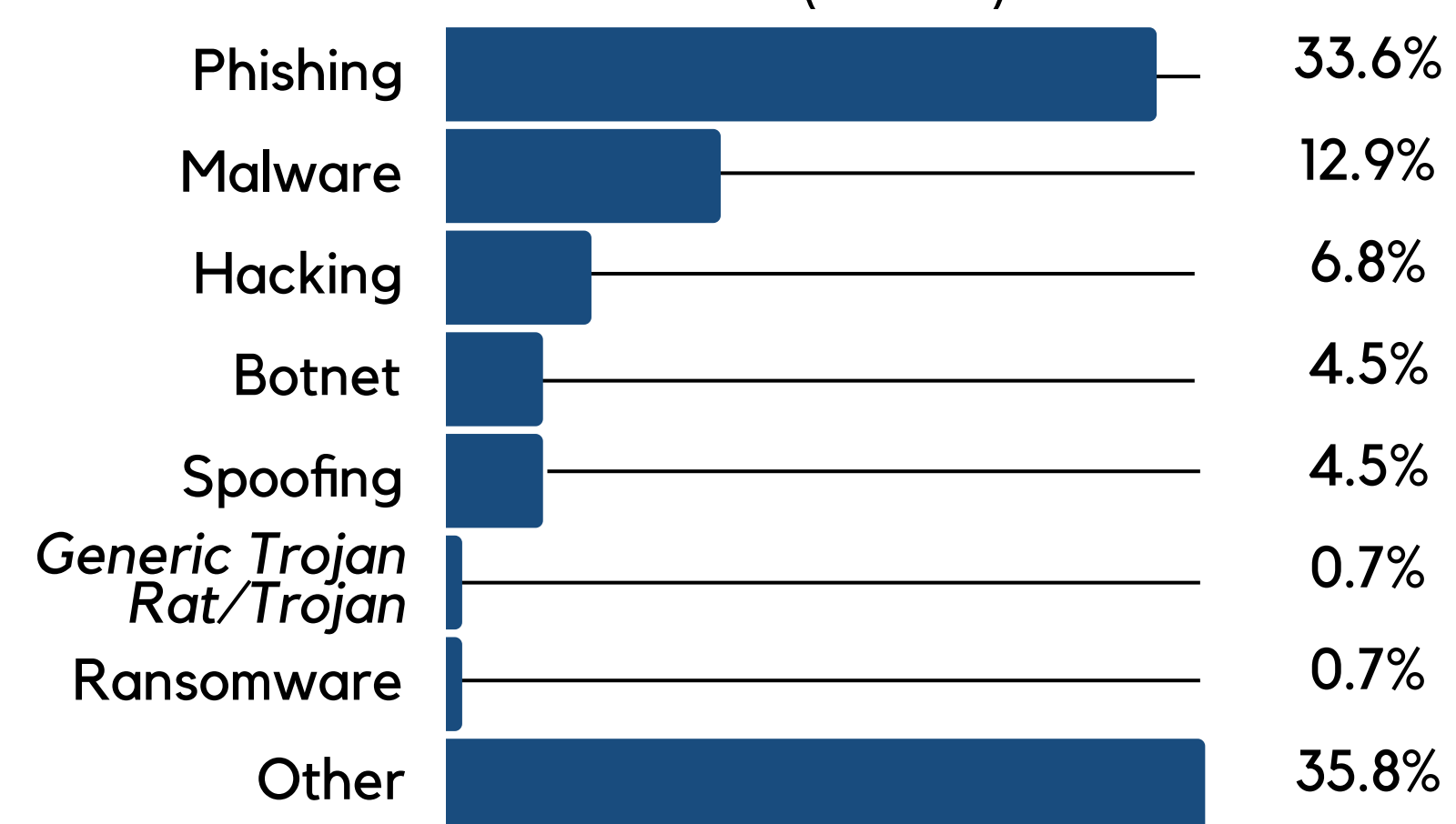
For the two categories of questions regarding types of incidents, the other option states that no incidents will occur during 2023. Based on the results of in-depth interviews, as transactions become more accessible, potential fraud incidents are often sporadic or have no pattern and have various types.

Besides implementing DRP, cyber-attacks can be anticipated by forming a Computer Emergency Response Team (CERT). CERT is a group of experts formed to respond to cyber-attack incidents. Of the total 131 respondents in AMS 2024, the majority, 59.5%, already have CERT. This means that fintech industry players know the importance of anticipating the threat of cyber-attacks.

The remaining 40.4% of respondents did not have a CERT, the largest reason being that the CERT was already part of the IT Operations Team (30.1%). Other reasons included not being needed at this time (16.9%) and limited personnel (13.2%) until it has been handled by a third party (11.3%).

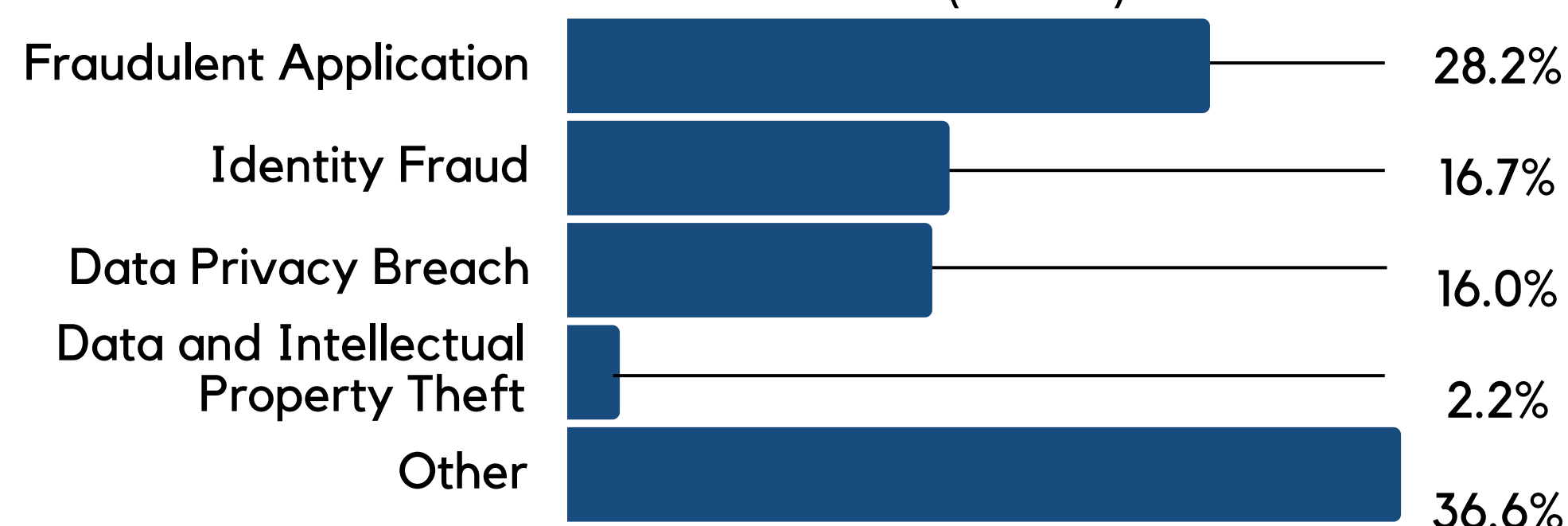
Anticipating cyber-attacks can also be done by maintaining cyber security. The 2024 AMS results show that the majority carry out cyber security maintenance very often, as often as once a month (38.1%). Others carry out maintenance every two to six months (14.5%), and several other companies only do it once a year (23.6%). The more frequently maintenance is carried out, the better the quality of the governance implemented.

Figure 6.12 Types of Cyber -Attacks Companies Have Faced (n=131)



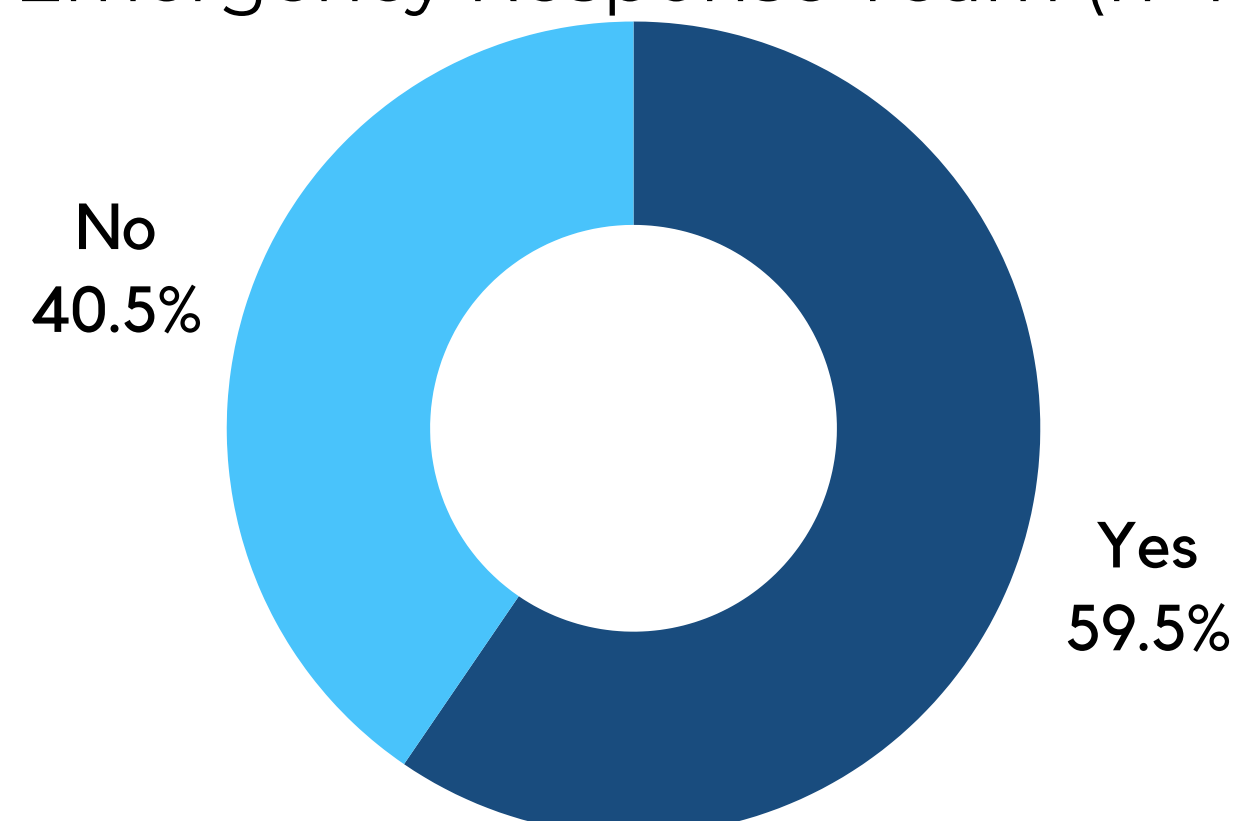
Source: AMS 2024

Figure 6.13 Types of Fraud Companies Have Encountered (n=131)



Source: AMS 2024

Figure 6.14 Ownership of the Computer Emergency Response Team (n=131)



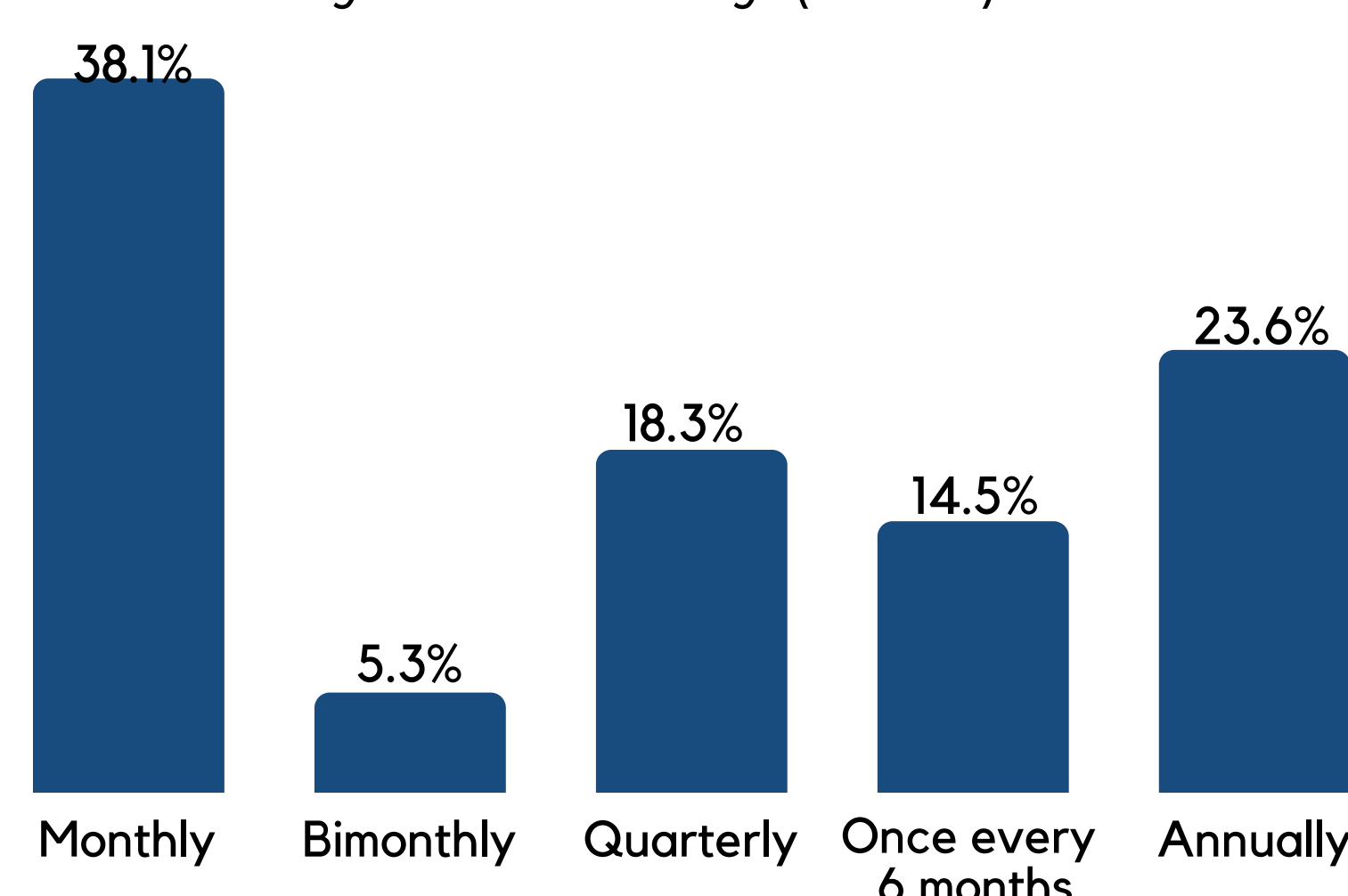
Source: AMS 2024

Figure 6.15 Reasons for Not Having a Computer Emergency Response Team (n=53)



Source: AMS 2024

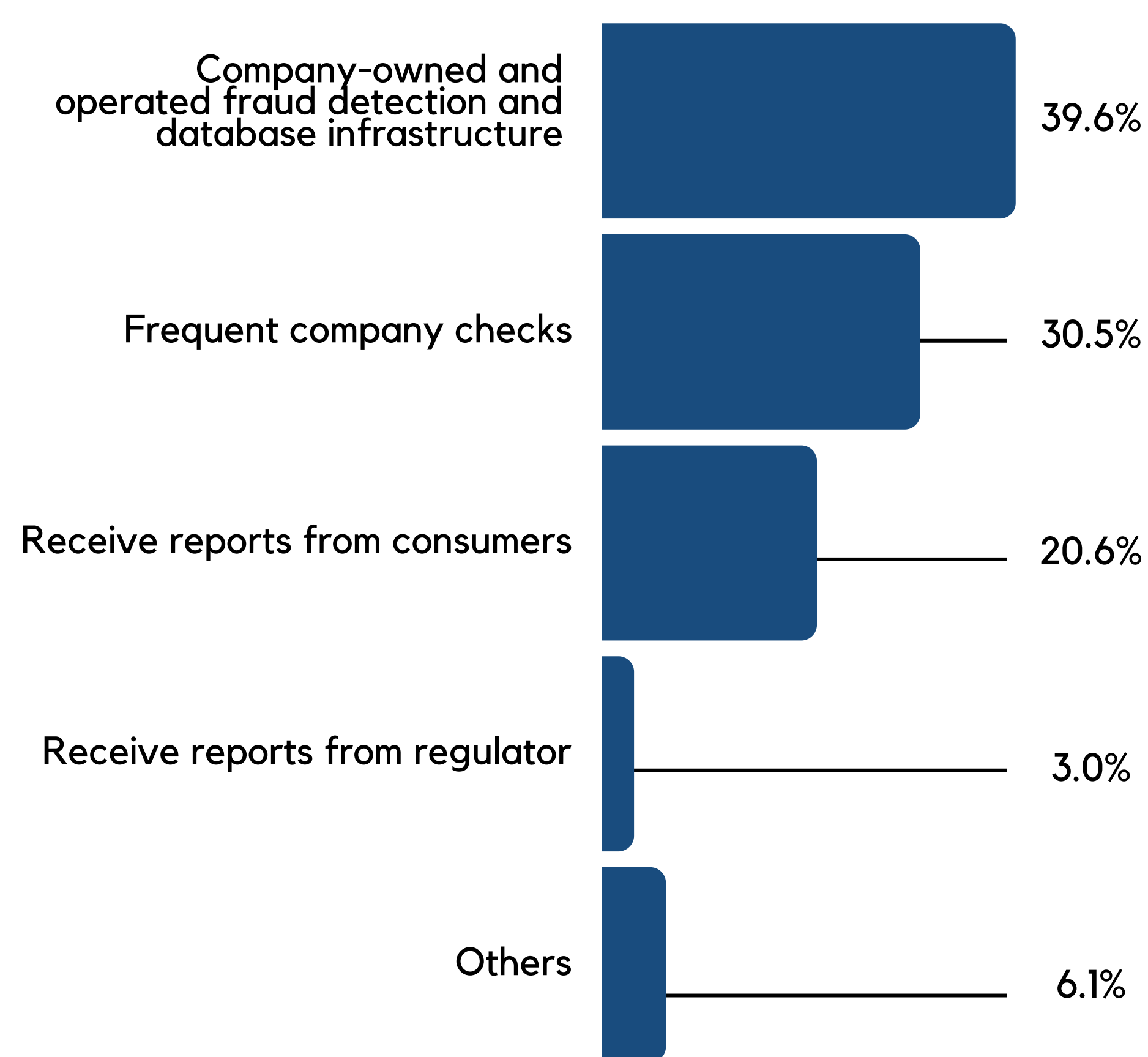
Figure 6.16 Maintenance Frequency for Cyber Security (n=131)



Source: AMS 2024

The survey conducted at AMS 2024 also sought to explore further the ways fintech companies identify fraud incidents. Most respondents answered that fraud incidents were identified through company-owned and operated fraud detection infrastructure and databases (39.6%). Other identification methods include frequent company inspections (30.53%), reports from consumers (20.6%), and reports from regulators (3%). In an in-depth interview, other ways to prevent fraud were explained by providing education and training to employees and collaborating with third parties to strengthen the defense system.

Figure 6.17 Identify Fraudulent Events (n=131)



Source: AMS 2024

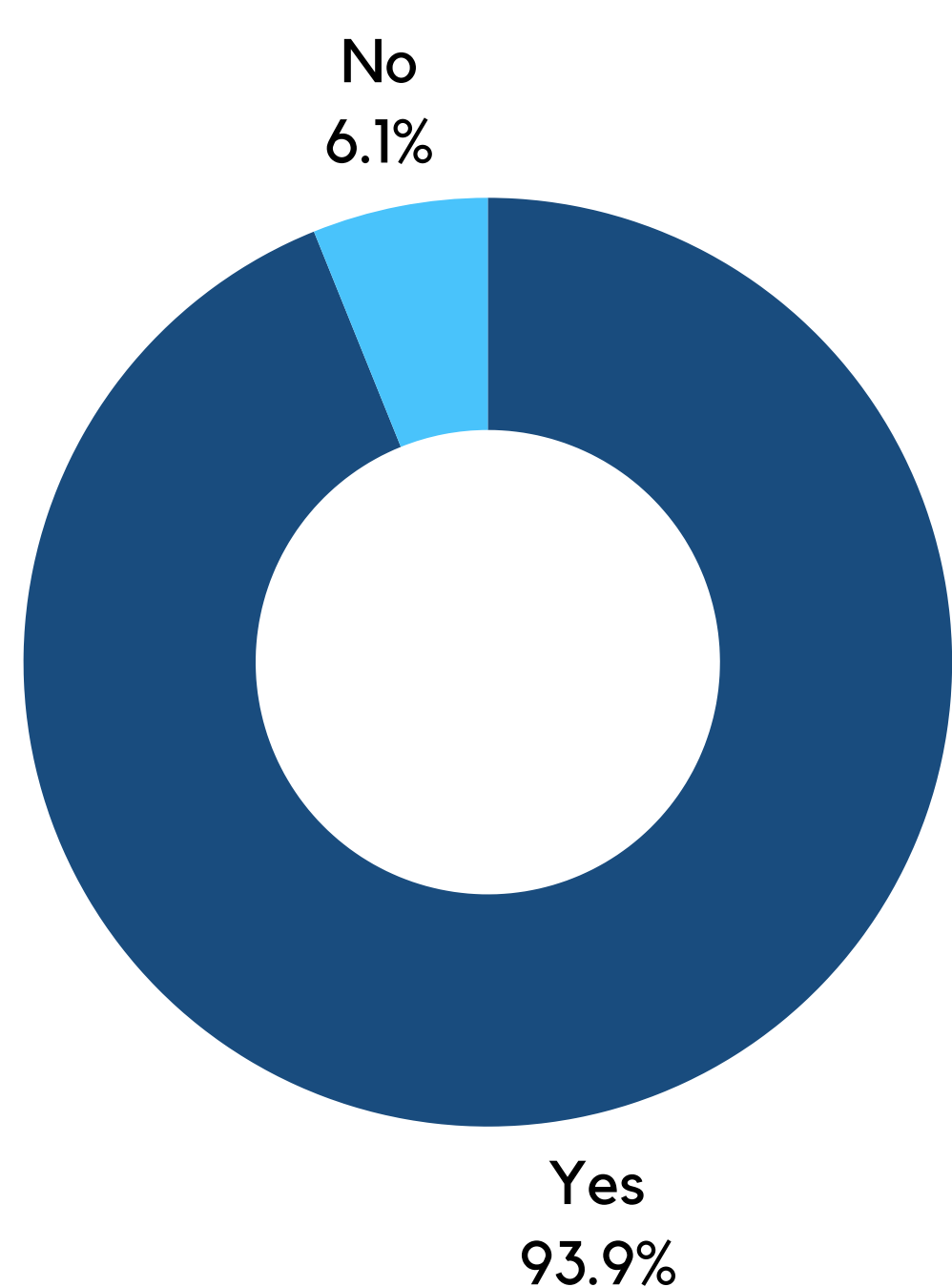
As a follow-up to disaster mitigation in fintech companies, this survey also analyses ownership of Data Protection Officers (DPO). The DPO is the officer responsible for ensuring that the principles of data protection and risk mitigation are always adhered to. It was recorded that 62.6% of the total respondents had a DPO. Meanwhile, a small number, namely 37.4% of fintech companies, still need a DPO.

Other innovations are necessary for implementing disaster or risk mitigation, for example, by providing an Integrated Fintech Fraud Database. Based on AMS 2024, more than 90% of respondents agree that the Integrated Fintech Fraud Database is needed to improve fraud identification and mitigation in fintech companies. However, a small number still believe they do not need this database because they already have their fraud database (37.5%), the current fraud identification mechanism is still adequate (37.5%), and other reasons. With many companies agreeing to the Integrated Fintech Fraud Database, 43.09% believe the fintech association is the right party to manage the database. The remaining respondents pointed to regulators (34.1%) and each fintech player (19.5%) as the right parties to manage the database (refer to Figure 6.20).

AMS 2024 identified the parties authorized to manage the Integrated Fintech Fraud Database through in-depth interviews with several AFTECH members. Members explicitly support the management of the database. AFTECH members stated that before implementing the Integrated Fintech Fraud database collection, it would be better first to define fraud. This is because each business model has a different definition of fraud, so the resulting database will have a harmonious understanding. Then, regarding parties deemed relevant to managing, members explained the importance of coordination from all potential parties, such as associations, regulators, and financial services business actors.

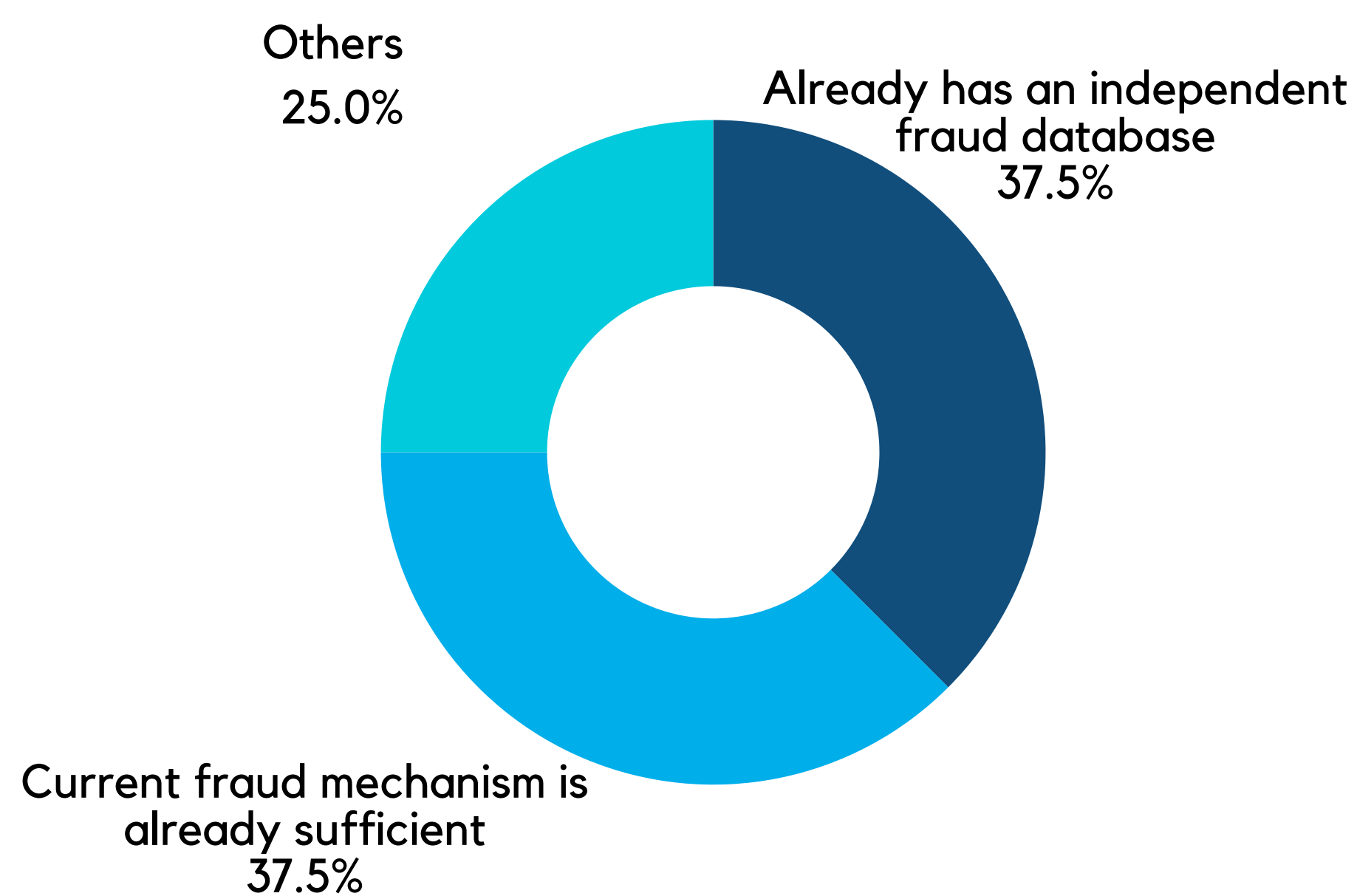
Synergy from several parties will create more effective and integrated data management. Besides data management, strict supervision and action against fraud incidents are also necessary. For this reason, collaboration with the Criminal Investigation Agency (*Badan Reserse Kriminal/Bareskrim*) or related agencies is crucial in collecting data and reducing the numbers of fraud.

Figure 6.18 The Importance of an Integrated Fintech Fraud Database in Improving Fraud Identification and Mitigation (n=131)



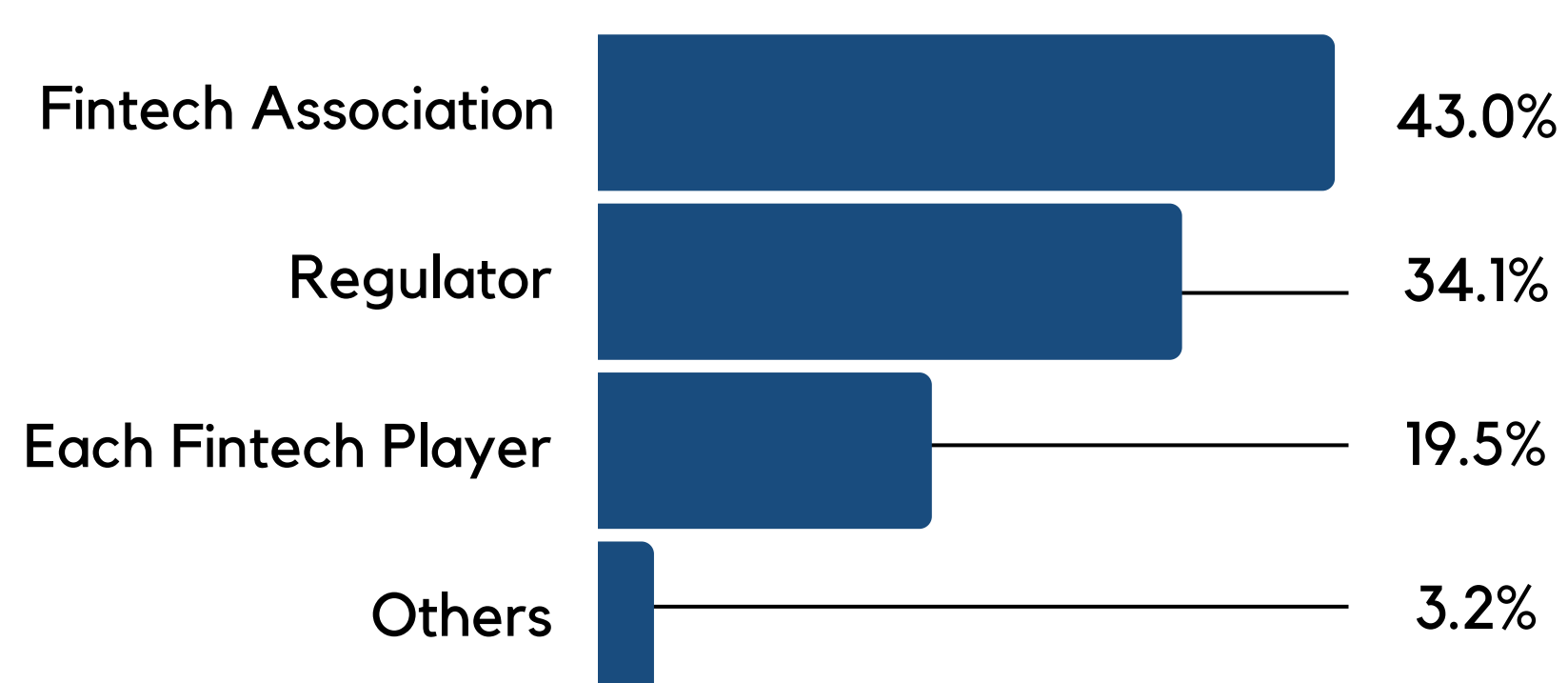
Source: AMS 2024

Figure 6.19 Reasons Why Is An Integrated Fintech Fraud Database Unnecessary (n=8)



Source: AMS 2024

Figure 6.20 The Right Party to Operate the Integrated Fintech Fraud Database (n=123)



Source: AMS 2024

Consumer Protection

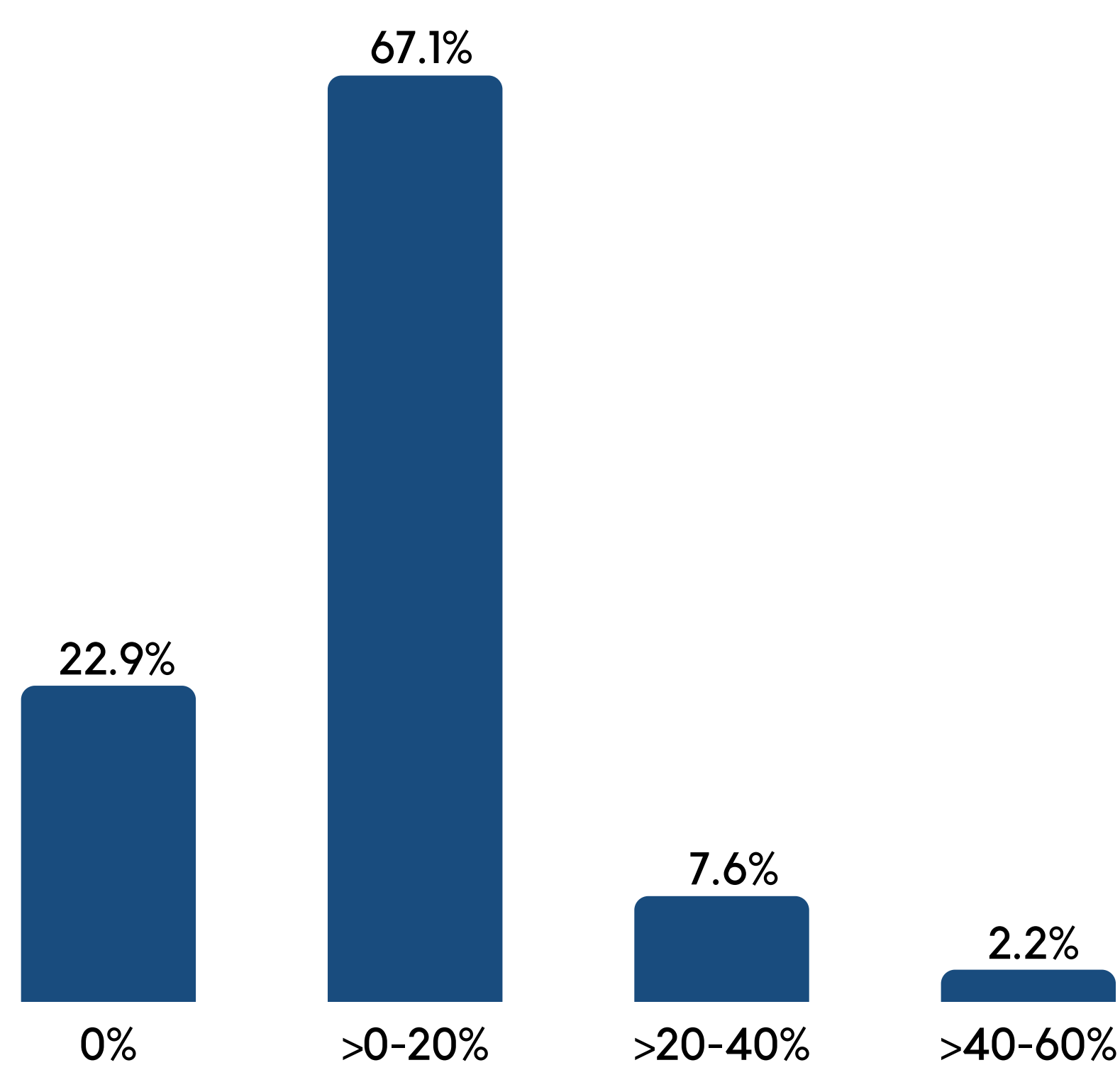
As an industry that operates in the service sector, fintech companies pay great attention to aspects of consumer protection. Good performance in the business world can be monitored from consumer satisfaction and how the company responds to consumer complaints. As with fintech companies, AMS 2024 showed that 77.1% of respondents admitted to receiving consumer complaints during 2023. The majority of each company received consumer complaints below 20% of all consumers. However, a few companies are free from consumer complaints, namely 22.9%. This indicates that the services provided by fintech companies are still good.

Based on AMS 2024, it is also known that 40.4% of consumer complaints received by companies were submitted via e-mail. The remainder was delivered via Call Center (27.4%), in person (16%), and social media (6.1%). This means that consumers prefer online media rather than face-to-face. This can be a consideration for fintech companies to be more responsive to online media.

For types of complaints, 34.3% of respondents had received complaints regarding late transactions. With these conditions, transaction time efficiency must be the focus of fintech companies in the future. In this fast-paced era, the slightest delay in a process can cause consumer losses.

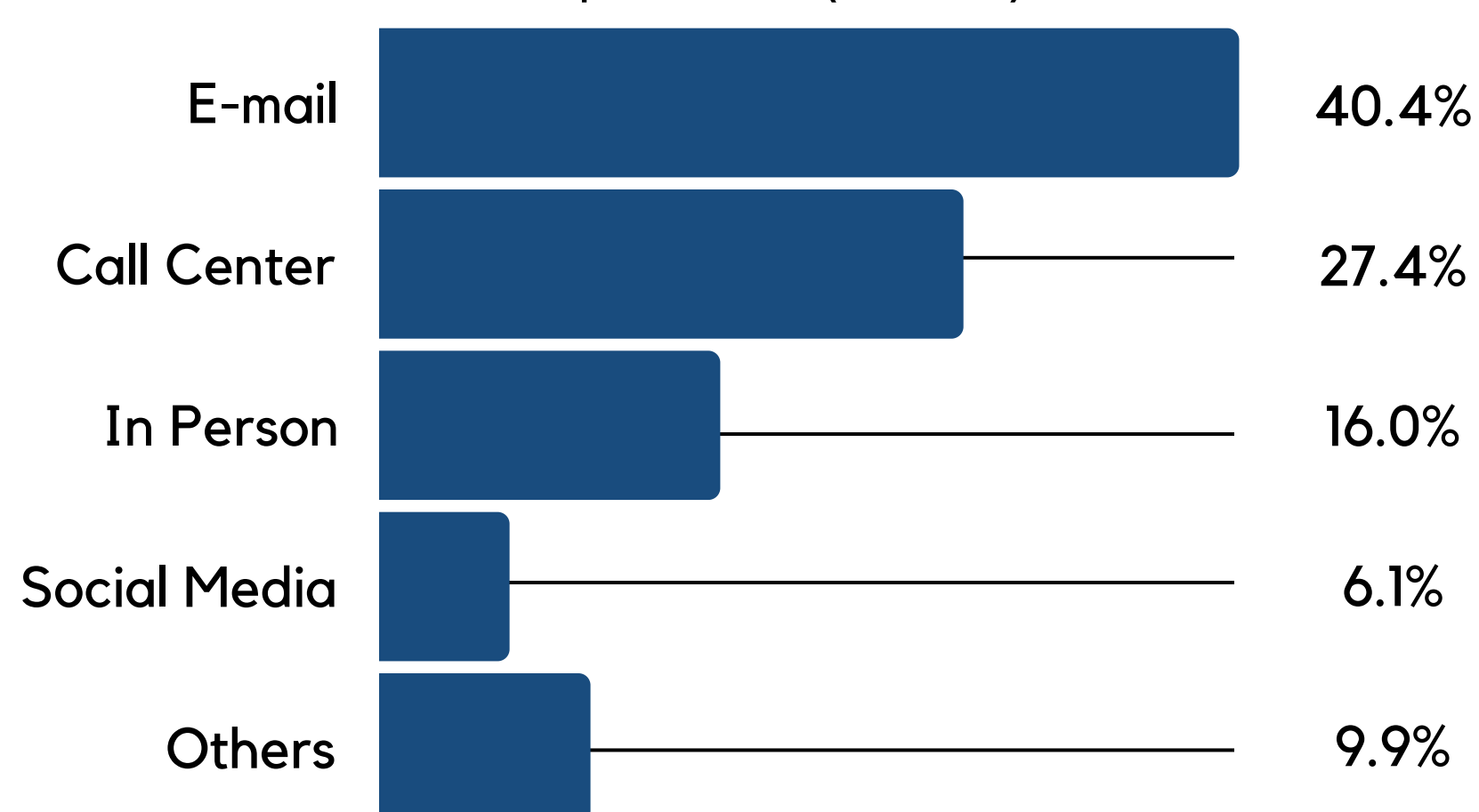
Apart from that, other types of complaints received by respondents included long administrative processes (16%), system failures (12.2%), poor service (2.2%), and high service costs (1.5%). The Other option (33.5%) means there are no complaints.

Figure 6.21 Number of Consumer Complaints Received Compared to All Consumers in 2023



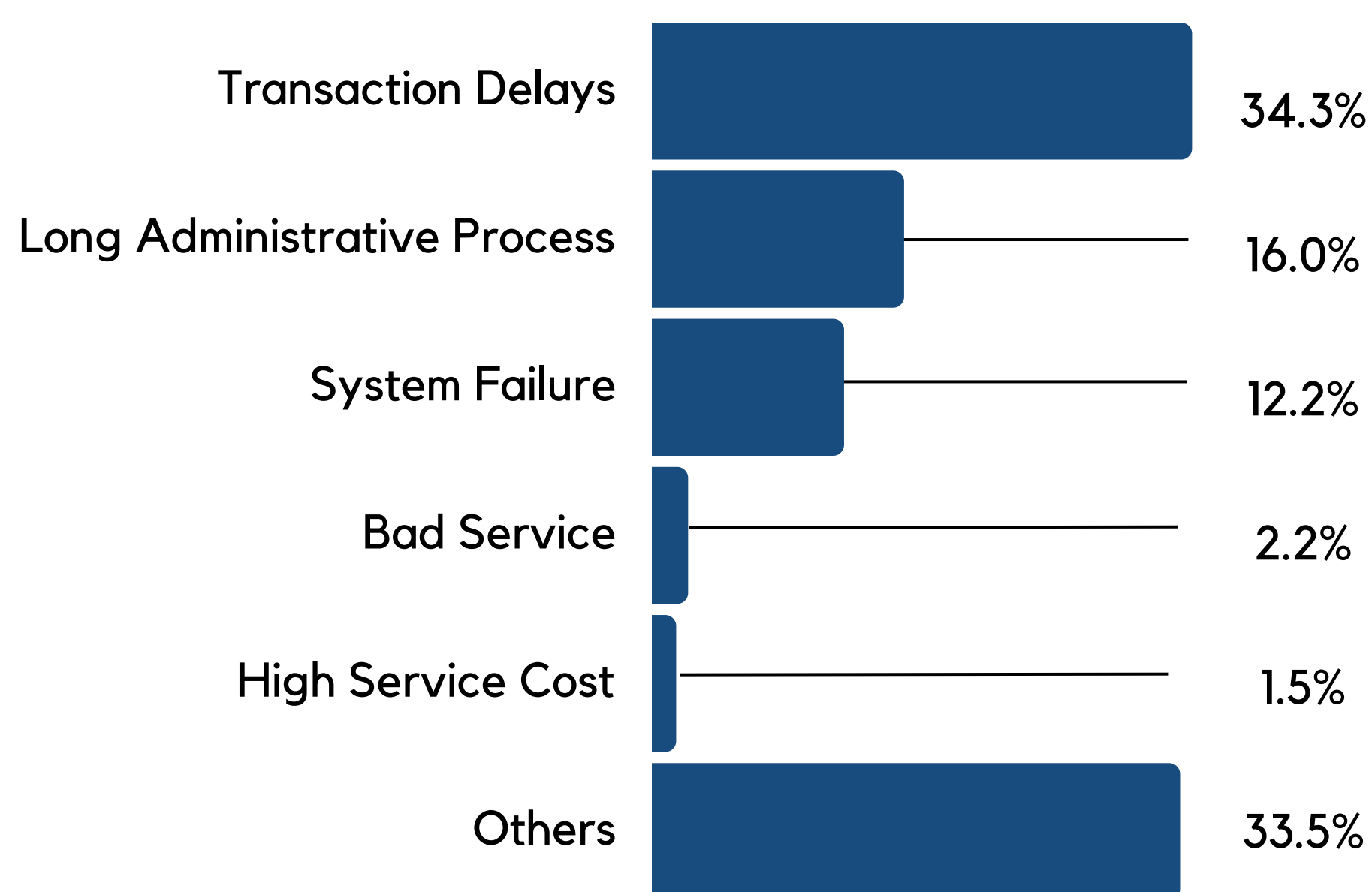
Source: AMS 2024

Figure 6.22 Media Used by Consumers to Submit Complaints (n=131)



Source: AMS 2024

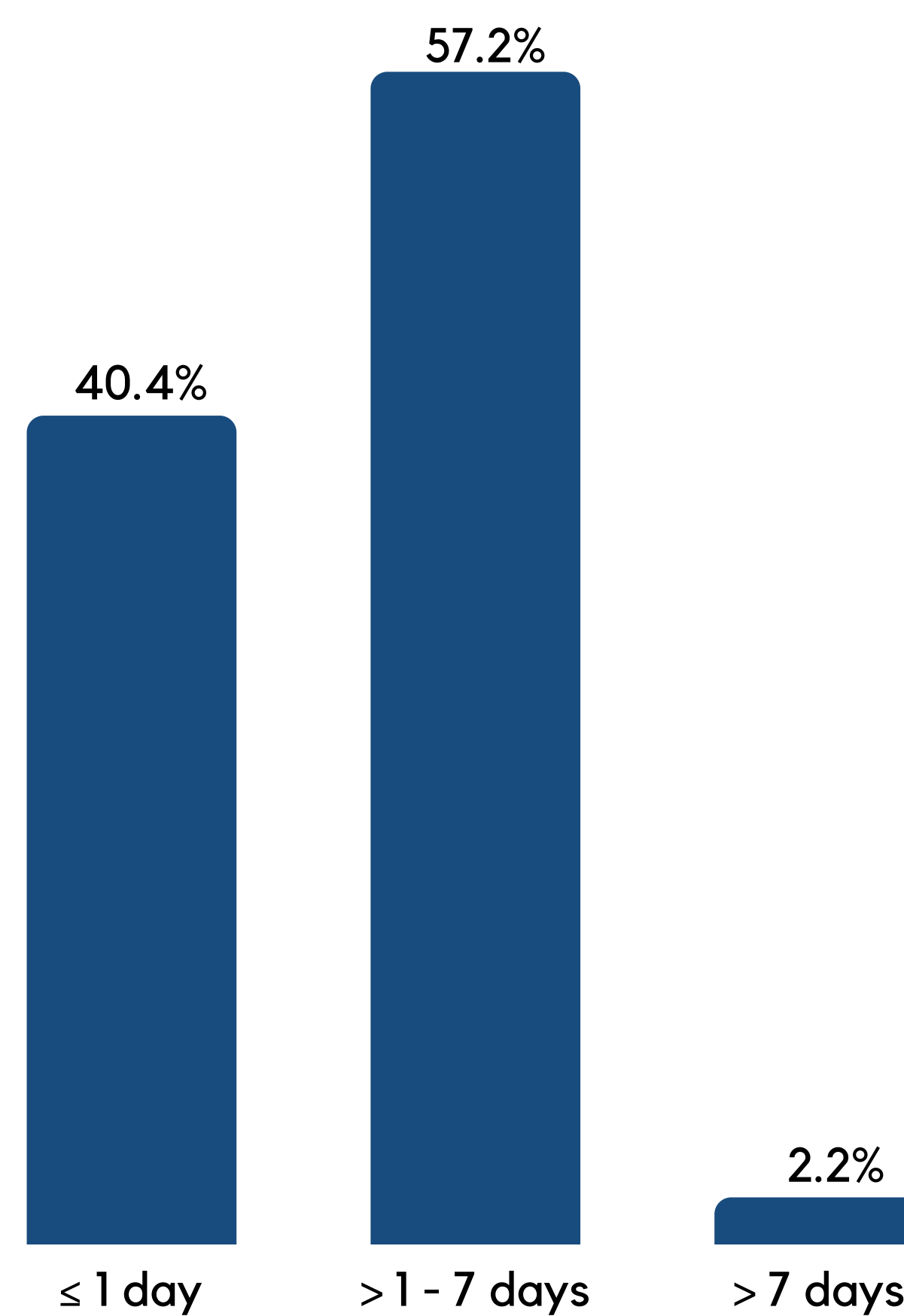
Figure 6.23 Most Common Types of Complaints Received in 2023 (n=131)



Source: AMS 2024

Of the many consumer complaints received by fintech companies, 40.4% of respondents needed less than a day to handle them (see Figure 6.24). Meanwhile, 57.2% of respondents required 1-7 days to resolve them. The survey found that only 2.2% of respondents took over one week to handle them. This development indicates the commitment of fintech companies to maintaining consumer trust.

Figure 6.24 Time Required to Resolve Consumer Complaints (n=131)



Source: AMS 2024

To provide the best service, fintech companies also routinely organize programs related to consumer protection. As many as 68.7% of respondents stated that they had held consumer protection programs at least 1-5 times a year, followed by 2.3% who held 6-10 consumer protection programs yearly. As many as 6.1% of respondents held consumer protection programs more than 10 times yearly (refer to Figure 6.25).

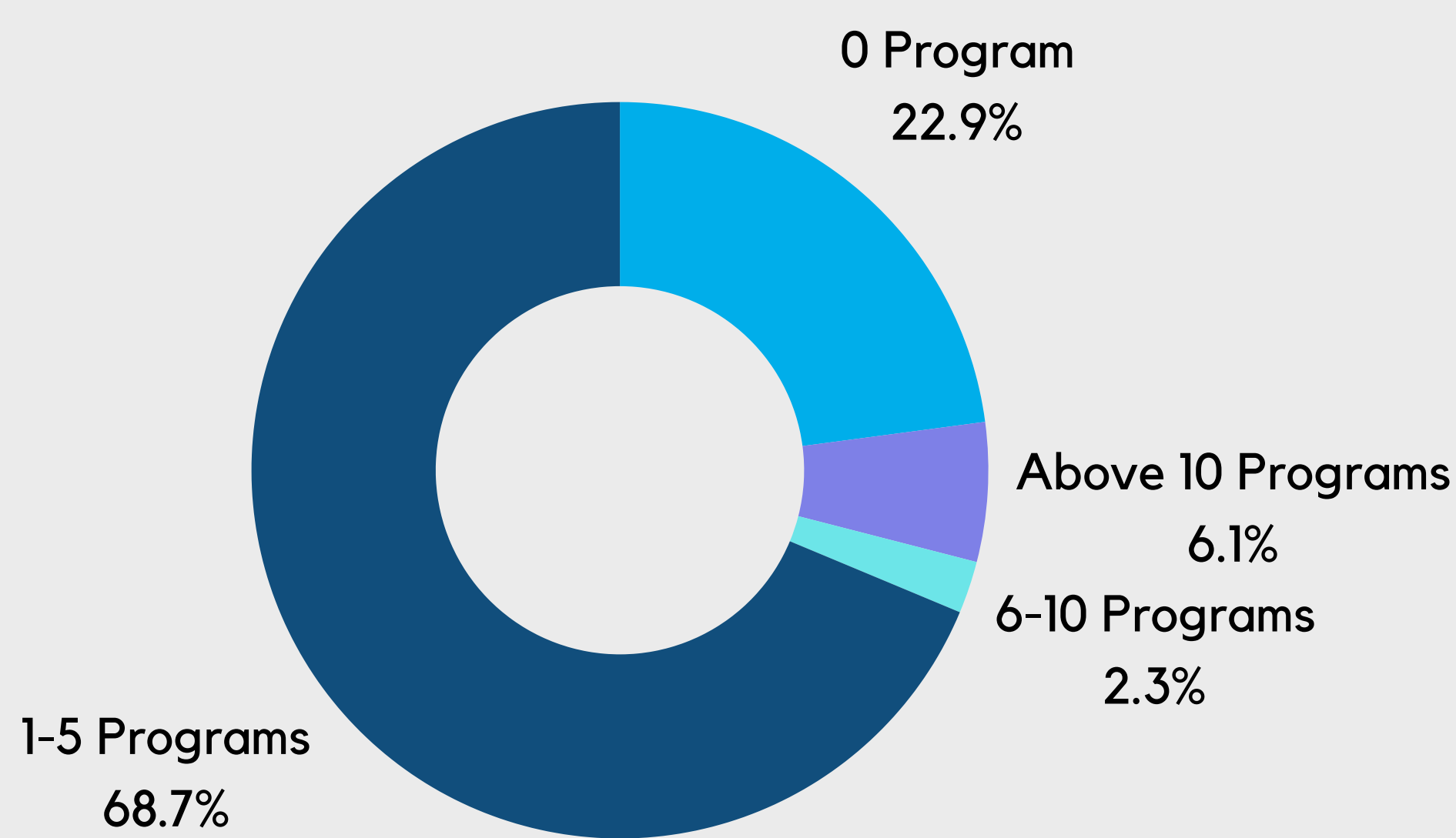
Carrying out consumer protection programs is the responsibility of fintech companies towards the interests of consumers.

However, some respondents (22.9%) still need to implement a consumer protection program during 2023. This could be an opportunity to collaborate with associations to initiate and synergize in new collaborative programs. For AMS 2024, the majority of respondents provide consumer protection in the form of programs related to data security and privacy (67.9%). The remainder carried out programs in the form of customer service training (43.5%) and insurance (6.8%).

As time goes by, the concept of consumer protection is seen to evolve following future industrial developments. For this reason, several factors are considered to influence changes in the concept of consumer protection in the future.

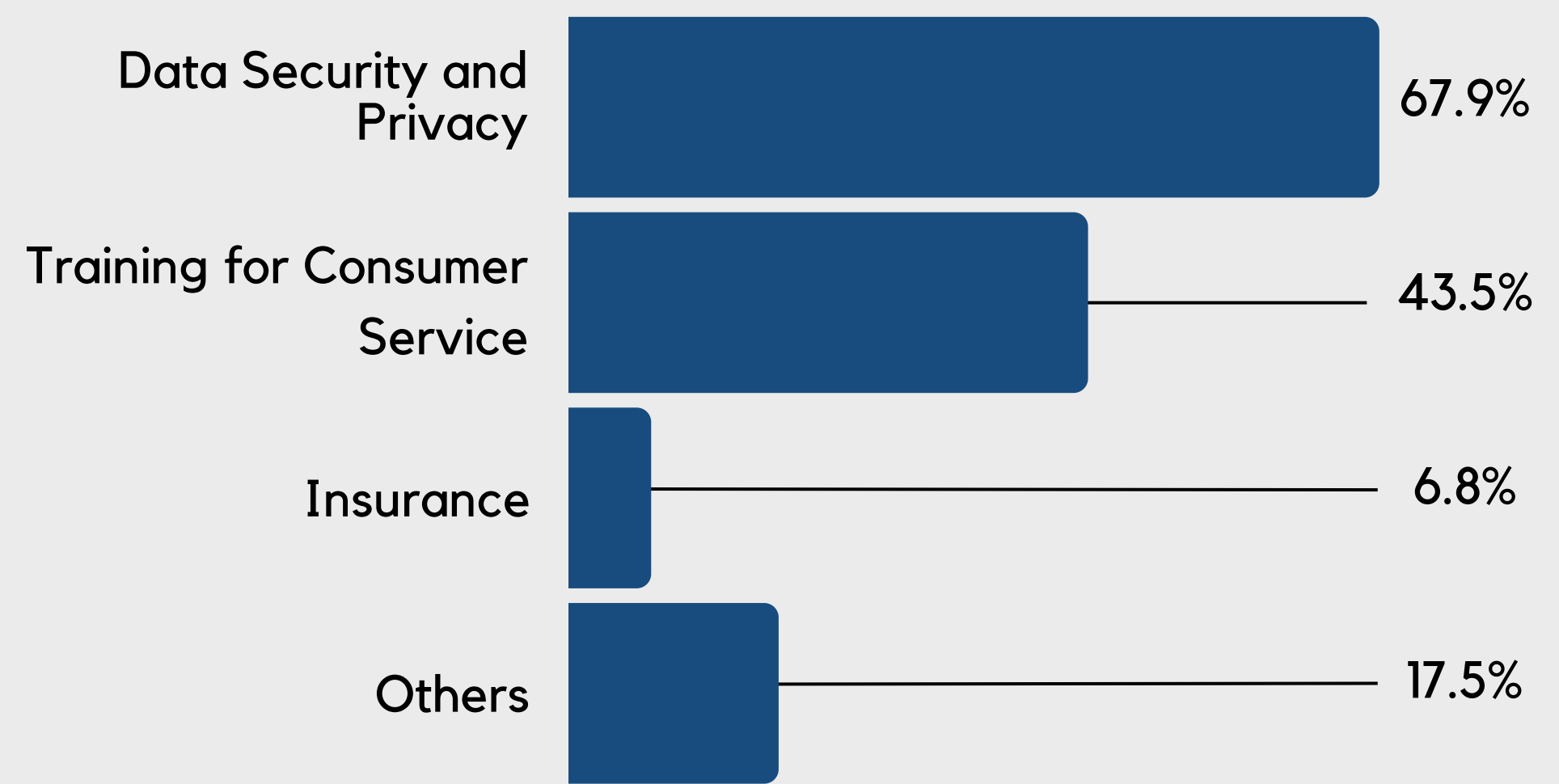
AMS 2024 proved that 75.5% of respondents agreed that increasing social awareness was the main driving factor for changing the concept (refer to Figure 6.27). This percentage increase compared to last year's 73.3%. This means that people are increasingly aware of social issues, such as gender equality and environmental issues, therefore the concept of consumer protection from fintech companies will also be adjusted to suit consumer preferences.

Figure 6.25 Number of Consumer Protection Programs Held in 2023 (n=131)



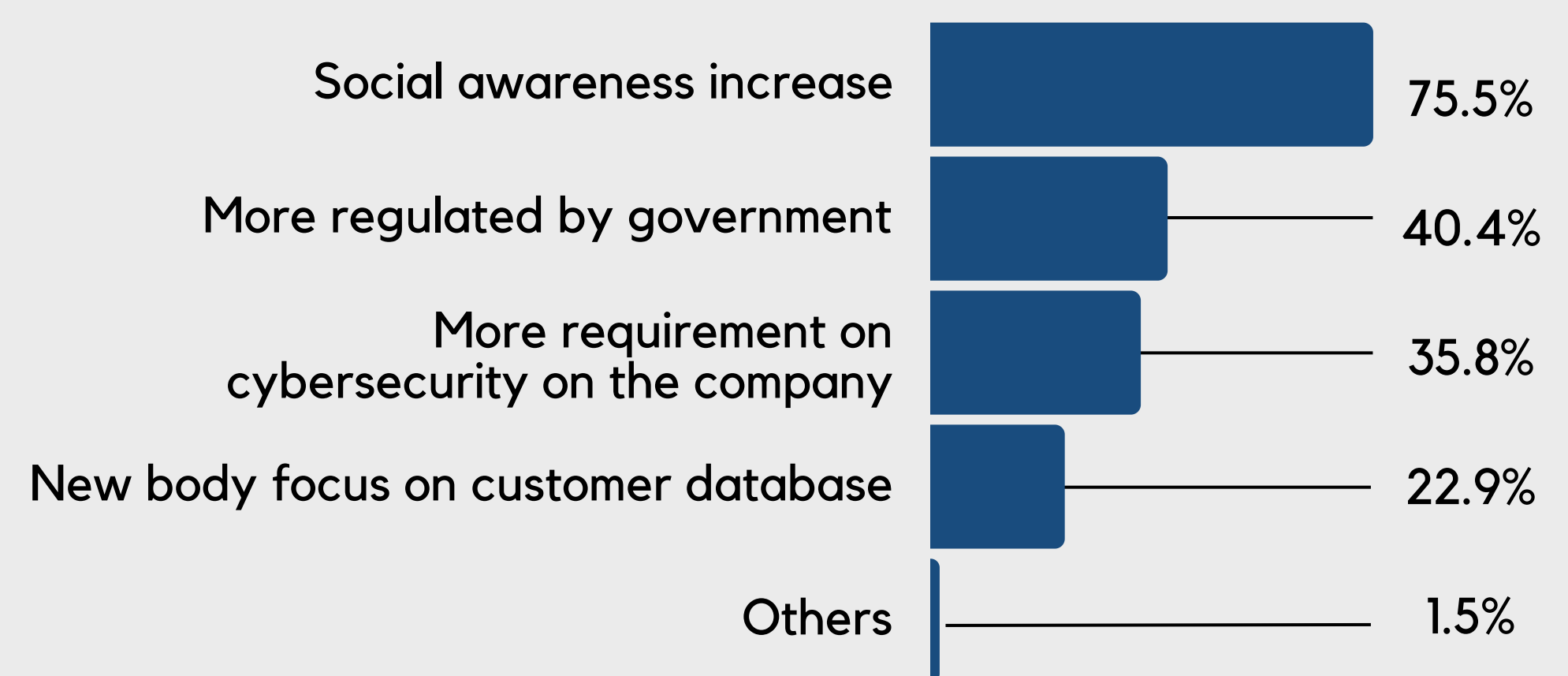
Source: AMS 2024

Figure 6.26 Types of Consumer Protection Programs (n=131)



Source: AMS 2024

Figure 6.27 Factors Influencing Consumer Protection (n=131)



Source: AMS 2024

International Standards and Regulations

The financial services and fintech industry do not only exist in Indonesia, but also in other countries throughout the world. Since the industry is interconnected globally, the regulations and standards that cover this industry are also agreed upon internationally. As many as 97.7% of AMS 2024 respondents agreed and strongly agreed that companies must follow international rules and standards. This large percentage shows that Indonesia's financial services and fintech industry can increasingly align with the everchanging global dynamics. However, a small portion of respondents (2.3%) still lean toward disagreement regarding the importance of following international regulations and standards.

More than half of AMS 2024 respondents (78.6%) have followed international regulations and standards. Others chose not to participate because they felt there were no standards relevant to the company's business model (8.4%), a minority of answers did not wish to participate (5.4%), and the remainder did not know whether to follow or not (7.6%). Of the 103 fintech companies that follow international regulations, 92.2% follow ISO 27001. ISO 27001 is an international standard that guides in implementing information security management systems. This regulation is very important for the financial services and fintech industries to implement because it is based on information technology. The implementation of ISO 27001 is often used as a benchmark for implementing good governance. Apart from ISO 27001, there are international regulations in the form of AML, followed by 40.8% of respondents.

Code of Conduct and Industry Standards

Implementing code of conducts (CoC) or industry standards is an effort to mitigate business risks in the fintech industry. The majority of AFTECH member respondents follow code of conducts and industry standards (90.8%). This percentage has significantly increased compared to the previous year which was only 77.3%. This growth indicates the company's commitment to always providing the best service by achieving high standards. Based on its type, 74.7% of AMS 2024 respondents follow ISO 27001. They are afterwards followed by POJK regulations (68.1%), PDP Law (68.1%), AFTECH CoC (51.3%), and AFPI CoC (34.5%).

Figure 6.28 The Importance of Following Regulations and Standards of the International Code of Conduct (n=131)

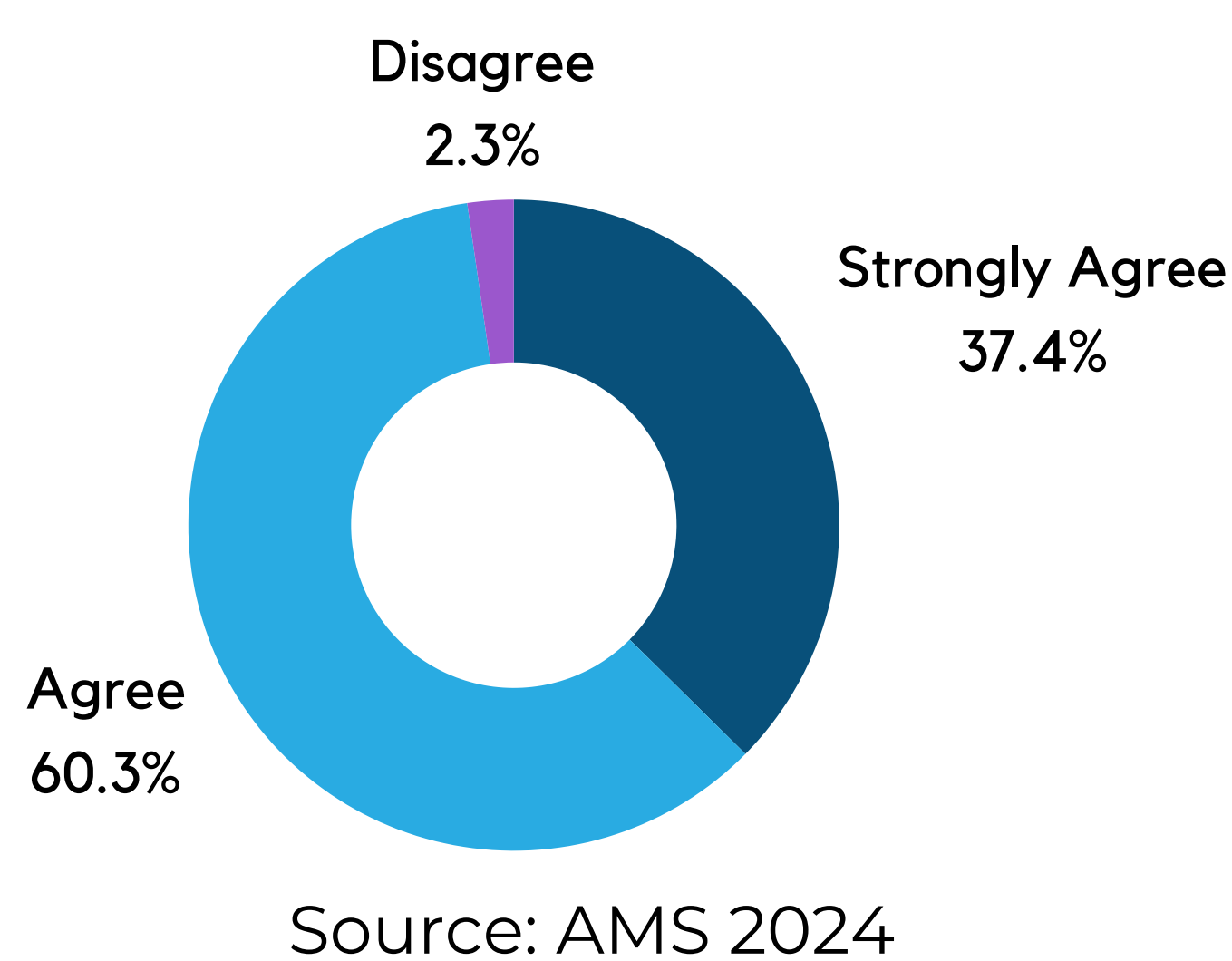
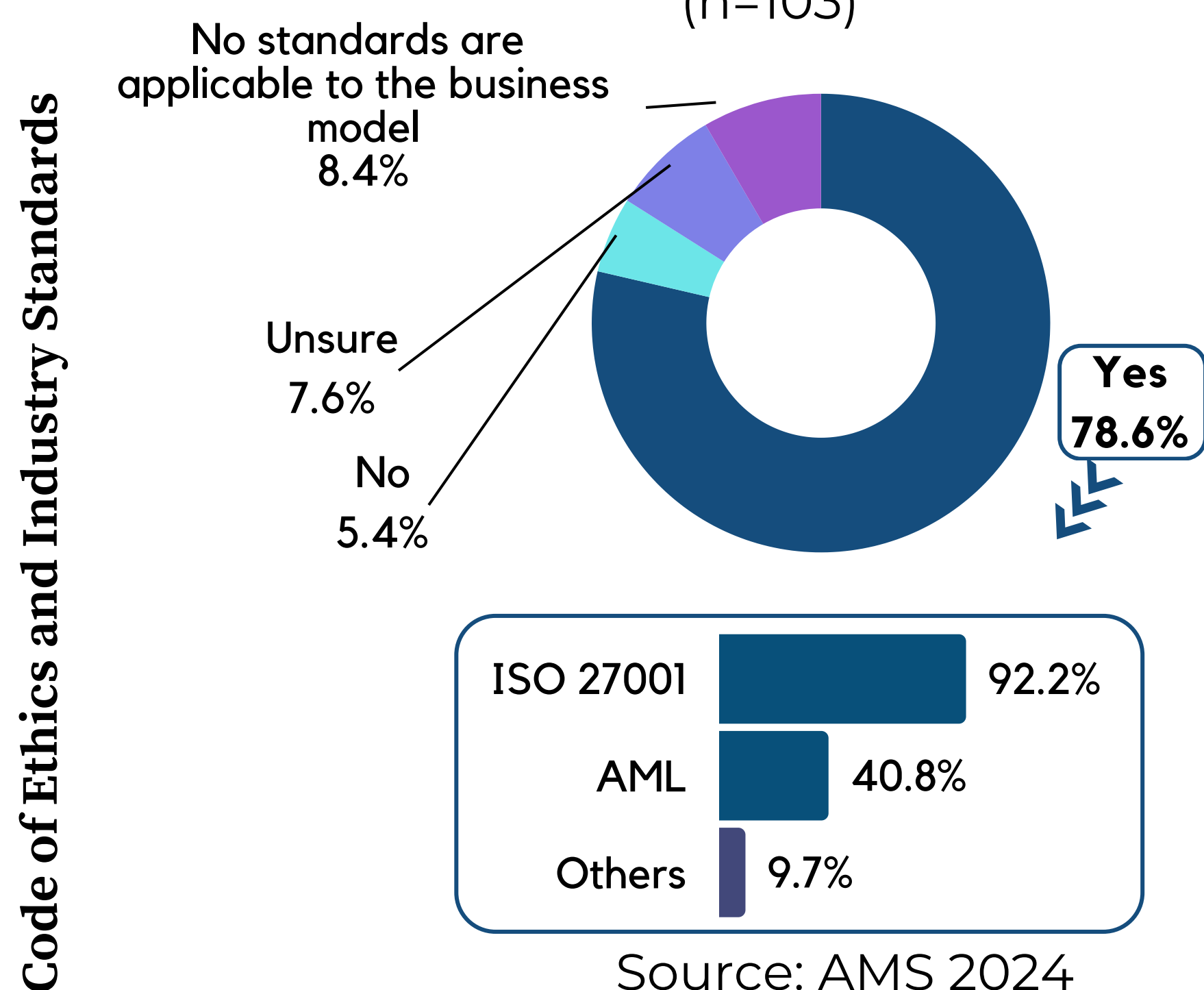


Figure 6.29 Participation in International Regulations and Standards (n=131) and its types (n=103)



As an association that oversees various fintech companies, AFTECH also has its code of conduct and standards to emphasize the importance of implementing GRC, for instance, regarding personal data protection. AMS 2024 demonstrates that 69.4% of AFTECH members have followed the rules set by AFTECH (see Figure 6.31). The remaining 19.8% are still undecided whether to follow these rules. A few others feel that AFTECH standards must be revised to the company's business model. Compared to last year's AMS, AMS 2024 has included new answer choices following AFTECH's current CoC and guidelines. Out of 91 AFTECH members, 58.2% of them follow the new rules regarding personal data protection and data privacy.

Even though it is a new rule, many members have already participated in implementing it. A similar case is applicable to a small number of respondents who have also followed AFTECH regulations on the Financial Planners (7.7%). Complying with regulations, including international standards, industry standards, and the AFTECH CoC, will improve the company's reputation and consumer trust.

Figure 6.31 Participation in the AFTECH Code of Conduct and Standards (n=131) And Its Types

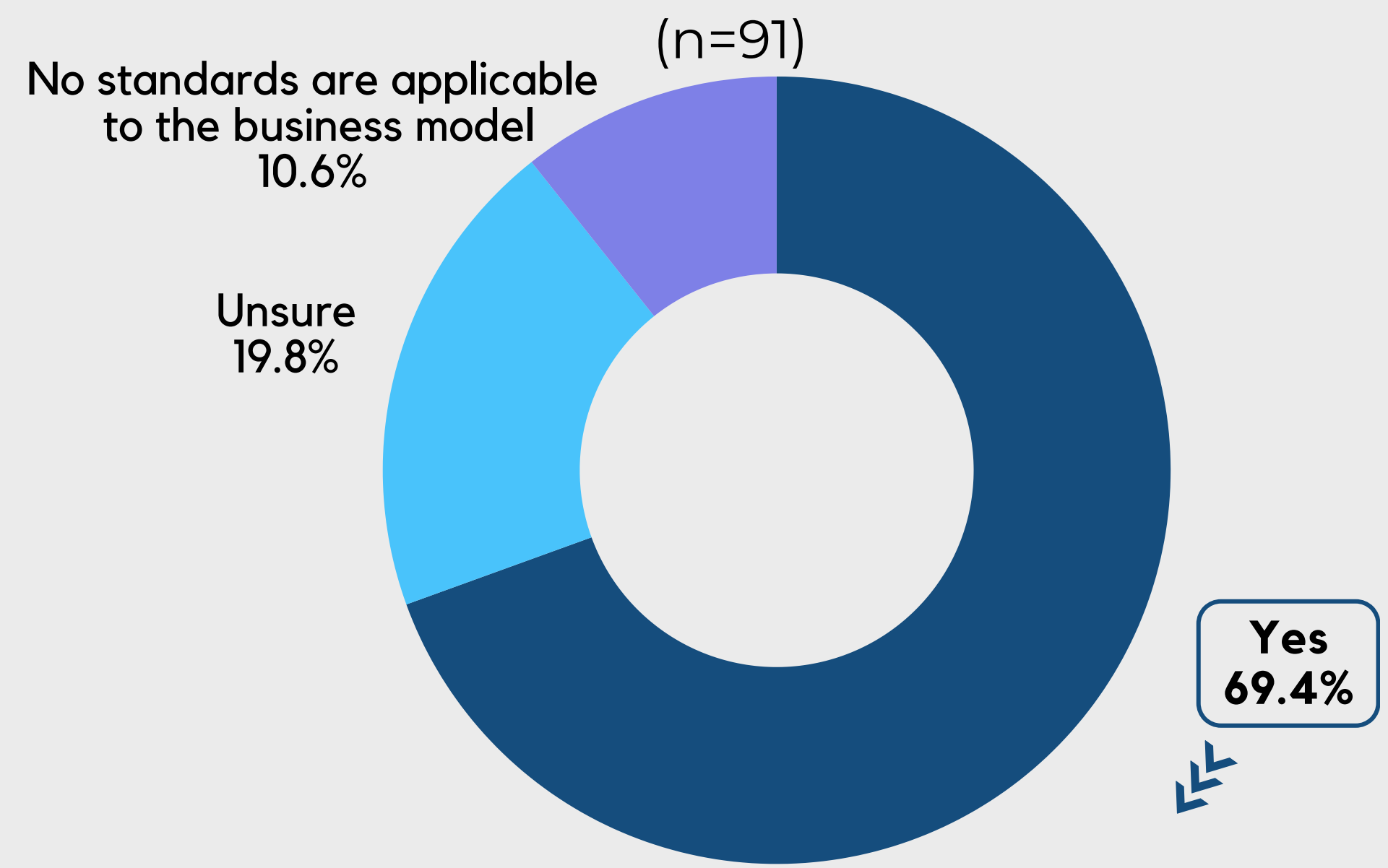
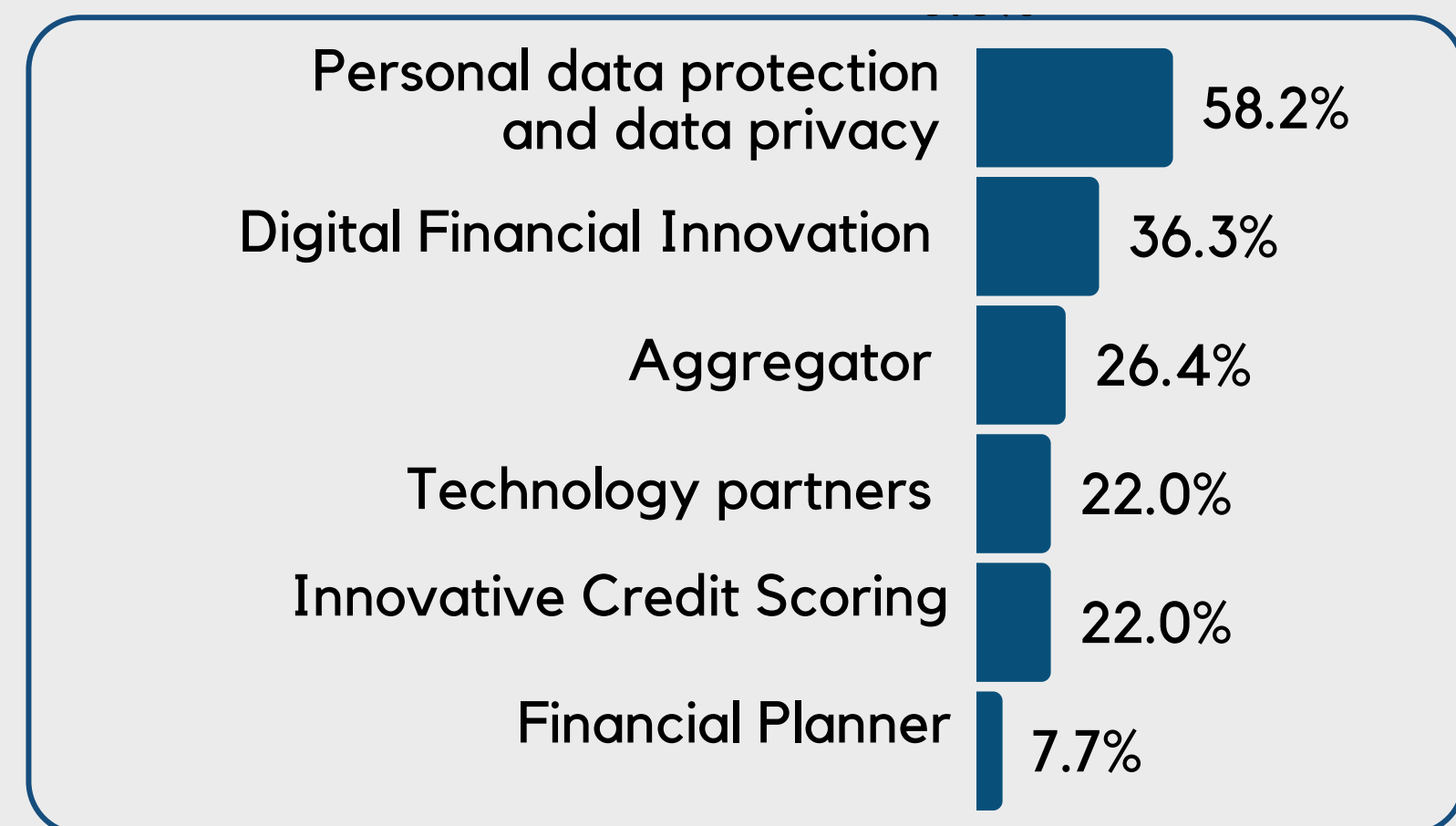
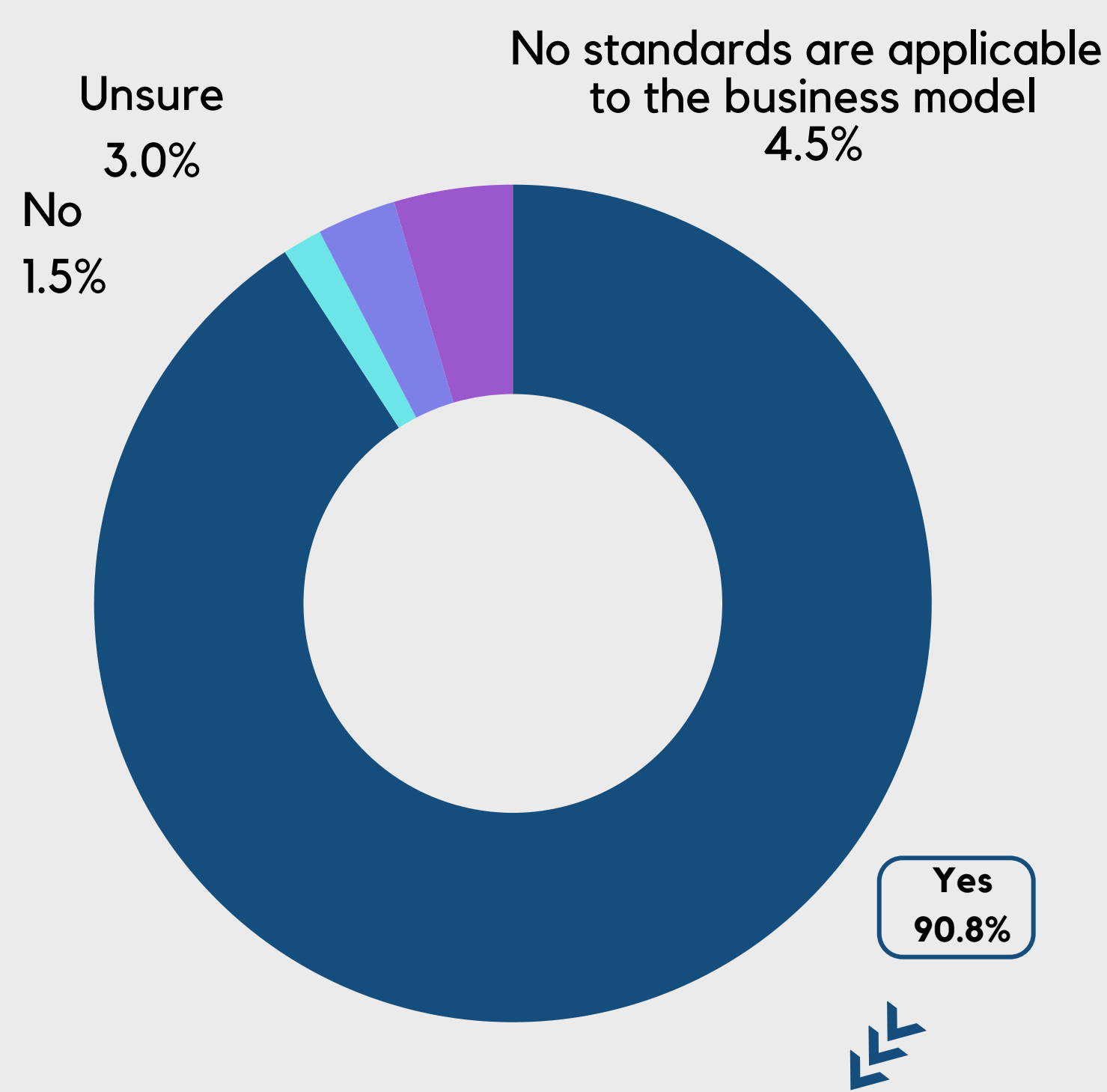
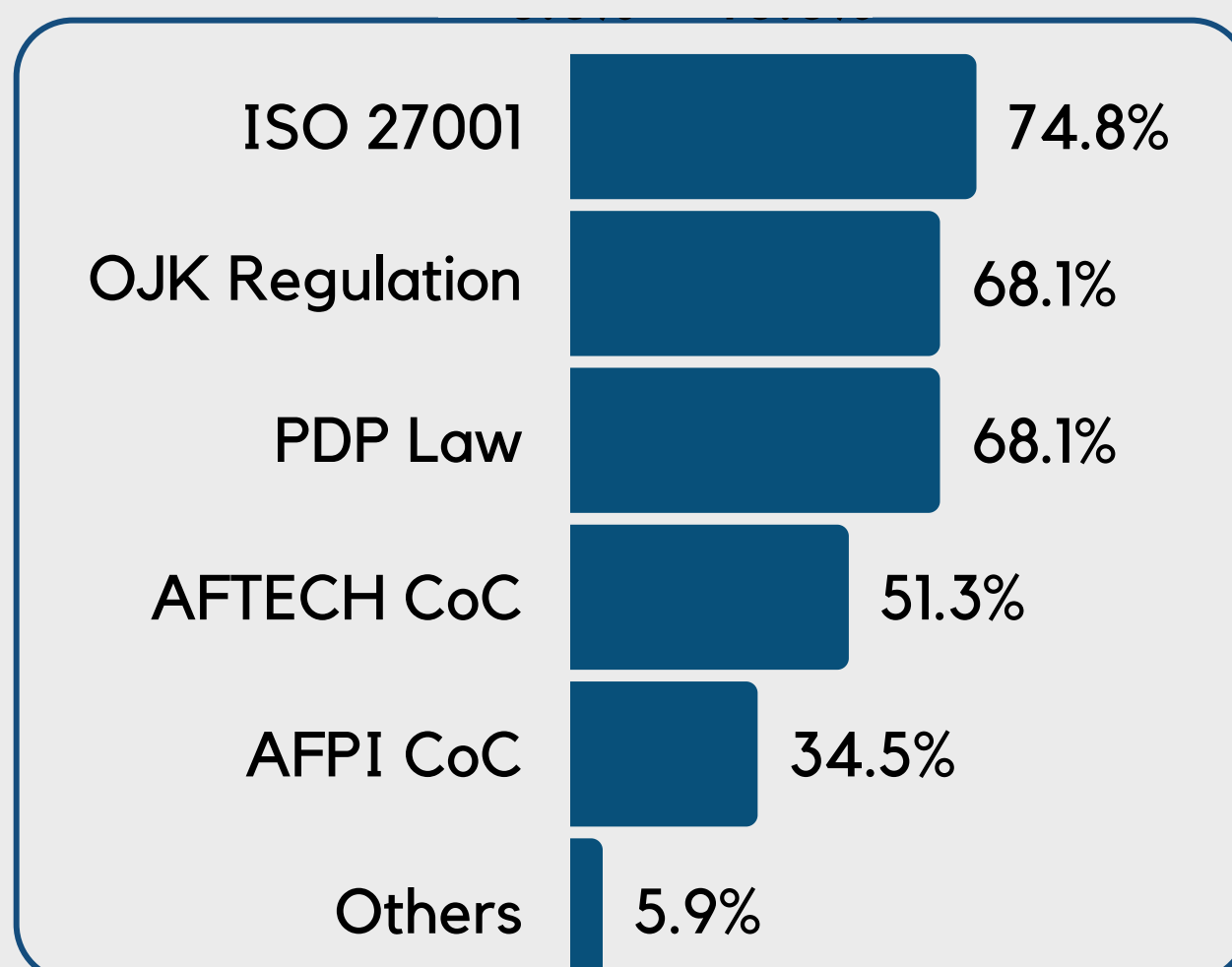


Figure 6.30 Participation in the Code of Ethics and Industry Standards (n=131) and Its Types (n=119)



Source: AMS 2024



Source: AMS 2024



7

Infrastructure and Technology

- **Development of Technology Infrastructure**
- **Challenges in Technology Infrastructure**

Infrastructure and Technology

The infrastructure and technology section aims to explain the development of technological infrastructure based on type, category and procurement, access to fintech companies and the challenges in Indonesia. Most respondents stated that they needed e-KYC technology and cloud infrastructure to develop their products. These two technologies and several others are still purchased or outsourced from other parties by most players in this industry. Then, 45.0% of companies have used Artificial Intelligence (AI) technology for various uses, including data analytics and facial recognition. On the other hand, there are some challenges in accessing this technological infrastructure, such as regulatory obstacles and high costs. In addition, around 2 out of 3 companies also stated that the gap between urban and rural areas is also a challenge in developing fintech.

Development of Technology Infrastructure

Massive technology developments in recent years have forced financial products to continue adapting and updating the latest and more relevant innovative technology to support the advancement of business landscape. AMS 2024 respondents state that the supporting technology that is currently key is e-KYC (64.1%), Cloud Infrastructure (60.3%), and Big Data (48.9%), as presented in figure 7.1.

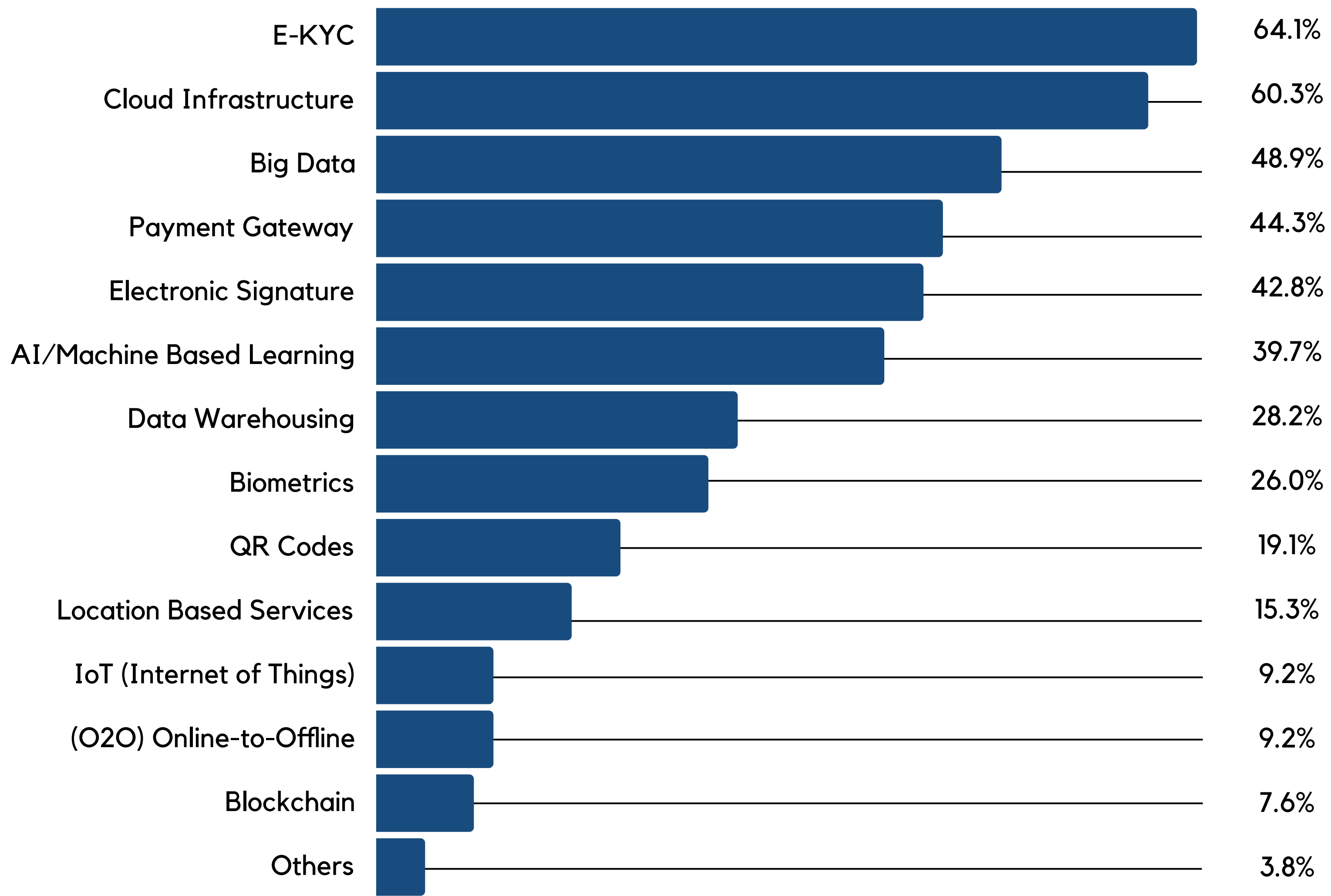
Every new technology has a high level of complexity, therefore using third parties is still a viable option to accommodate this technology. By using third parties to accommodate the procurement of certain technologies, fintech companies can save time, costs, and resources while ensuring they can utilize the latest technology effectively and safely. O2O (Online-to-Offline) technology (66.6%), blockchain (60%), and QR Code (60%) are three technologies that the majority of respondents are capable of producing themselves.

Meanwhile, cloud infrastructure technology (93.7%), payment gateway (84.5%), and digital signature (82.1%) are the three technologies most frequently outsourced to third parties.

In the fintech industry, data is very crucial. The data managed by fintech industry players is generally large amounts of data (big data); with this data, companies in the fintech industry can present real-time facts. Therefore, fintech players have transitioned to data-driven business processes by using machine-based learning or AI (Artificial Intelligence).

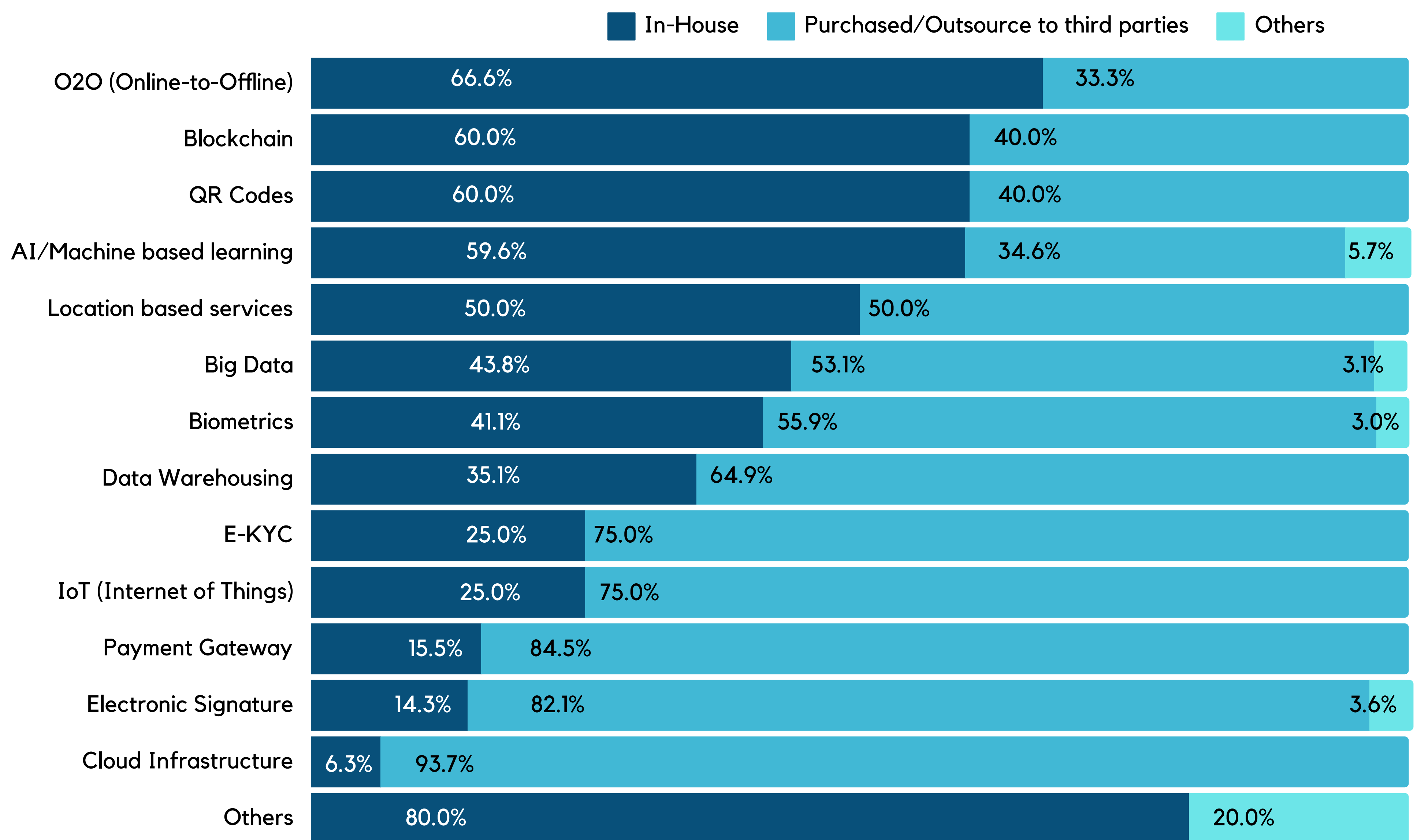
In line with this, an interesting finding that can be observed in the AMS 2024 results is the emergence of the latest adopted technology, such as machine-based learning or AI which represents a fairly large percentage (39.7%) as supporting technology that plays an important role in fintech.

Figure 7.1 The Most Needed Technologies for Product Development (n=131)



Source: AMS 2024

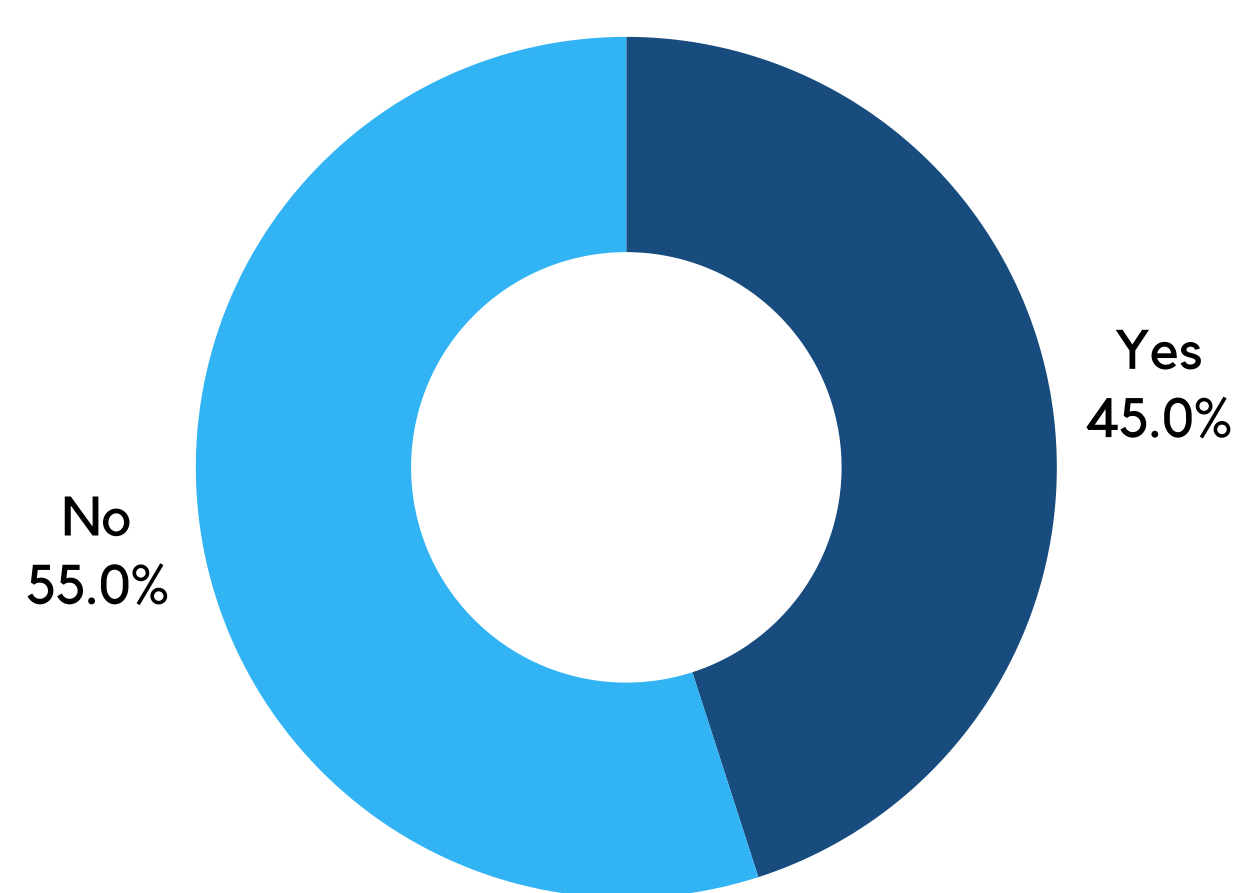
Figure 7.2 Utilized Technology and Procurement Methods (n=131)



Source: AMS 2024

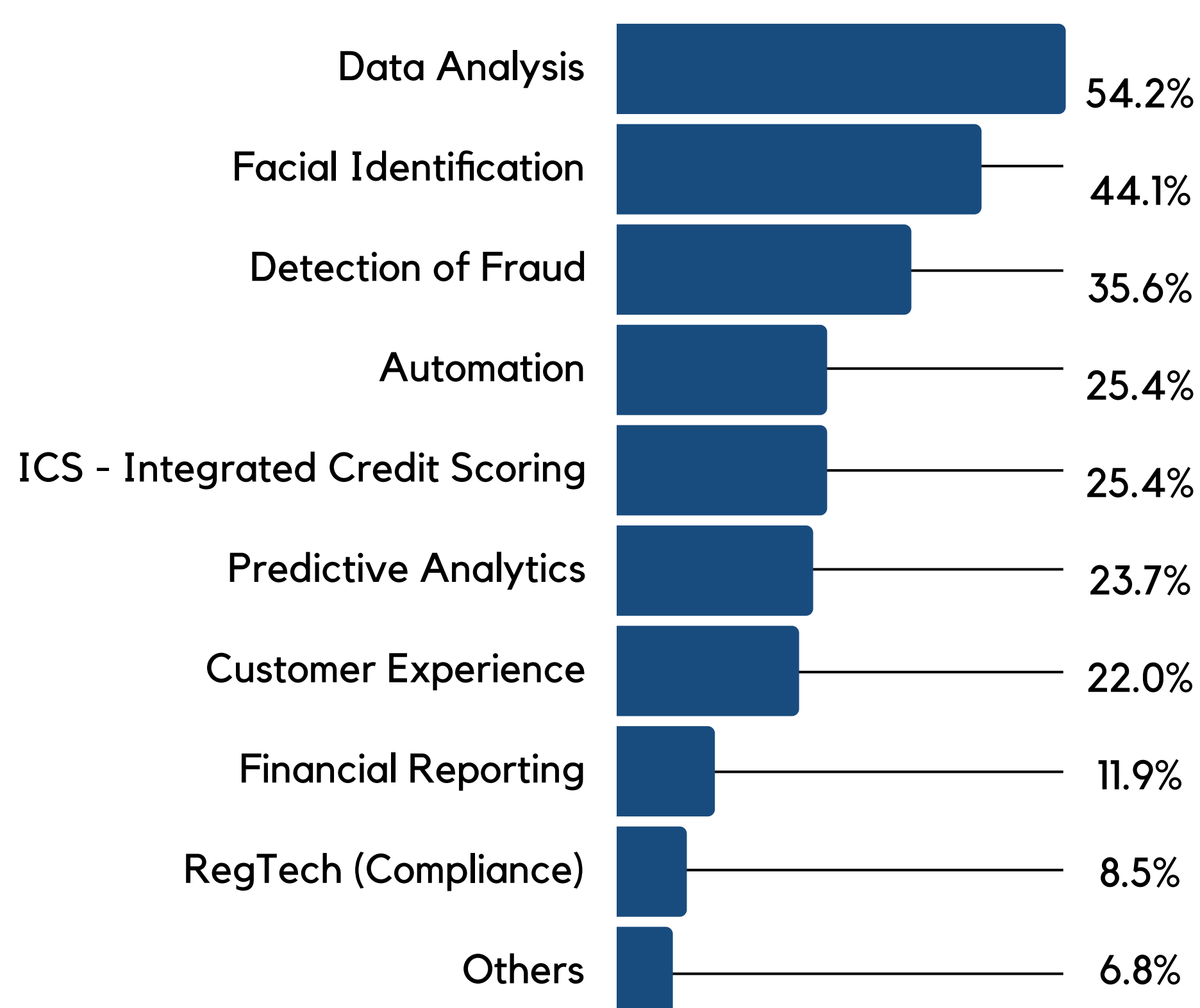
The adoption of machine-based learning or AI in the operations of fintech companies is also quite common according to the number of respondents who state that they used AI in their company's operations, namely 45.0% (see Figure 7.3). Furthermore, the top three of AI type that are most widely used to assist fintech company operations, as illustrated in Figure 7.4, are Data Analytics (54.2%), Facial Recognition (44.1%), and Fraud Detection (35.6%).

Figure 7.3 The Use of AI in Fintech Company Operations (n=131)



Source: AMS 2024

Figure 7.4 Types of AI Used in Fintech Company Operations (n= 59)

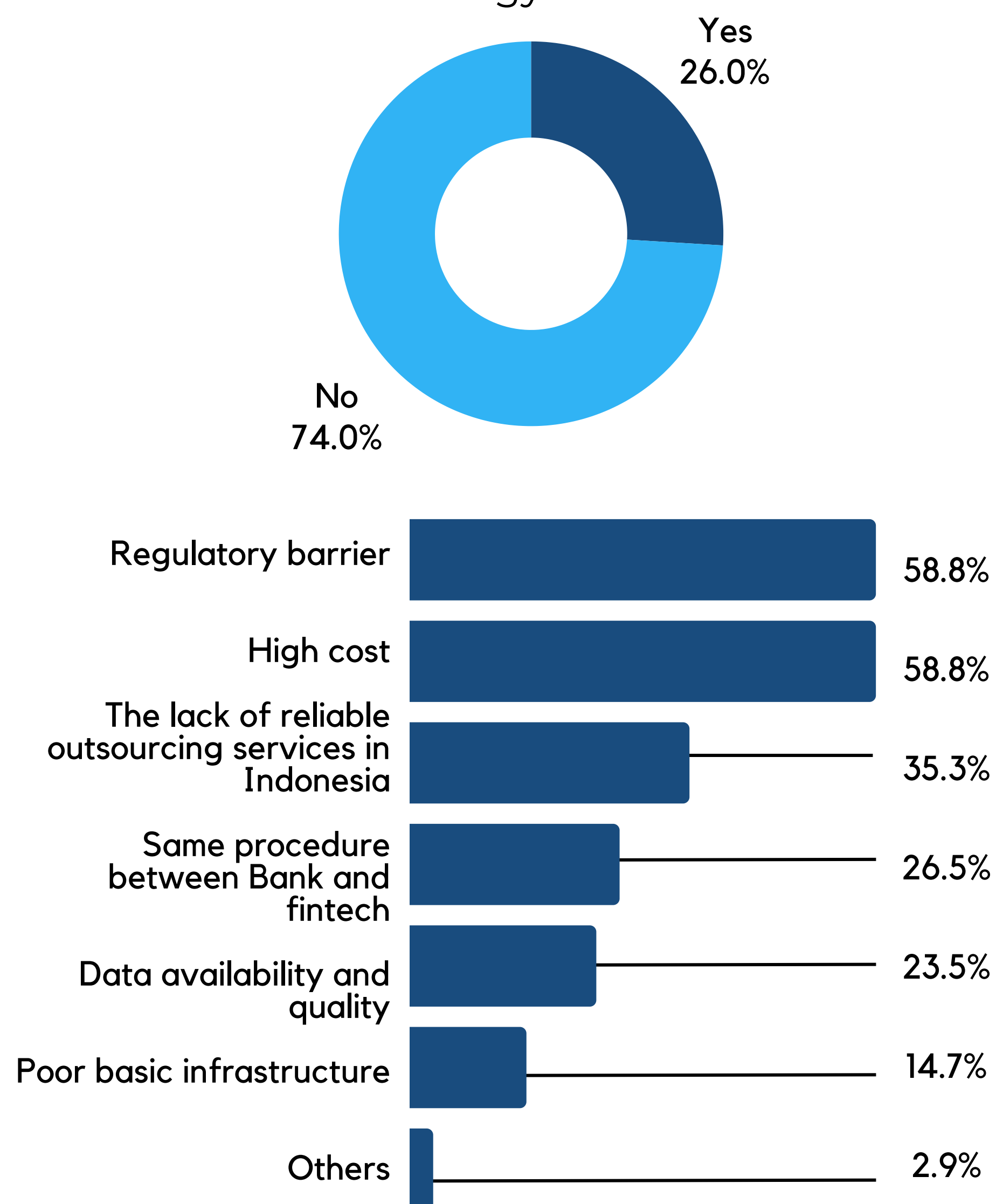


Source: AMS 2024

One of the recent rapid innovation growth indicator is the AI technology implementation in almost all industries and business sectors, including the fintech industry. The fintech industry has responded quickly to implementing AI technology and even became the pioneer in establishing an AI code of conduct with the OJK and AFTECH at the end of 2023.

The ability to respond and adapt to the latest technology is evident as 74% of respondents believe that they do not face any difficulty in accessing the technology and the supporting infrastructure needed. Meanwhile, as many as 26% experience difficulties. Respondents who experience difficulties in accessing technology and the supporting infrastructure are due to the following factors: regulatory barriers (58.8%), high cost (58.8%), and lack of outsourcing services in Indonesia (35.3%) (see Figure 7.5). Policy limitation and high cost are still the main difficulties faced by respondents since 2022.

Figure 7.5 Ease of Access and Factors Barriers to Access to Technology and Infrastructure

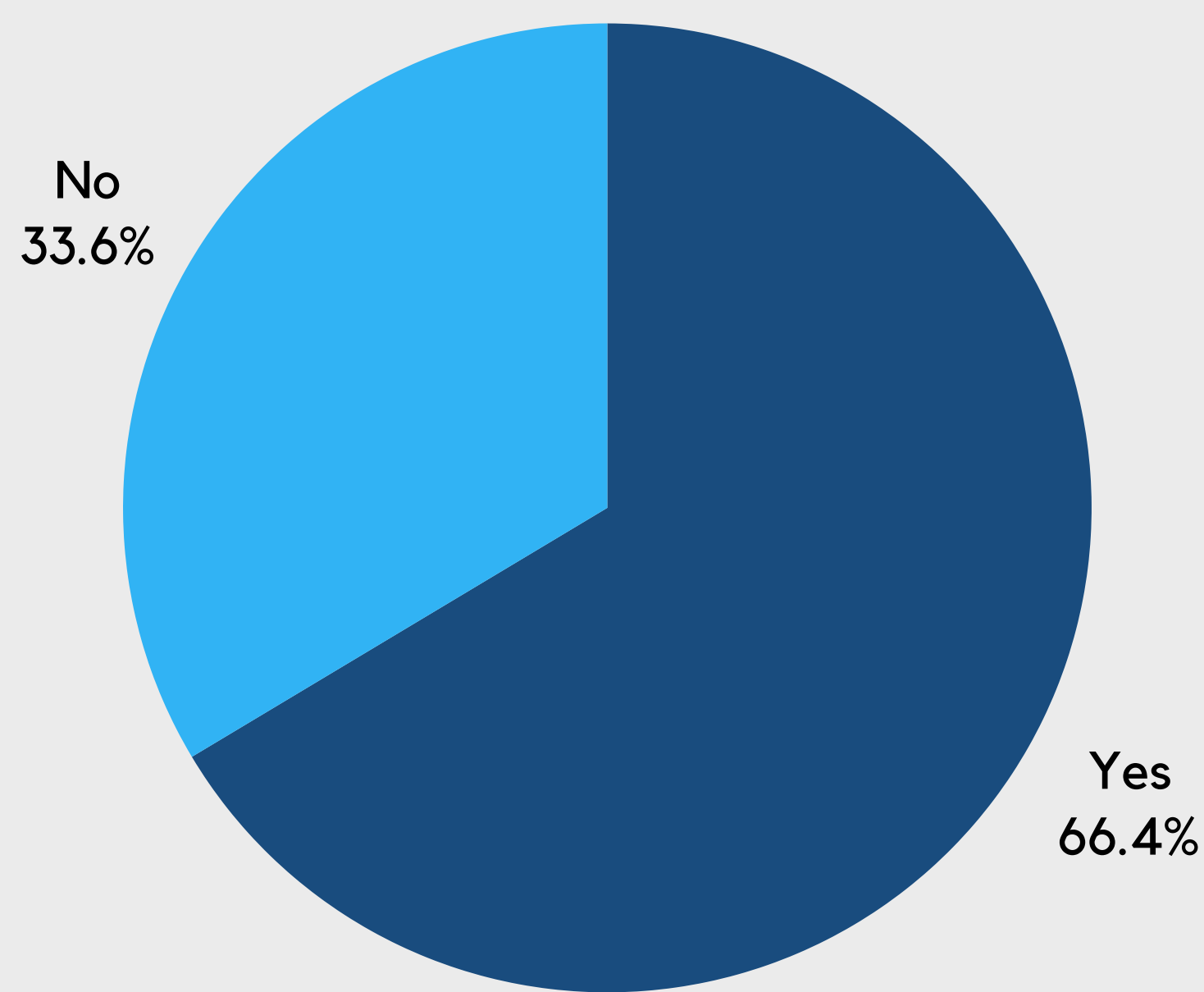


Source: AMS 2024

Although respondents are considered capable of adapting to the latest technology, the survey results show local dissatisfaction regarding the industry's perception of domestic technology suppliers. Based on the survey results, 66.4% of respondents consider local technology producers could not meet the technology needs required by the fintech industry (see Figure 7.6).

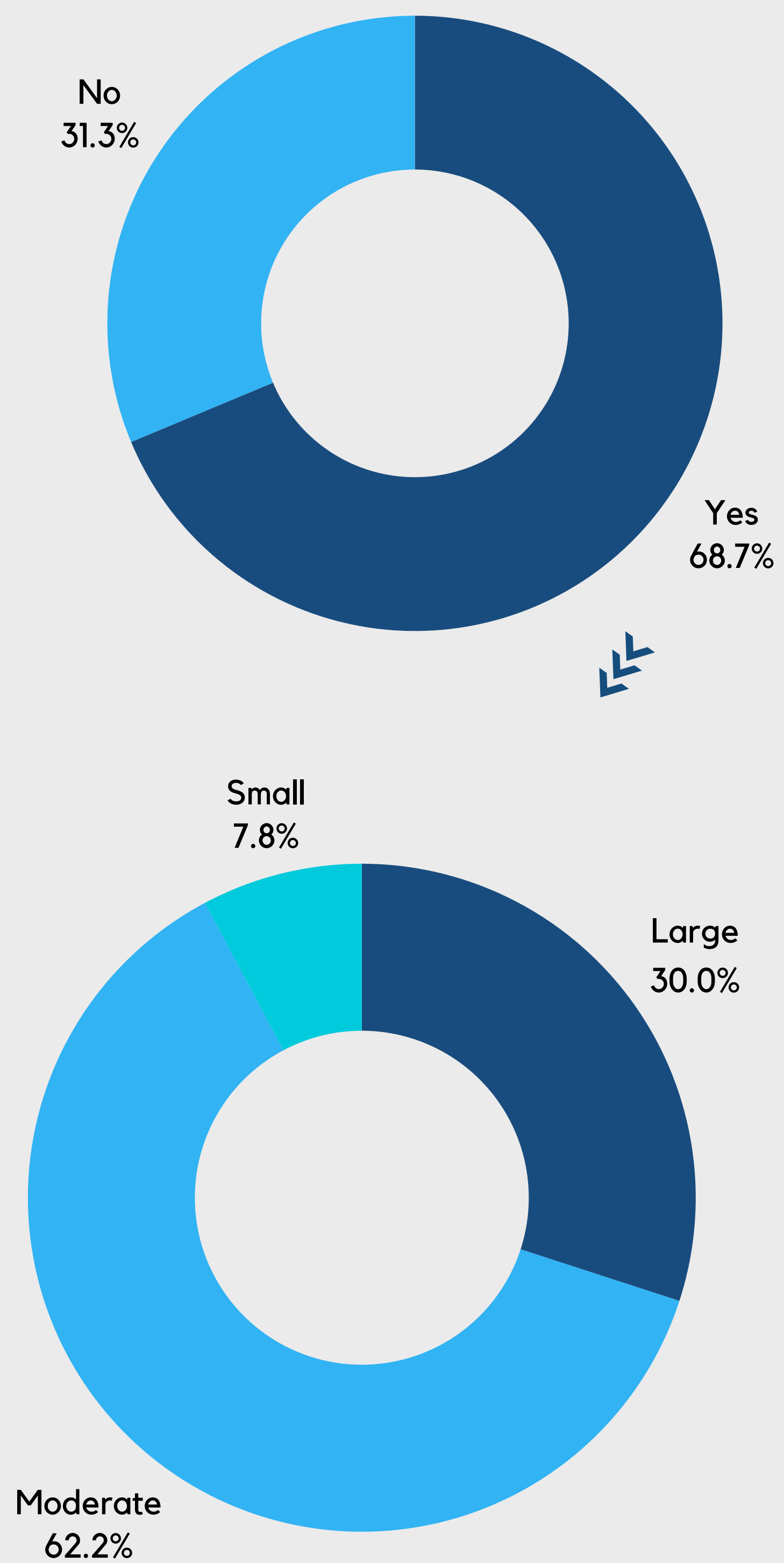
In other words, the finding indicates a gap between the capabilities of local technology providers and the specific expectations and needs of the fintech sector, which continues to grow rapidly. However, our discussions with business actors in the fintech industry show that large companies generally accommodate their technology needs independently or collaborate with local technology suppliers.

Figure 7.6 Technology Supplier/Technology Service Provider (n=131)



Source: AMS 2024

Figure 7.7 Infrastructure Gap between Rural and Urban (n=131) and Its Level of the Gap



Source: AMS 2024

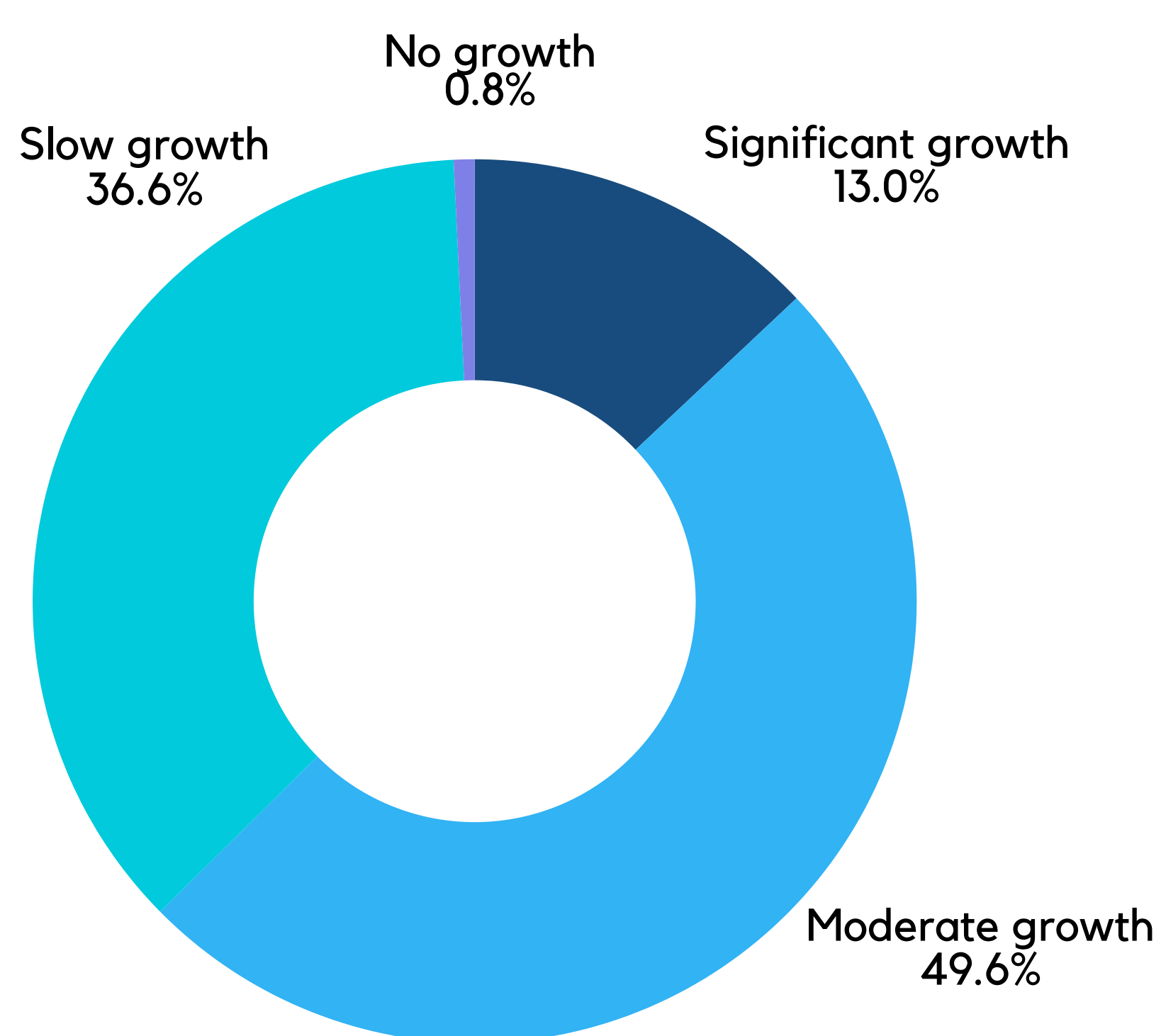
Challenges in Technology Infrastructure

Apart from continuing to adapt to the latest technology, respondents also state that they still face hurdles in technological infrastructure. In the local context, as many as 68.7% of respondents still state that there is a technology infrastructure gap between urban and rural areas. Among respondents who state a technology infrastructure gap between urban and rural areas, 62.2% shows a moderate gap, and 30% states a large gap, as seen in Figure 7.7.

Geographical factor becomes one of the main challenges in the equitable application of technology in Indonesia. Infrastructure gaps will impact the accessibility and the spread of fintech services. Indonesia's geographical condition is diverse and dominated by islands. The demographic distribution of the population in Indonesia makes it difficult to distribute technological infrastructure evenly, specifically in rural and remote areas. These limitations result in gaps that may limit market growth and potential revenue for fintech companies and therefore impact financial inclusion, which is one of the main goals of the fintech industry.

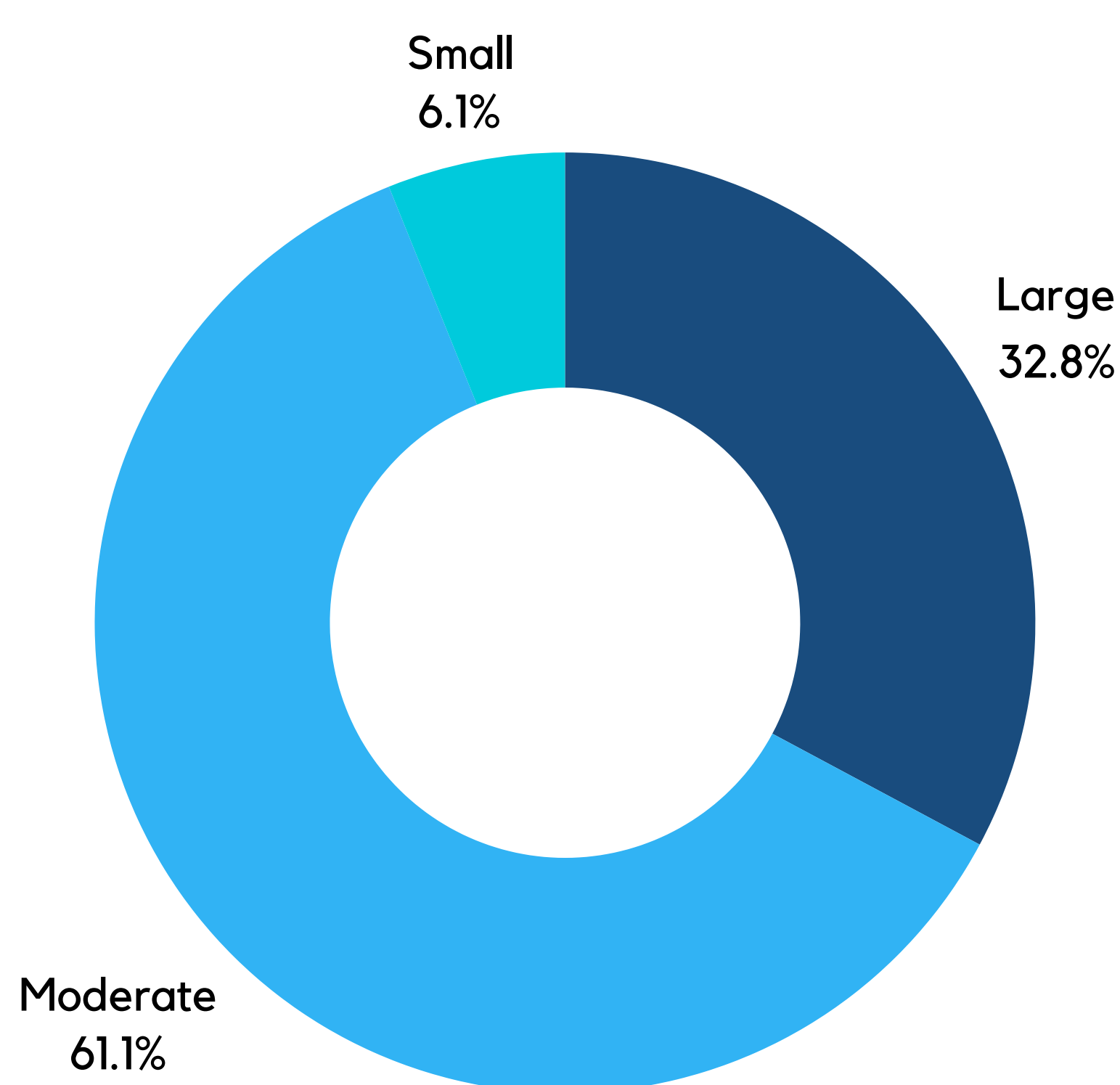
In Figure 7.8, 49.6% of respondents believe that in the future, there will be sufficient technological development in rural areas. Then, 13% believe there will be significant technological development. This value has increased by 3.6 percentage points compared to last year's AMS, where only 9.3% of respondents believe significant technological infrastructure development would occur.

Figure 7.8 Prospects for Rural Area Technology Development (n=131)



Source: AMS 2024

Figure 7.9 Level of Gap in Indonesia's Technology Infrastructure and Developed Countries (n=131)



Source: AMS 2024

When viewed nationally, Indonesia also experiences a technology infrastructure gap compared to abroad. As many as 32.8% of respondents shows that there is still a large gap in terms of technology and infrastructure between Indonesia and developed countries (see Figure 7.9).

Efforts to reduce the technological infrastructure gap between urban and rural areas, at the national and international level, need to be supported by various parties. As a stakeholder, the government needs the support of fintech industry players to identify strategic steps in reducing this technology infrastructure gap. With the right collaboration, the government can invest in advancing digital technology and infrastructure and create an innovation friendly regulatory environment that can cater the needs of the fintech industry, so that the fintech industry can develop optimally.

Hence, by promoting partnership and collaboration between local and international fintech companies can support the overall efforts to reduce the technology infrastructure gap in Indonesia. Such ideal collaboration between various stakeholders can foster the technology infrastructure development and enable various industries to utilize it, especially to accommodate the market needs in rural and remote areas.

8

Human Resources Challenges and Strategies

- **The Skills Gap Condition in Fintech Industry**
- **Efforts to Bridge the Skills Gap**



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Human Resources Challenges and Strategies

This section will describe the challenges of the skills gap, and the efforts made by the fintech industry to overcome this. Data analytics and cyber security are two skills considered unequal in this industry in Indonesia. Fintech companies have carried out various efforts to solve this problem. In this case, 2 out of 3 fintech companies organize in-house training and most training is held to improve information technology skills.

The Skills Gap Condition in Fintech Industry

Human resources (HR) have a major role in realizing the government's goal to achieve Golden Indonesia 2045 Vision. This goal requires competent talents who have skills and can adapt to the increasingly advanced knowledge, innovation, and technology, as well as have the capability of competing. However, the demographic dividend remains a challenge since the productive age population in Indonesia reaches a proportion of 60% of Indonesia's total population.

Based on a study by the International Institute for Management Development (IMD) World Talent Ranking (WTR) 2023, Indonesia's human resources are still ranked 47th. This position is still inferior to the neighboring countries such as Malaysia (33) and Thailand (45).

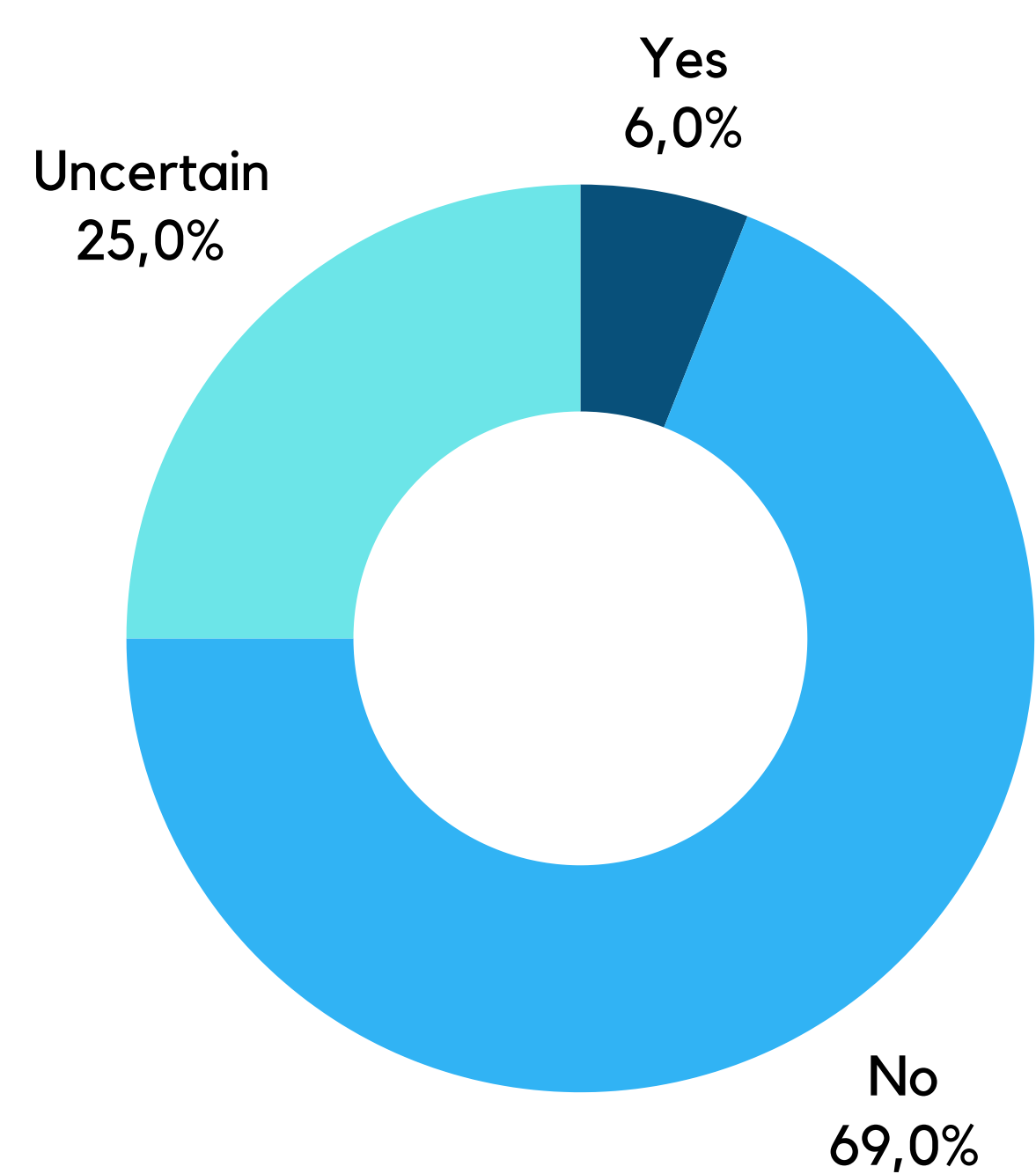
Furthermore, according to the Indonesian Digital Society Index, people's digital literacy is still at the basic level because interest in digital literacy is still lacking. Indonesia's average digital society index is 43.1, while Malaysia has reached 60. This gap makes it challenging for the industry to absorb workers from within the country.

AMS 2024 highlights that the skills gap is still a concern for fintech businesses. Survey results show that 46.6% of respondents identified data and analytics as skills that are still rare and difficult to find in Indonesian Human Resources (HR), followed by 45% who mentioned gaps in the cyber security sector and 34.4% in knowledge of risk management. Compared to last year, risk management issues this year shifted the knowledge of the financial industry which is now in fourth position (see Figure 8.1).

This skills gap creates a talent gap in fintech companies. The World Bank, in its 2021 report, noted that Indonesia is experiencing a talent gap in the digital sector and needs 9 million digital talents by 2030. Meanwhile, AMS 2024 captures the optimism of fintech companies, where the majority of respondents (73.0%) believe there will be a decrease in the talent skills gap in the future, as depicted in Figure 8.2.

Then, most fintech companies state that they still prefer to employ domestic talent rather than overseas talent (69.0%), and only 6.0% state the opposite by preferring foreign talent (see Figure 8.3).

Figure 8.3 Preference for Foreign Talent over Domestic Talent (n=131)



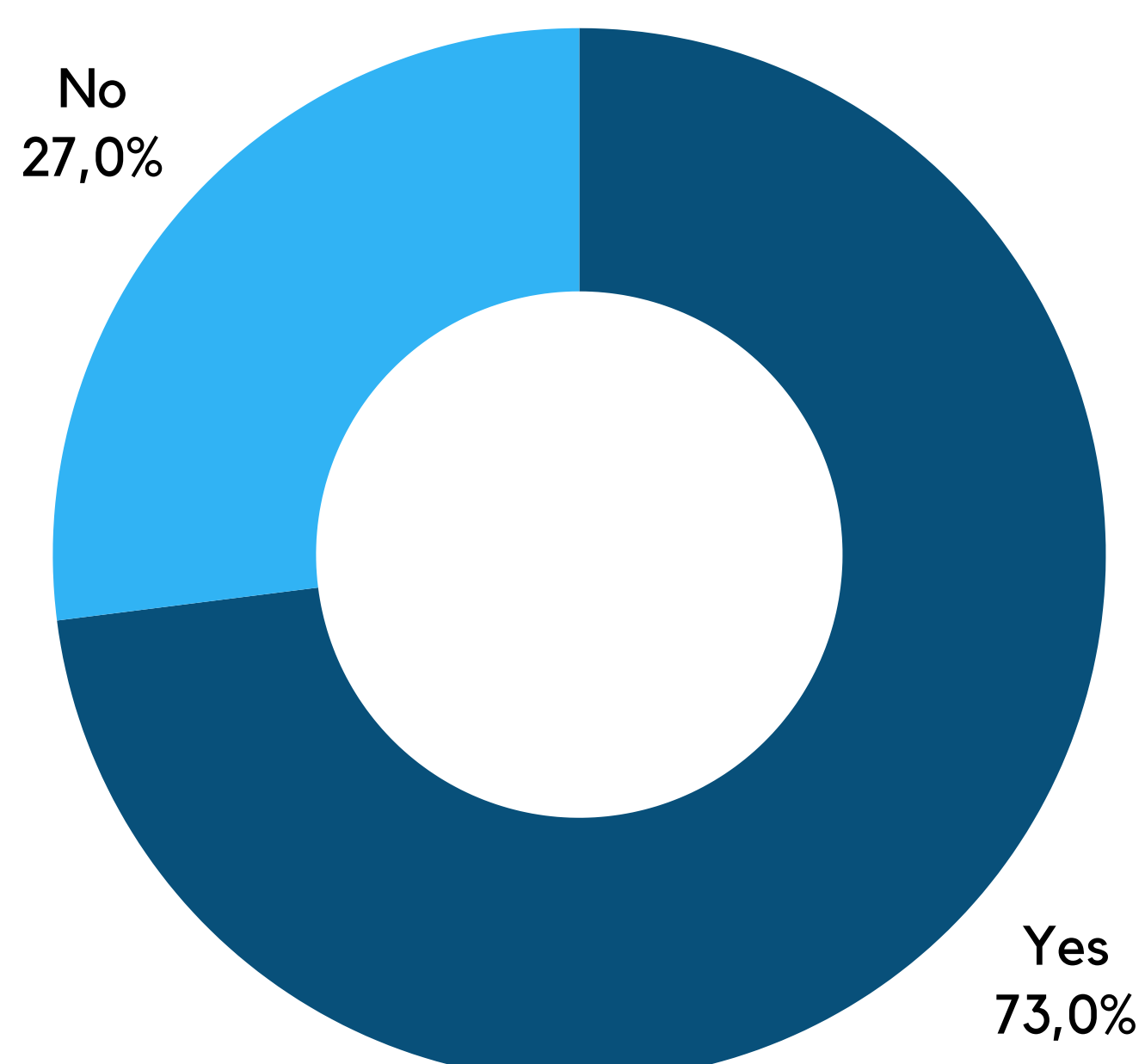
Source: AMS 2024

Figure 8.1 Skills Gaps in the Talent Landscape (n=131)



Source: AMS 2024

Figure 8.2 The Future Talent Skills Gap (n=131)



Source: AMS 2024

Efforts to Bridge the Skills Gap

Efforts to Bridge the Skills Gap

Most fintech companies as our respondents addressed the talent gap issue by conducting in-house training efforts (67.2%). Other efforts made by AMS 2024 respondents are recruiting from similar companies (48.1%) and recruiting from financial institutions (28.2%), as seen in Figure 8.4. However, these two solutions have consequences for the industry becoming less sustainable because talent in a company will move around and make it difficult for the company to develop. Such coordinated efforts are needed so that this talent gap is mitigated, and the industry can grow steadily together. Internship programs initiated by the government, such as the Kampus Merdeka (Internship Program), can be a solution so that university graduates can be the work-ready talents and are equipped with skills to cater the needs of the fintech industry.

The most significant in-house training programs that companies carry out are skills related to information technology (72.5%), followed by leadership skills (51.1%).

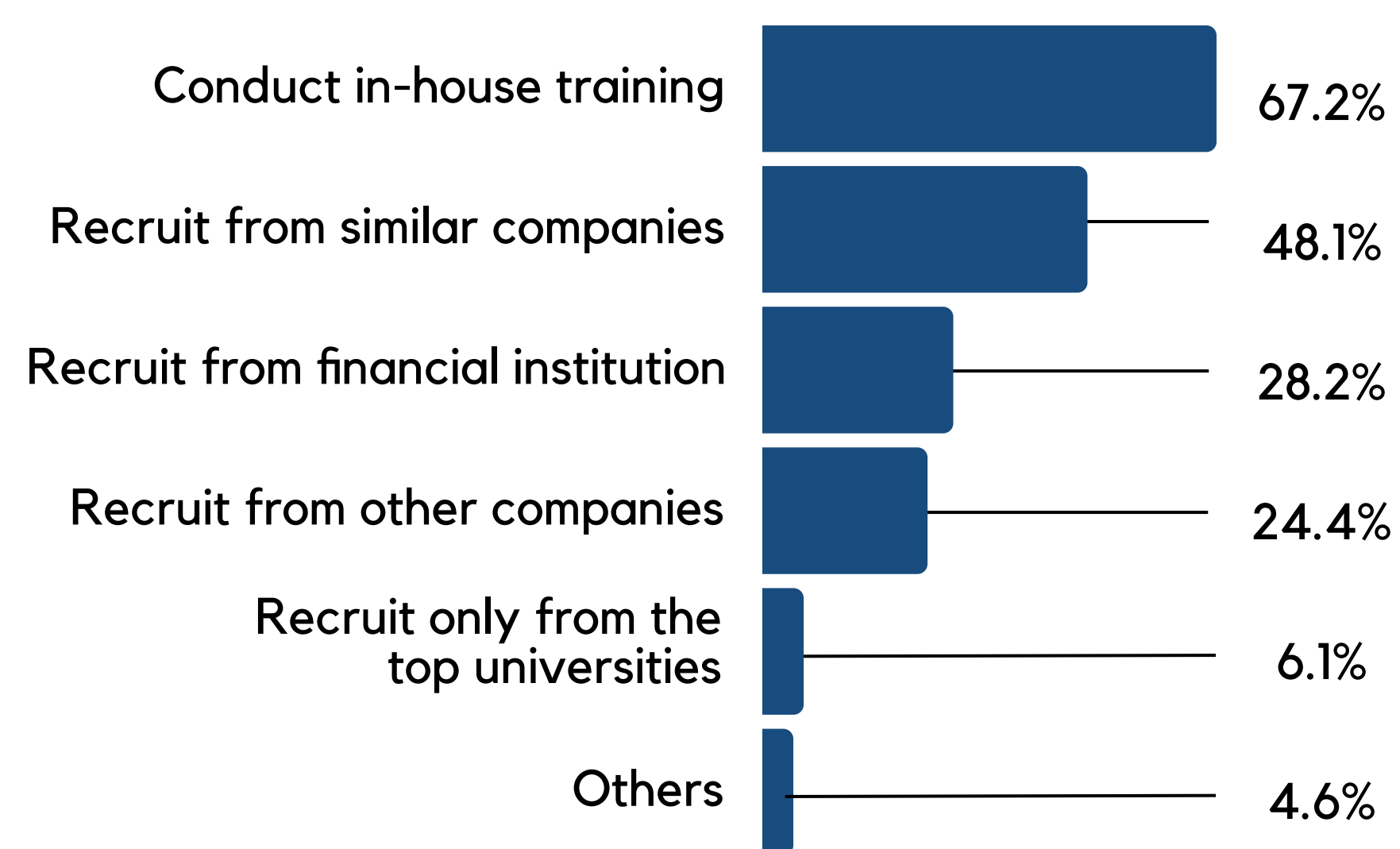
Skills training related to information technology is the highest because these skills directly touch technical aspects that can support the quality of services and products, expand market coverage, and increase user satisfaction of the fintech company.

Lack of labor in this industry is still a major challenge. The availability of domestic talent is still insufficient to meet the needs of human resources in the digital financial sector. Despite this, the majority of AMS members (71.0%) prefer to hire labor from within the country. This figure, however, is a slight decrease compared to last year (75.0%).

The increase in the proportion of companies employing overseas talent to address this talent gap aligns with the increase in the proportion of foreign talent occupying various levels. Figure 8.7 illustrates that 76.3% of respondents have managerial skills originating from abroad, an increase from the 2022/2023 AMS results of 55.6%. At the C-level, 60.5% of respondents had foreign workers, which increased from the previous survey to 50.0%. A similar trend is also experienced at the staff level, with 34.2% of respondents reporting employing foreign talent, up from 16.7% in AMS 2022/2023.

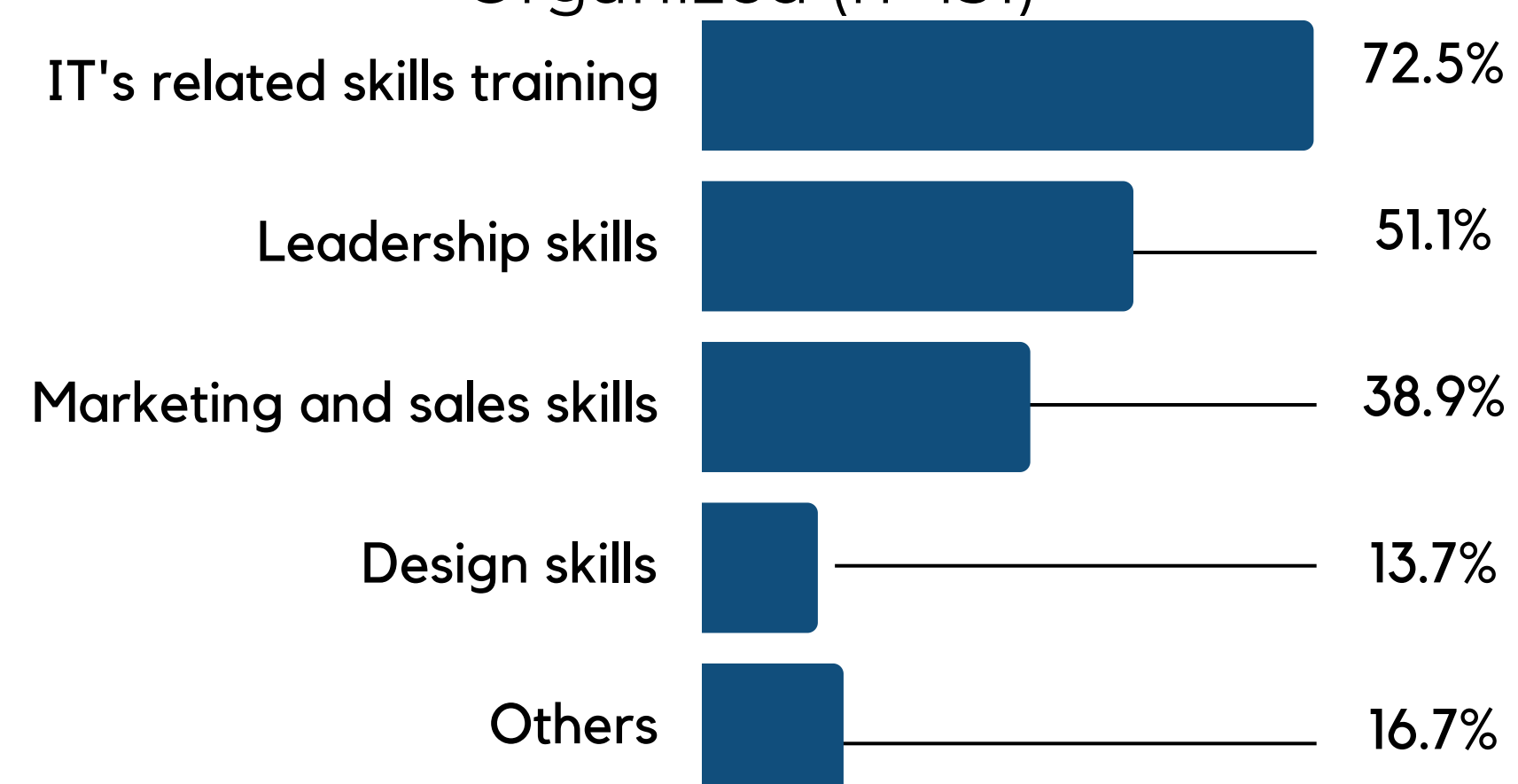
Companies who prefer foreign talent state that foreign workers understand the latest technology better (100%), and some choose to hire foreign talent for language reasons (12.5%), as seen in Figure 8.8. This is quite understandable, considering that technological developments for the fintech industry are progressing rapidly, and understanding foreign languages is needed to transfer knowledge from abroad.

Figure 8.4 Efforts to Reduce the Skills Gap (n=131)



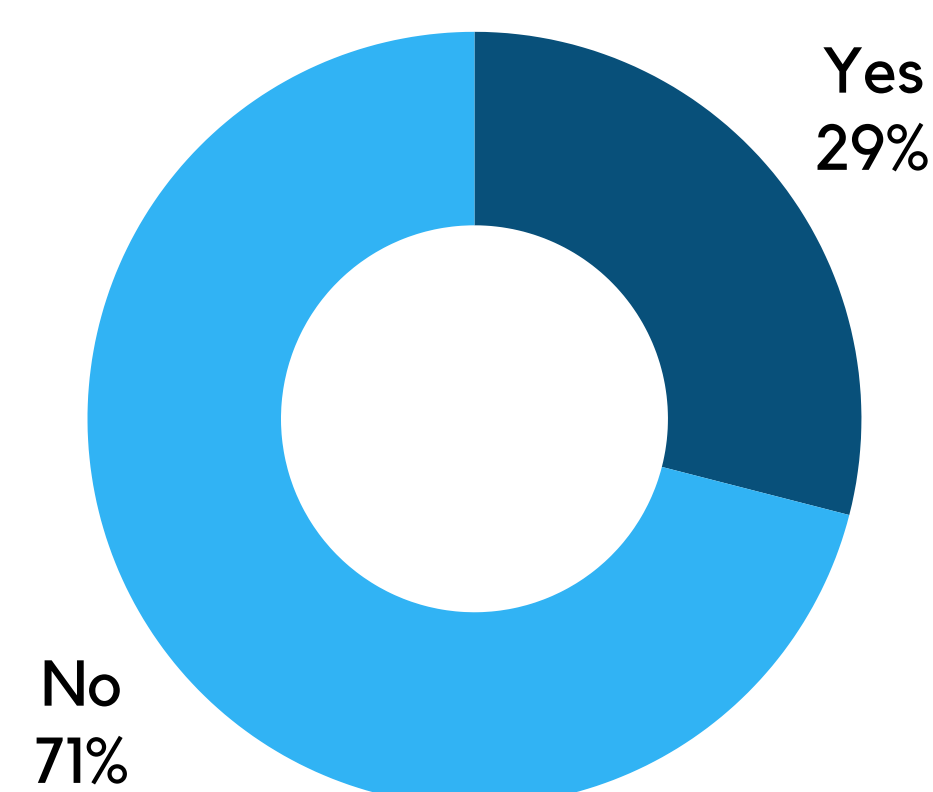
Source: AMS 2024

Figure 8.5 Types of In-House Training Organized (n=131)



Source: AMS 2024

Figure 8.6 Hiring Overseas Talent to Address the Skills Gap (n=131)



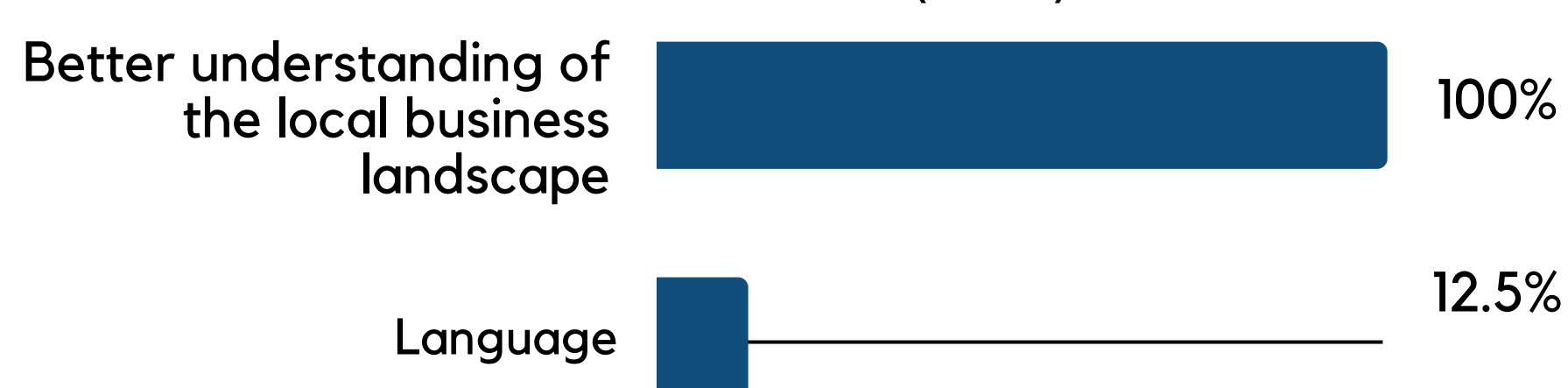
Source: AMS 2024

Figure 8.7 Position of Foreign Workers in Companies (n= 38)



Source: AMS 2024

Figure 8.8 Reasons to Prefer Hiring Foreign Workers (n=8)



Source: AMS 2024



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9 The Implementation of Financial Inclusion Strategy

- **Fintech Initiatives in Promoting Financial Literacy and Inclusion**
- **Expectations for the Association**

The Implementation of Financial Inclusion Strategy

Expanding the availability and increasing the access of financial services to the community has also encouraged the increase in economic activity and growth. In this case, the fintech industry is expected to become a motor that encourages financial inclusion in Indonesia through innovation, the use of technology, and partnerships with other financial service institutions. Financial inclusion for everyone is one of the 12 fintech principles initiated by the International Monetary Fund (IMF) and the World Bank in 2018. Fintech is considered capable of increasing financial inclusion with relatively easier accessibility compared to conventional financial services.

OJK has also issued regulations for Financial Services Business Actors (PUJK) to realize the Financial Inclusion Index target of 90% by 2024. Through these regulations, fintech with the technology it promotes, is expected to be able to increase financial literacy and inclusion in Indonesia. However, promoting financial inclusion through fintech is not a risk-free path, especially regarding its safety and effectiveness. For this reason, all parties involved in the digital economy and fintech ecosystem need to collaborate to create a targeted approach.

The 2022 National Survey of Financial Literacy and Inclusion (SNLKI) conducted by OJK recorded a financial inclusion index achievement of 85.10% and experienced an increase from the 2019 survey (76.19%), 2016 survey (67.80%), and 2013 survey (59.74%). A similar trend was also recorded by the financial literacy index, which in 2022 reached 49.68% and increased from the results of the 2019 survey (38.03%), 2016 survey (29.70%), and 2013 survey (21.84%). However, developments in 2022 will still leave a gap between inclusion and literacy levels of 35.42%. There is an indication that many Indonesians have accessed formal financial services without understanding the benefits and risks of using financial products and services.

Financial literacy is a concern for fintech players, whereby AMS 2024 shows that 91% of respondents have implemented various initiatives to encourage increased financial literacy (see Figure 9.1). To increase financial literacy, respondents' most common initiative is collaborating with financial service institutions, in this case, banks (55%) or establishing strategic partnerships with the Government (30%), as depicted in figure 9.2. Apart from that, AMS 2024 also shows that fintech companies also carry out initiatives to increase financial inclusion, including collaboration with other financial institutions (66%) and cooperation with the government (35%), as in Figure 9.3. The Financial Services Industry Communication Forum (FKIJK), initiated by OJK and in collaboration with AFTECH provides opportunities for fintech providers to collaborate with banks, is an effort to facilitate fintech collaboration with other LJKs in various regions to expand the reach of financial literacy.

Meanwhile, government programs such as the Pre-Employment Card using a digital wallet have helped increase financial literacy and inclusion for recipients of program assistance who previously did not have a bank account. The QRIS expansion program for micro, small and medium enterprises (MSMEs) in regions, including the disadvantaged, frontier and outermost areas, is also an activity that fintech providers often support. Survey results show that 78.0% of respondents stated that they have participated in government projects in 2023 (Figure 9.4). As seen in Figure 9.5, the agencies that partner with fintech providers are BI (29.0%), Ministry of Communication and Information (24.0%), and OJK (19%) as illustrated in Figure 9.5.

Fintech Initiatives in Promoting Financial Literacy and Inclusion

To boost financial inclusion, 35.0% of AMS 2024 respondents launched special products for community groups that are still unbanked and/or underbanked (Figure 9.6). However, majority of fintech companies have not specifically targeted unbanked and/or underbanked community groups because some companies conduct business-to-business (B2B) or target individual groups of formal workers who tend to have bank accounts already.

In addition, some fintech companies also face various challenges when executing activities that promote financial inclusion.

The main challenge expressed by AMS 2024 respondents was regulatory clarity (40.0%), one of which was experienced by several fintech companies in the regulatory sandbox with "Registered" status, not "Registered" or "Licensed", which was assessed by several other Financial Service Institution (LJK) who have been unable to officially become a collaboration partner. Apart from that, other challenges are obstacles to the speed of agreements and eliminating bureaucracy (29.0%) and public concerns about data privacy and security (29.0%), as depicted in Figure 9.7.

Figure 9.1 Financial Inclusion and Literacy Initiatives (n=131)

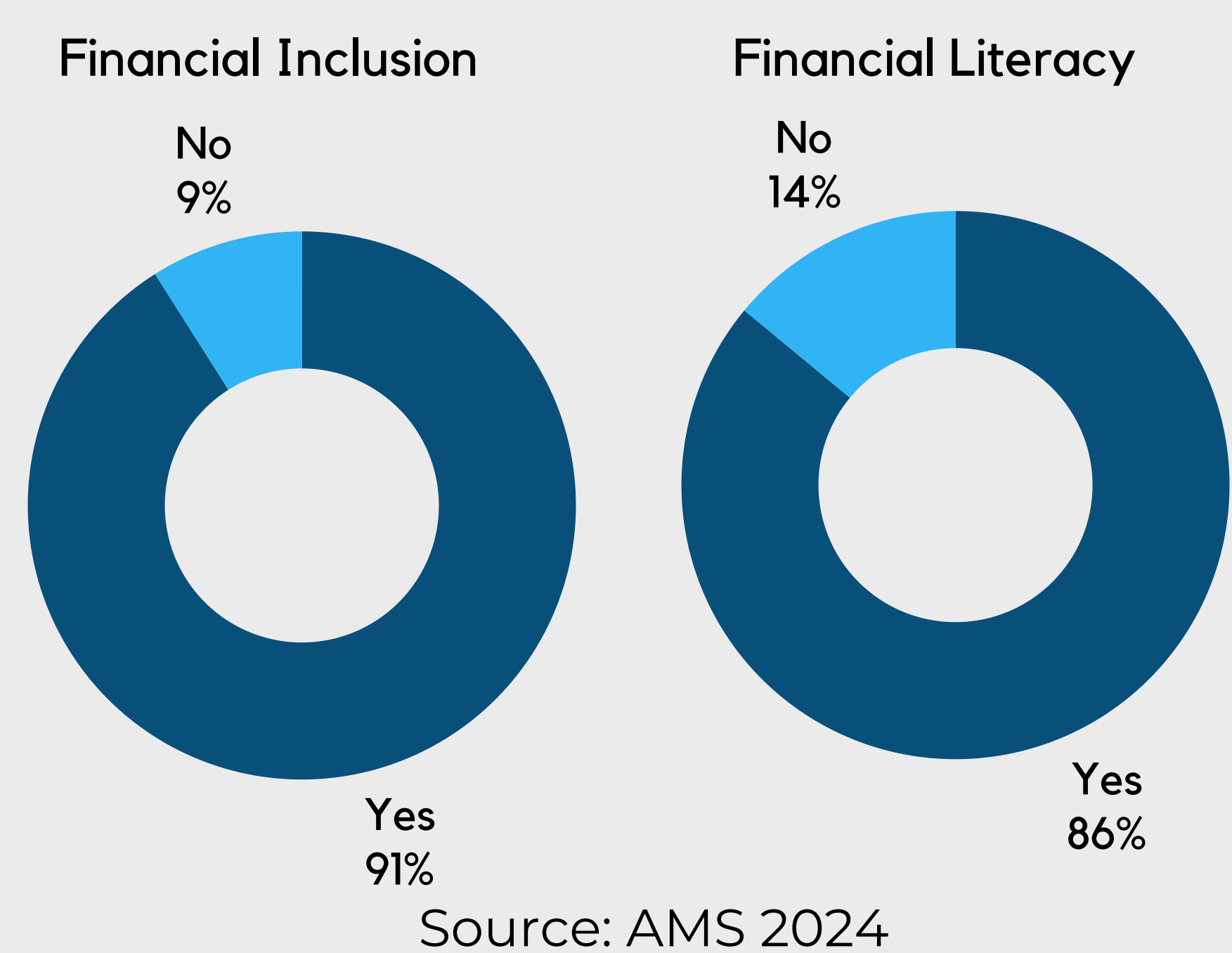


Figure 9.2 Financial Literacy Initiatives (n=131)

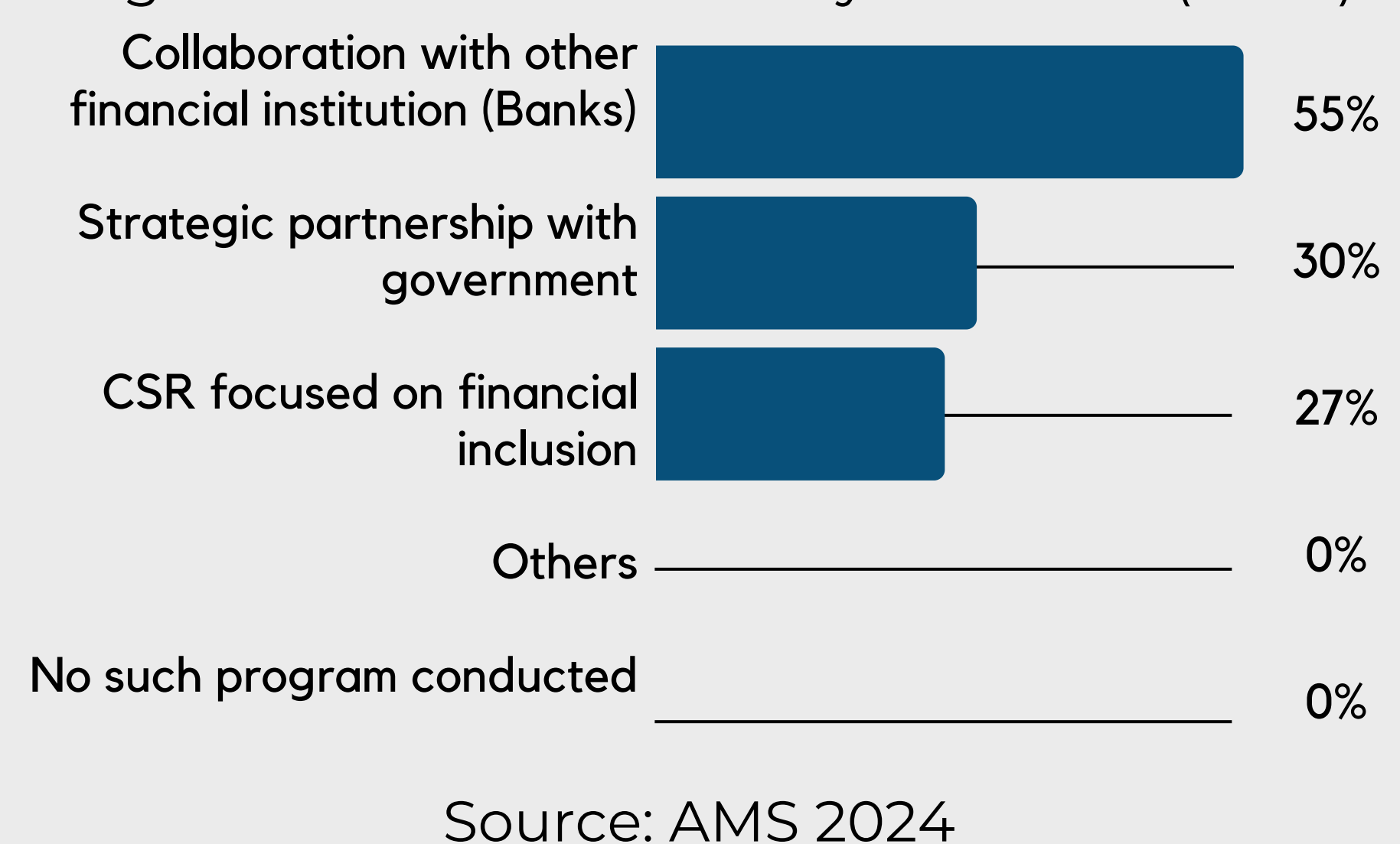


Figure 9.3 Financial Inclusion Initiatives (n=131)

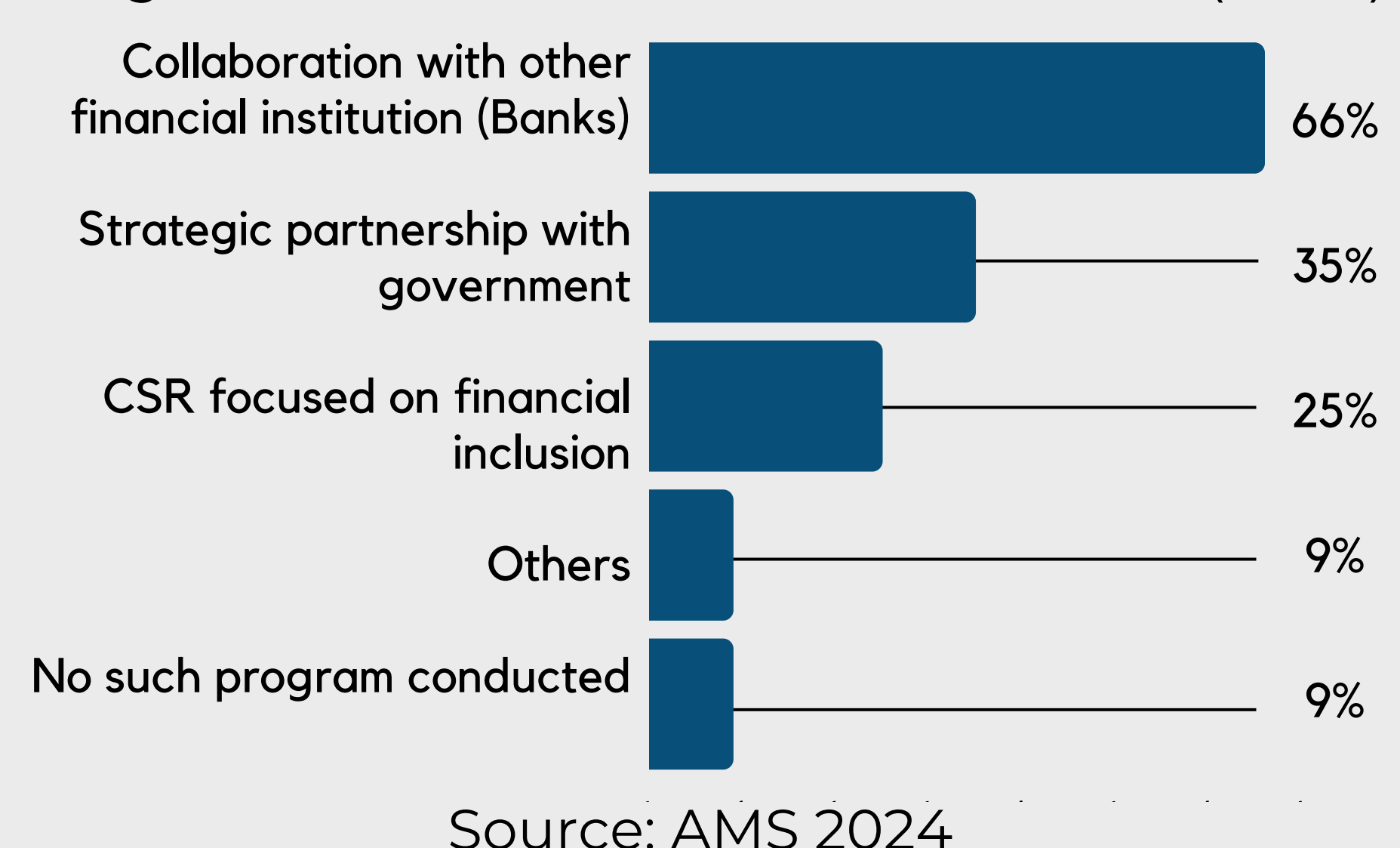
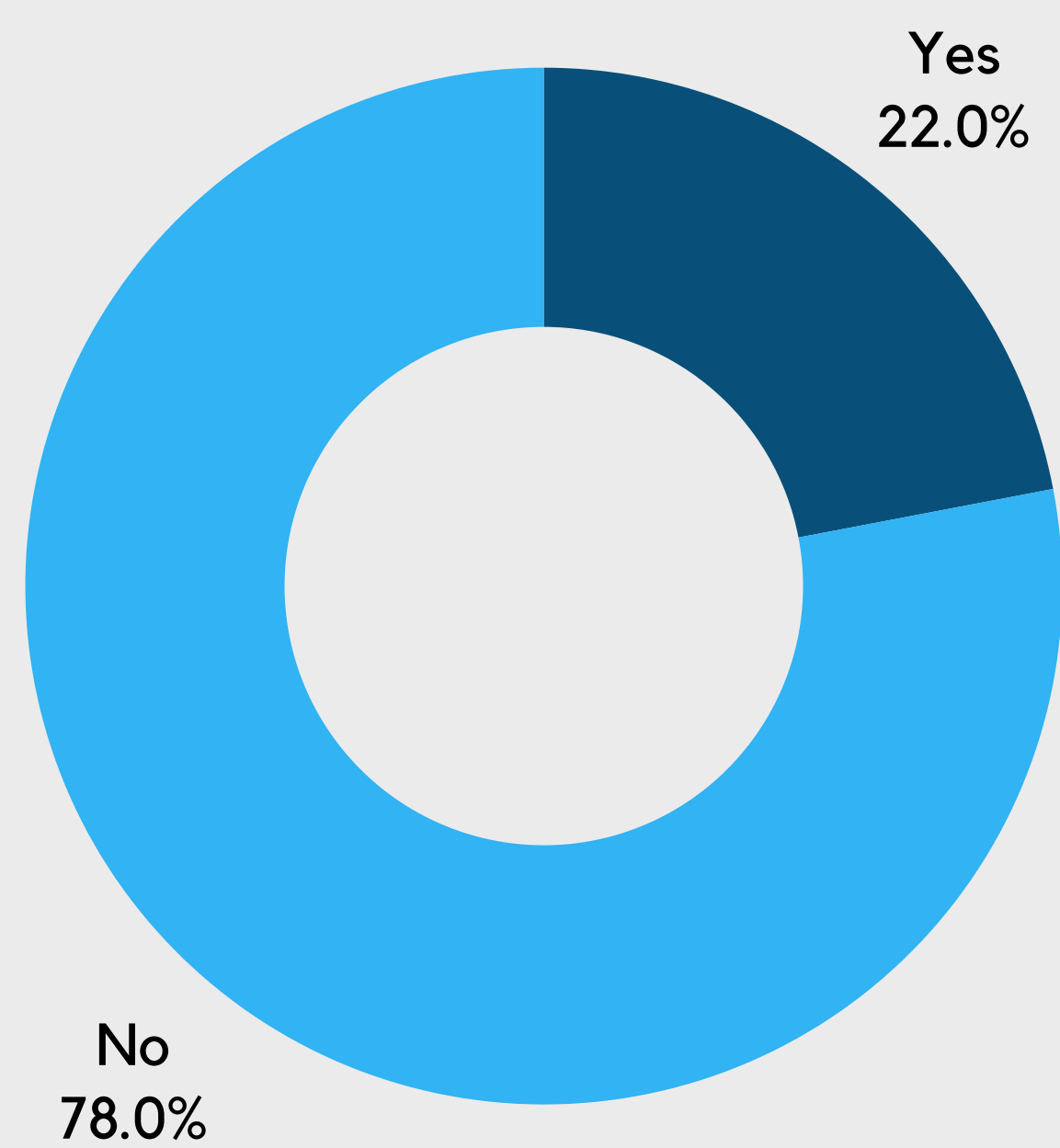
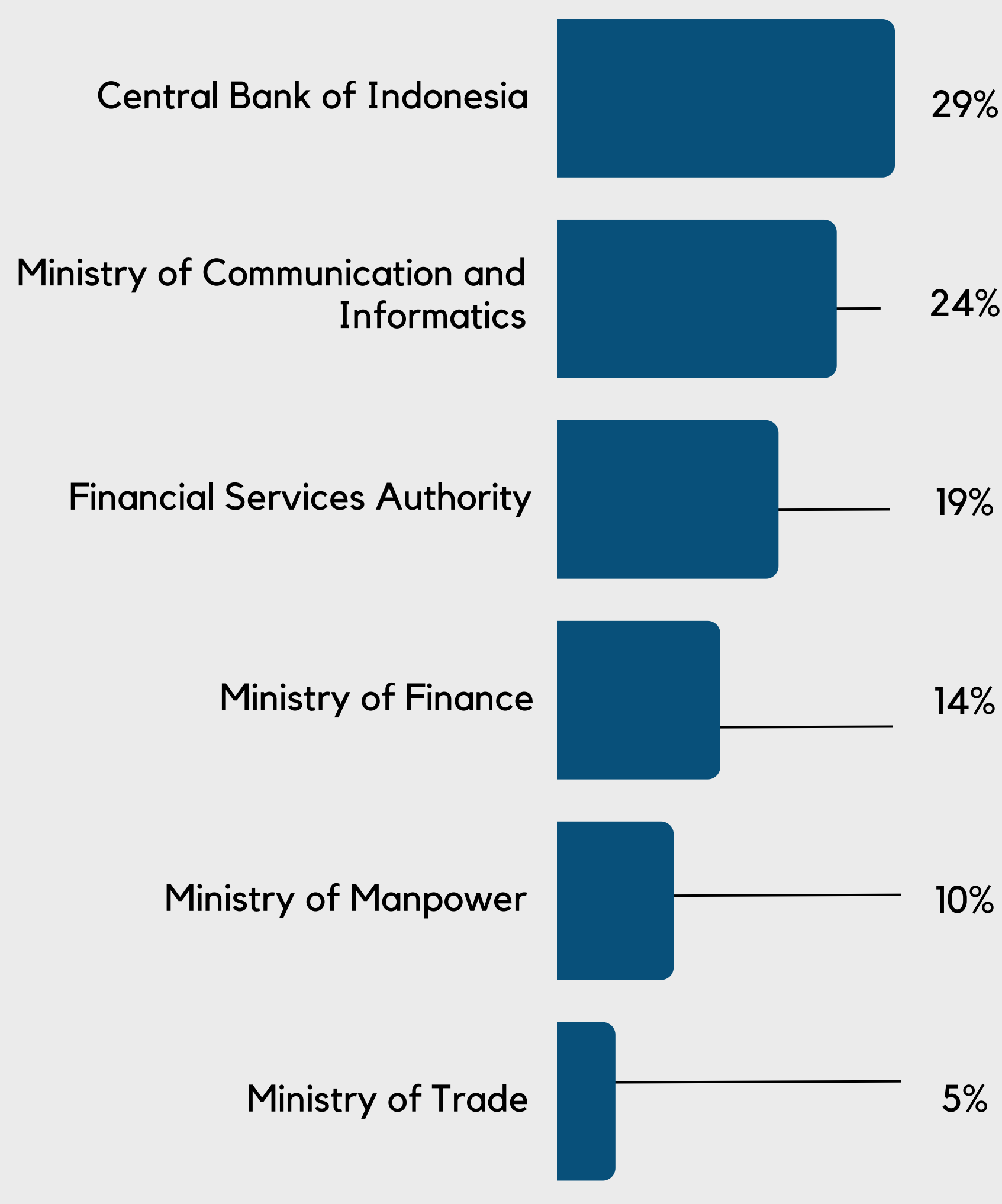


Figure 9.4 Participation in the Government Program in 2023 (n=131)



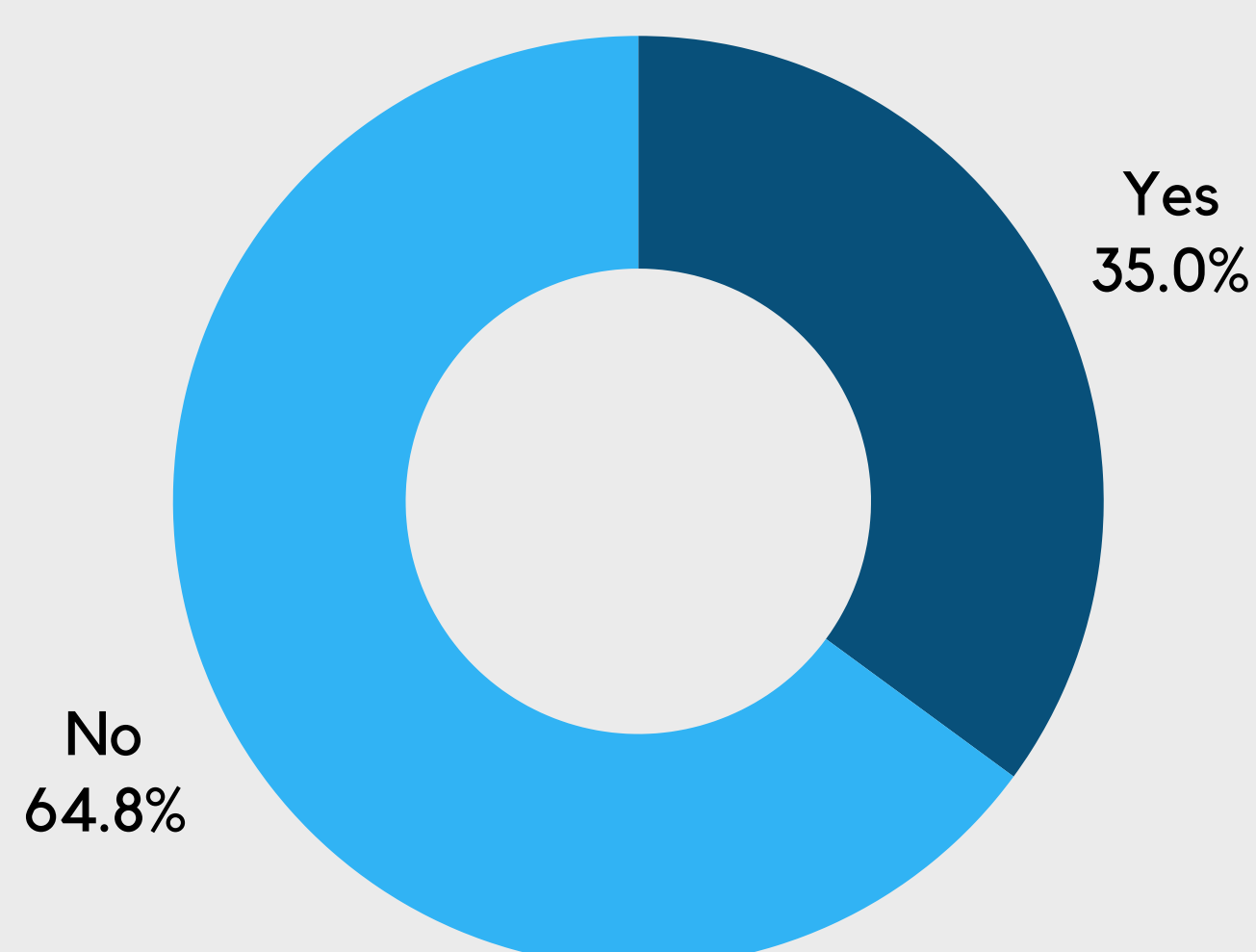
Source: AMS 2024

Figure 9.5 Government Project Based on Institution (n=29)



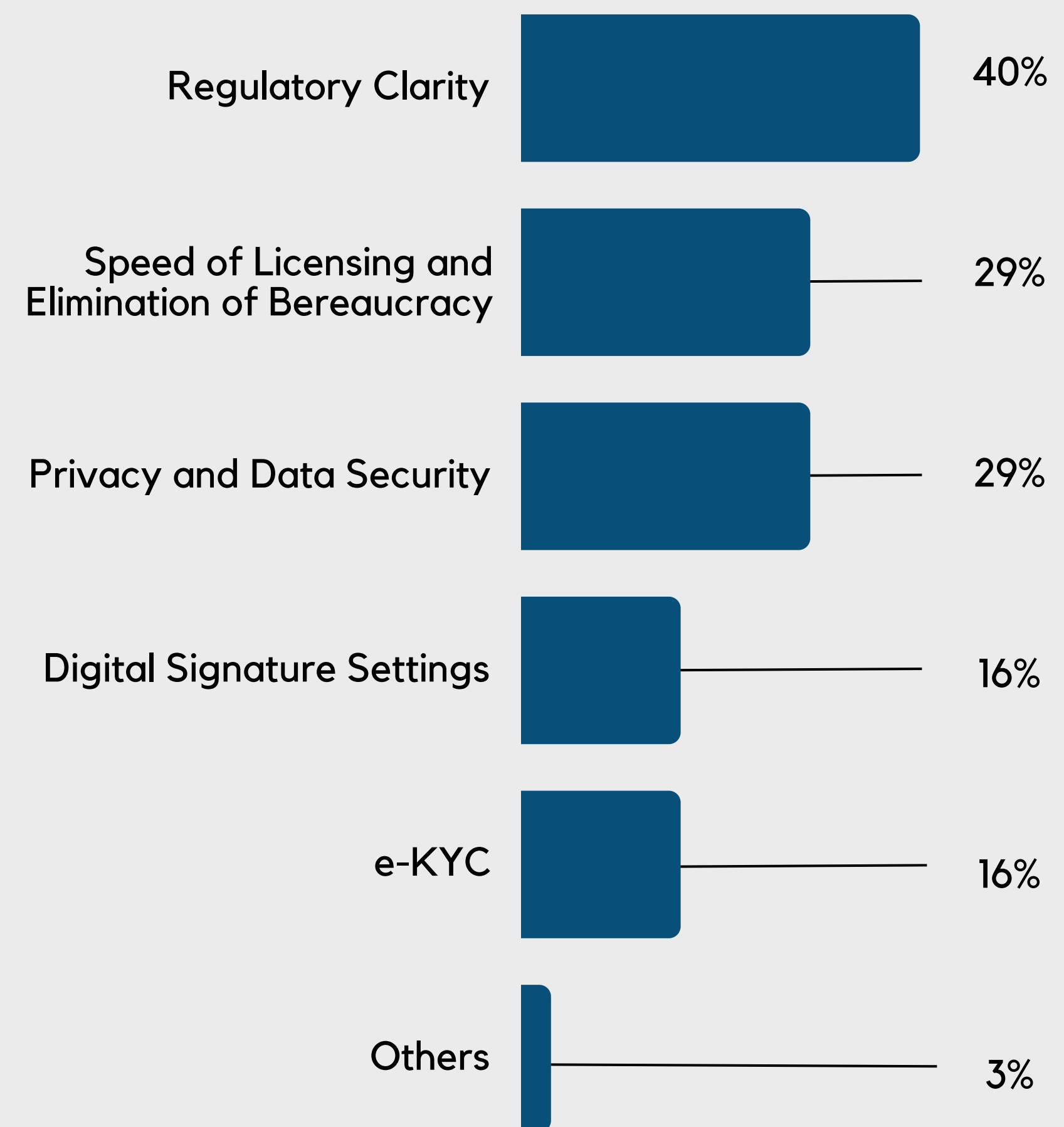
Source: AMS 2024

Figure 9.6 Specialized Product for Unbanked or Underbanked Individuals (n=131)



Source: AMS 2024

Figure 9.7 Challenges for the Fintech Industry for Financial Development (n= 131)



Source: AMS 2024

Expectations for the Association

Law Number 4 of 2023 (UU P2SK) concerning the Development and Strengthening of the Financial Sector through its implementing regulations, namely Financial Service Authority Regulation (POJK) number 3 in 2024, concerning the Implementation of Technological Innovation in the Financial Sector, requires financial services fintech providers to join associations. AFTECH, as one of the associations that the OJK has officially appointed as the Association for Organizing Technology Innovation in the Financial Sector, is a forum for fintech players to advocate and collaborate with various stakeholders to encourage technological innovation and strengthen the competitiveness of the national fintech industry. AFTECH represents official fintech providers from various business models, digitally oriented financial institutions, and technology companies that are part of Indonesia's digital financial services ecosystem.

With its vision of encouraging financial inclusion through digital financial services, AFTECH has a mission to help provide access to technology-based financial services for people throughout Indonesia by increasing access, adoption and quality of financial services.

AFTECH members expect that joining an association with a strategic role in external and internal engagements will help realize progress in the fintech industry. All types of industries, including fintech, face various stakeholder issues. AMS 2024 shows that fintech players generally face issues with external parties, namely the government (29%), the public (24%) and other parties such as conventional financial services and Non-Governmental Organizations (NGOs) (19%), as seen in figure 9.8 fintech players generally need support from AFTECH in the form of intermediation in the process of mitigating problems with the government and the general public.

Figure 9.8 Expectation for AFTECH in Supporting Fintech Industry (n=131)



Source: AMS 2024

In addition, in-depth interviews with four AFTECH members revealed a number of expectations. First, AFTECH members hope that AFTECH can carry out advocacy on an ongoing basis, especially when monitoring regulations, and then convey it regularly to its members so that fintech players always have the latest information. In this case, AFTECH is expected to be able to become a policy-making partner for regulators so that AFTECH is involved in the entire process as well as being a mediator when there is a need for negotiations between business actors and regulators or other business actors.

Furthermore, AFTECH is also expected to initiate regular activities for internal parties, for example, for business matching activities, and external parties, for example, through outreach and education, especially to conventional financial service institutions, so that business actors continue to benefit. Lastly, AFTECH needs to focus on achieving the 90% financial inclusion target, which is set to conclude in 2024, as well as on the financial literacy and inclusion goals outlined in the National Medium-Term Development Plan (RPJMN). In this context, AFTECH can provide input to the government for the setting future targets, thereby motivating AFTECH members to achieve these targets..



10 Gender Equality

- **Women's Participation in Fintech**
- **Targeting woman consumer**

Gender Equality

Since 2023, the AFTECH Annual Members Survey (AMS) has provided gender analysis on the following aspects: female employee participation in fintech companies, female leadership, investment decisions, product and service design, employment policies, and strategies for targeting the female market. This gender survey and analysis were carried out to identify potential interventions that could promote gender equality in the Indonesian fintech industry.

Women's Participation in Fintech

Women's Participation in Workforce

Companies that implement inclusive policies by encouraging women's participation in all job positions demonstrate stable financial performance and continue to grow. It is supported by various studies, including a survey from the International Labor Organization (2020) of 416 companies in Indonesia, showing that 60% of companies implementing gender diversity increase their profits by 5% to 20%[1]. The positive impact between the participation of female workers and increasing company performance is also reviewed in the article "Gender Diversity and Firm Performance: When Diversity at Middle Management and Staff Levels Matters", published in The International Journal of Human Resources Management (2020)[2]. The article emphasises that to get these positive results, women must be at various levels of work, from staff, middle management, to the board of directors. The 2024 AMS results can analyse women's participation and representation in various work units and job levels. Still, they cannot conclude a positive correlation with fintech performance because the data is unavailable.

From all companies participating in AMS 2024, 62% reported a total workforce composition consisting of 26-50% women, and 14.7% had more than 50% female workers. In percentage terms, this figure has not changed much from last year's survey results. However, it should be noted that the number of respondents this year increased by 58% from last year. Out of the total respondents, 23.3% companies had female workforce composition of less than 25%.

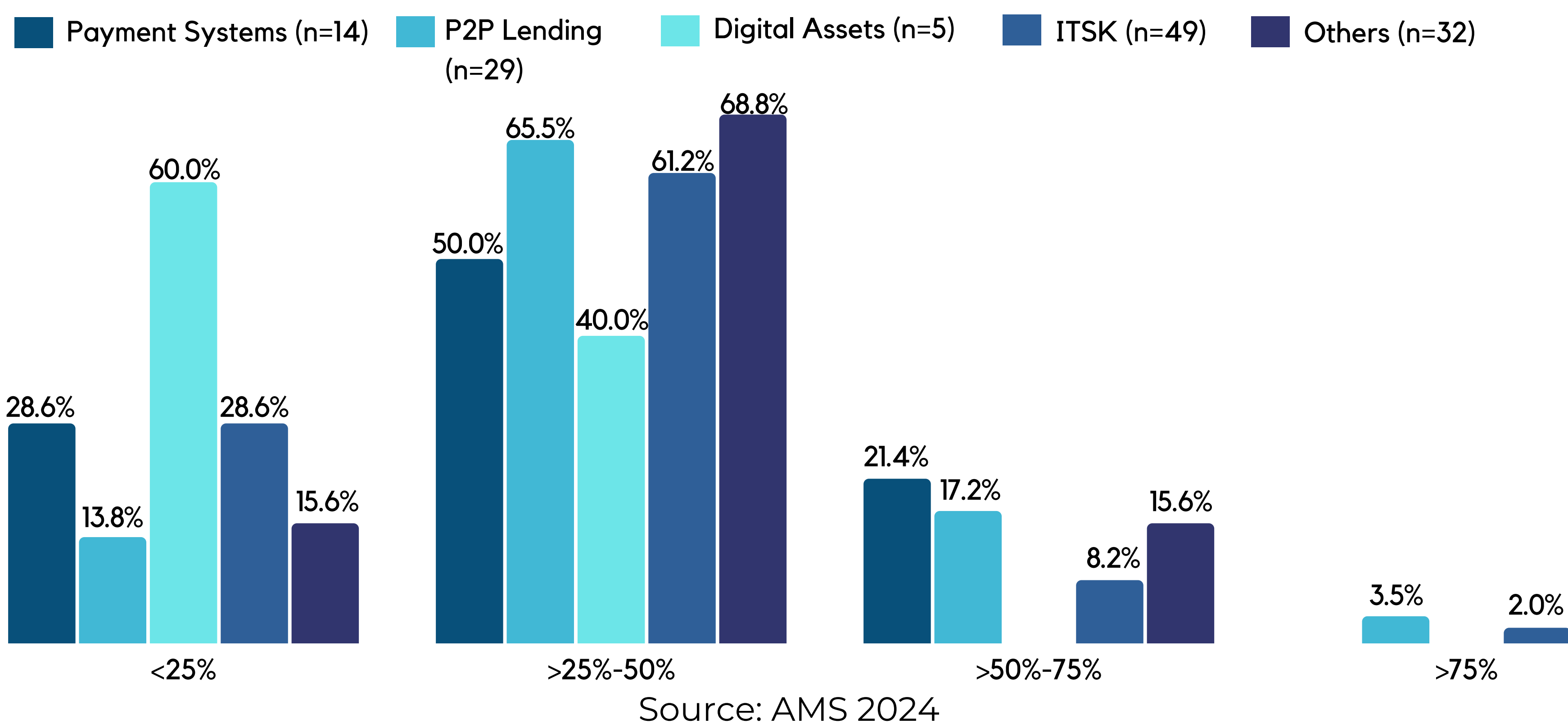
To understand more deeply regarding women's participation, the results of this survey can illustrate differences in composition in various work units and various types of businesses run by fintech. This survey identified 5 types of businesses: payment systems, peer to peer lending (P2P lending/LPBBTI), digital assets, Financial Sector Technology Innovation (ITSK), and other types of businesses.

[1] Perusahaan dalam survei ini mencakup perusahaan kecil, menengah dan besar; beroperasi di tingkat lokal dan multinasional; serta dari berbagai sektor. Melangkah Menuju Keberhasilan: Argumentasi Pendukung Kiprah Perempuan Dalam Bisnis Dan Manajemen di Indonesia. International Labour Organization. (2024a, Februari 1). <https://www.ilo.org/publications/leading-success-business-case-women-business-and-management-indonesia?lang=id>

[2] Ferrary, M., & Déo, S. (2022). Gender diversity and firm performance: when diversity at middle management and staff levels matter. The International Journal of Human Resource Management, 34(14), 2797–2831. <https://doi.org/10.1080/09585192.2022.2093121>

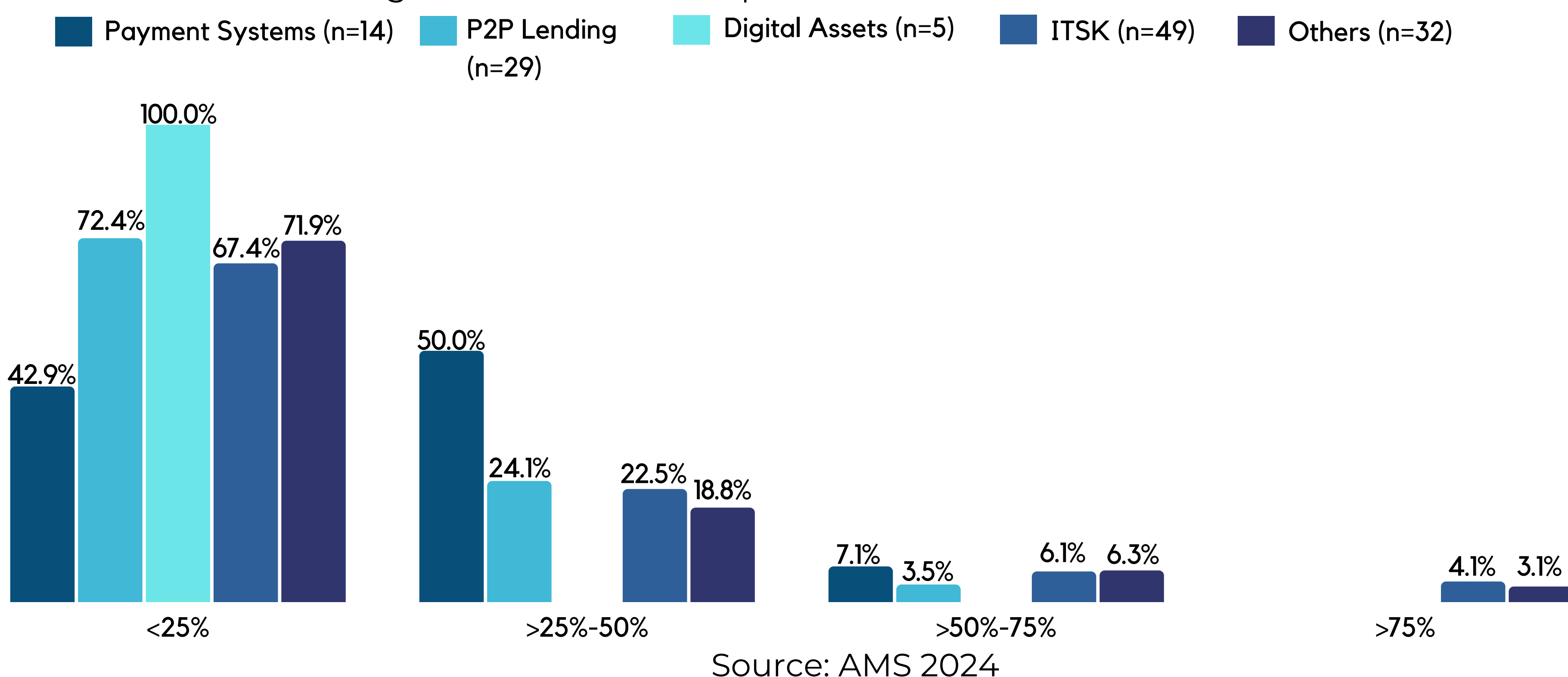
AMS 2024 results indicate that the highest percentage of female workers are in the legal and financial literacy work units. In the business development work unit, there is still a gender gap between the number of male and female workers, although it is not as high as in the information technology work unit. As many as 44.2% of companies reported having 25-50% female workers in business development work units, and 17% had 50-75%. Meanwhile, in information technology (IT) work units, 68.2% reported having less than 25% female workers, and only 7.7% had a female composition above 50%. This gap is also reflected when the analysis is based on the fintech business type.

Figure 10.1 Women worker participation based on the types of fintech



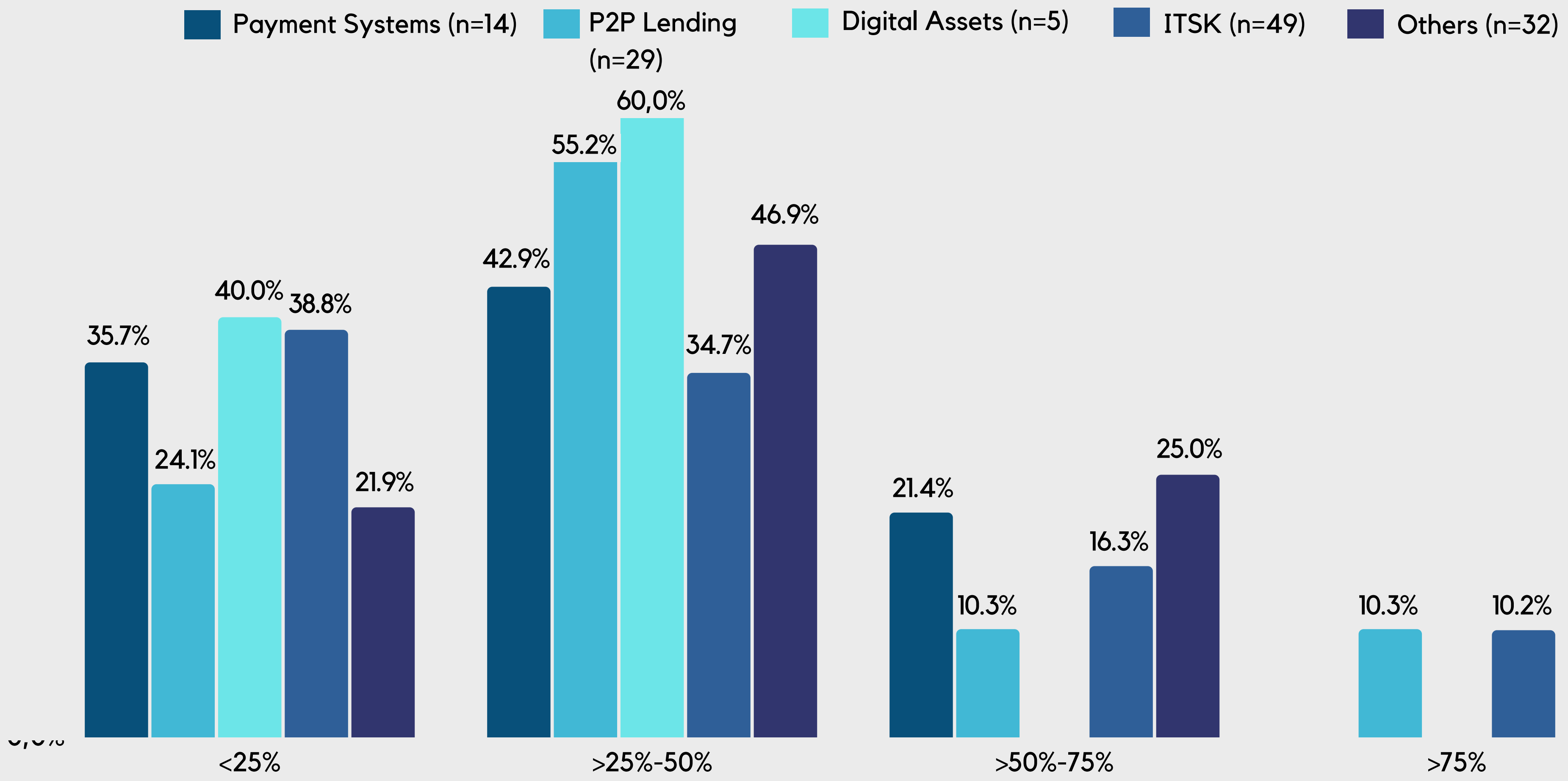
Based on business type, the composition of female workers is highest in payment system companies with 21.4% of respondents saying that they have more than 50% female workers and 50% of fintechs have more than 25-50% female workers. Most P2P lending companies also show a relatively high female employee composition, with 65.5% of fintechs having a female employee composition of 25-50% and 17.2% of fintechs with a female employee composition of more than 50%.

Figure 10.2 Women's Representation in IT Unit



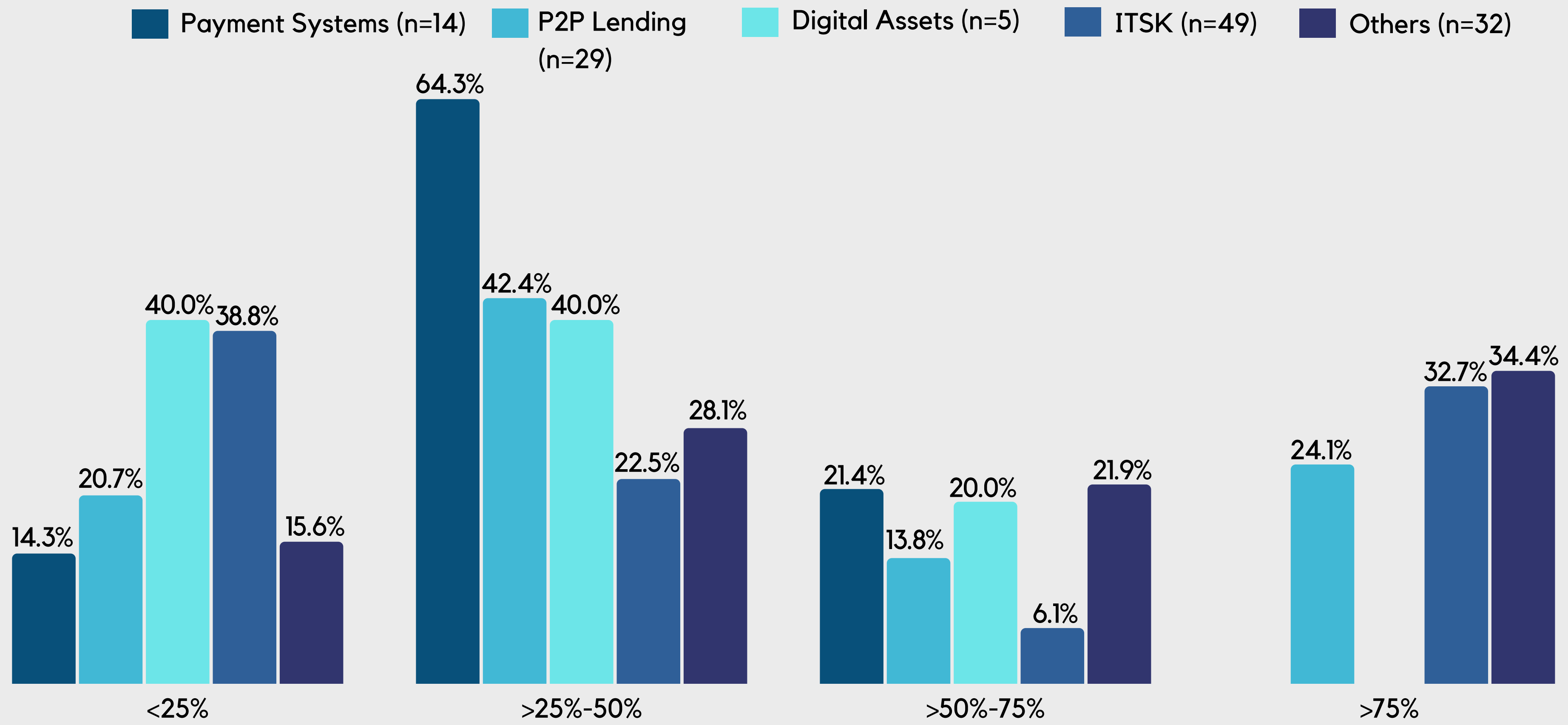
Women's Participation in Fintech

Figure 10.3 Women's Representation in Business and Development Unit



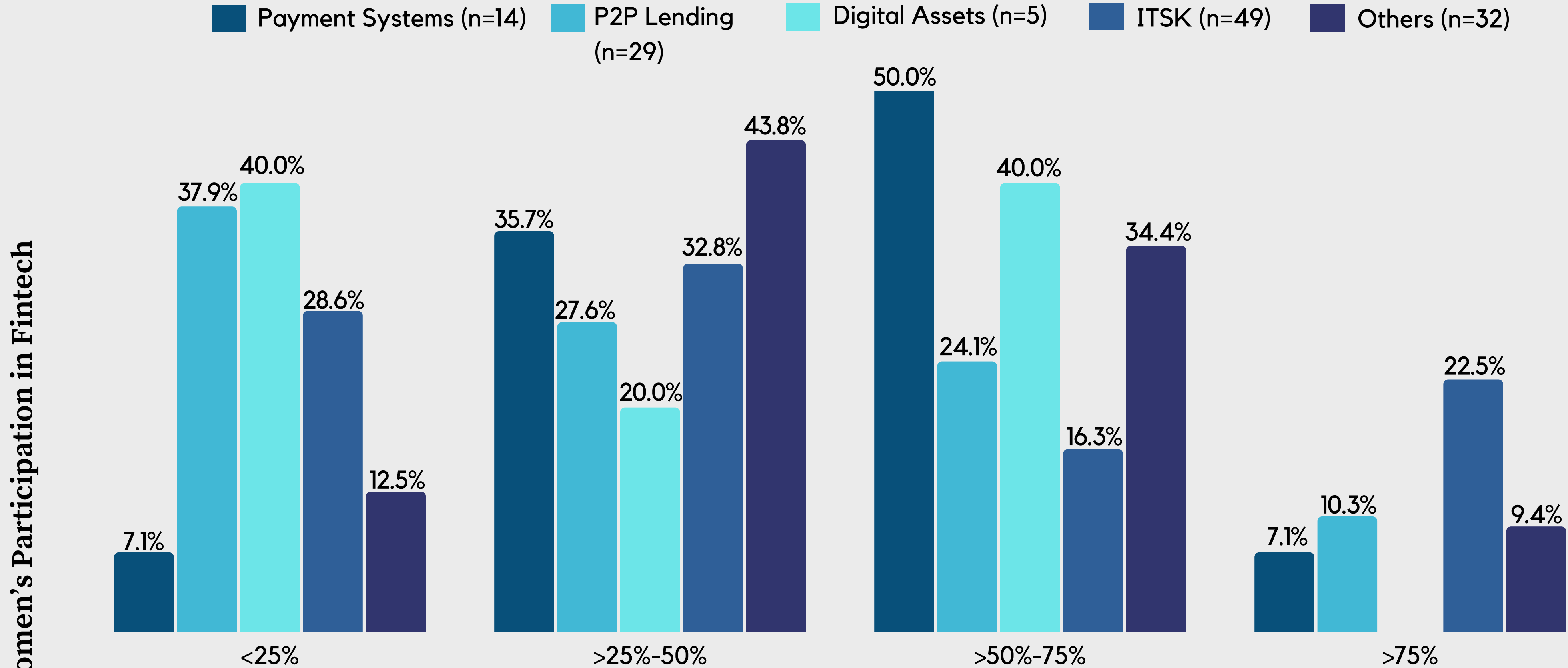
Source: AMS 2024

Figure 10.4 Women's Representation in the Legal Unit



Source: AMS 2024

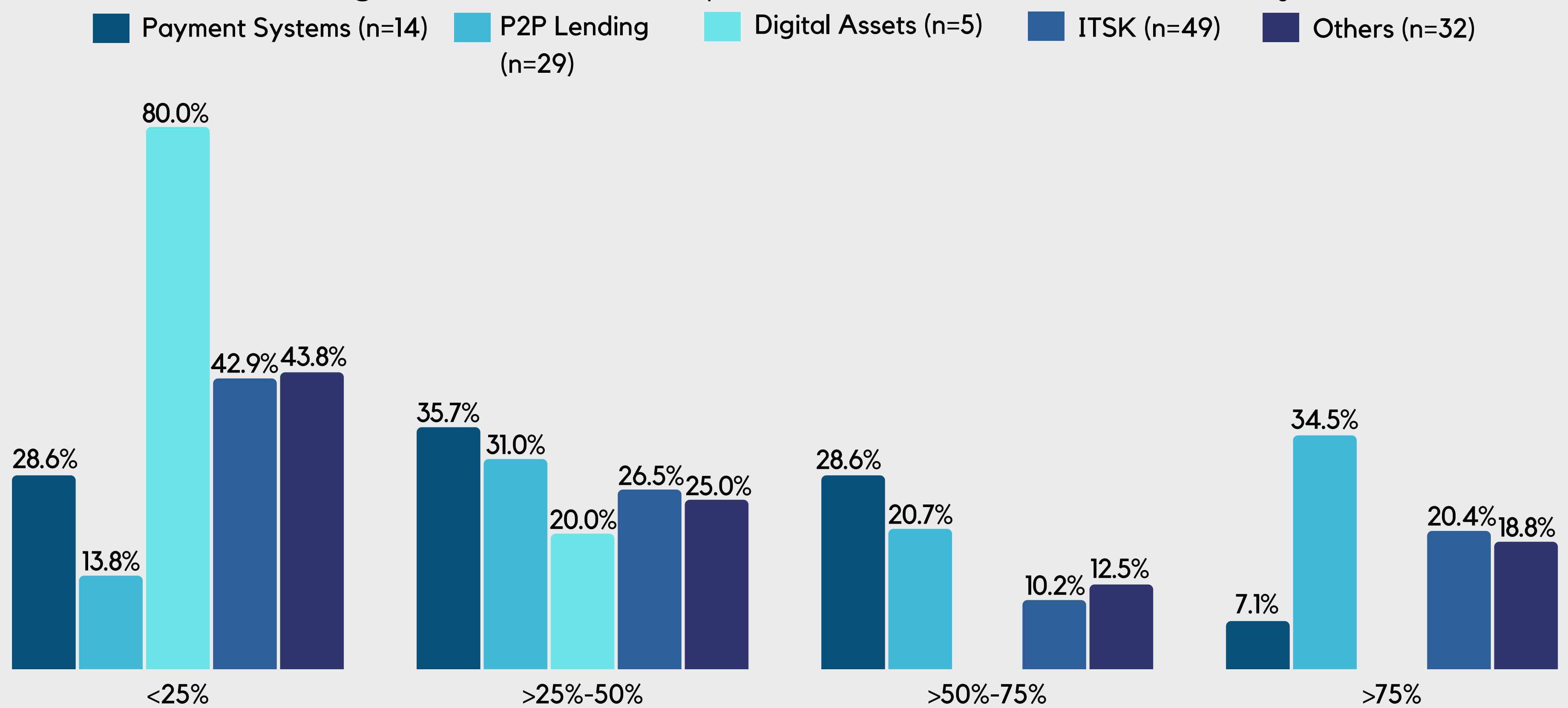
Figure 10.5 Women's Representation in Marketing Unit



Source: AMS 2024

Women's Participation in Fintech

Figure 10.6 Women's Representation in the Financial Literacy Unit



Source: AMS 2024

24.1% of P2P lending companies have a female employee composition in legal work units of more than 75%. In the marketing sector, the composition of female workers in all fintech businesses is above 50%. Meanwhile, in the business and development work unit, all digital asset fintechs report the number of female workers is less than 50%.

Women's participation in information technology remains low, with 68.2% of fintech reporting having less than 25% female employees in this unit. This percentage shows that digital asset companies are the type of business with the lowest number of female workers in information technology work units. Meanwhile, most payment system companies and P2P lending also report a female composition below 50% in the same units.

The data above show that the composition of female workers in various work units varies. However, this generally means that there is still a high gender gap in strategic units such as information technology and business development. The composition of female workers in marketing and legal work units is relatively higher. Further studies are needed to understand the factors influencing workforce composition, including unconscious gender bias in selecting certain job positions.

Further investigation also needs to be carried out regarding the lower percentage of women compared to men on the board of directors and C-level (figure 10.7). Additional analysis needs to see whether women fill staff or middle management positions in marketing and legal work units that show high female worker participation. To understand this, fintech can utilise data disaggregated by gender at various seniority levels and work units within the company so that the company's internal policies in promoting gender equality can continue to be evaluated.

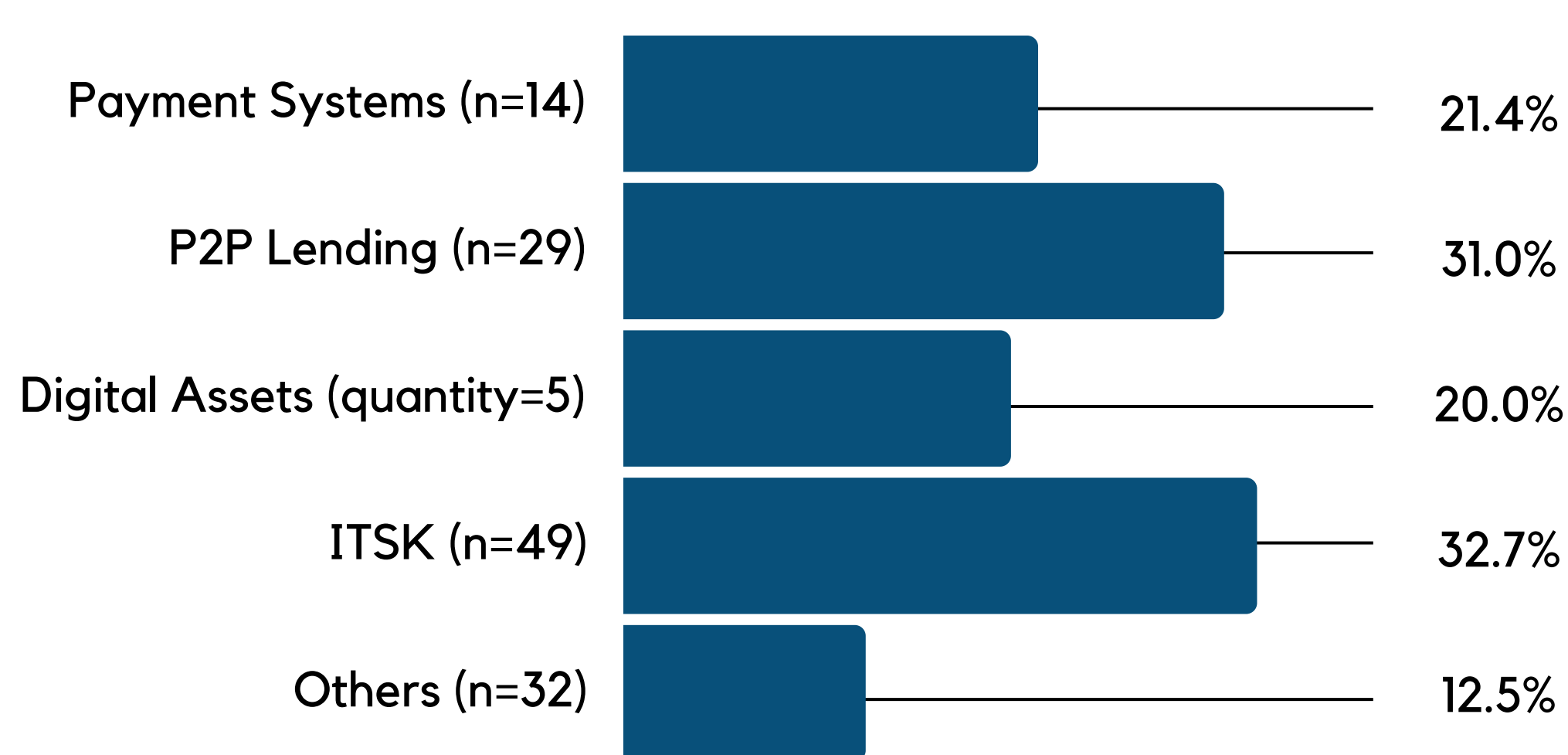
Woman Leadership

The number of women is still fewer than men who hold high level management positions in the banking and fintech sectors Women's World Banking research (2023) on women's leadership in the banking sector shows that only 19% of women are in director positions out

of 543 banking directors operating in Indonesia[3]. Three women hold director positions out of a total of 543 banking directors in Indonesia[3]. In contrast, AMS 2024 shows that only 11.6% of fintechs have more than 50% women on their board of directors, while 67% of companies have less than 25% women.

Even though the representation of women as company directors or C-level is still low, there has been a significant increase in the number of female CEOs compared to last year's survey results. This year's survey shows that 25.6% of companies have female CEOs, compared to only 13% last year. Apart from that, 30.2% of companies also reported that at least one of their founders was a woman, which means there was an increase compared to last year, which was only around 21%. AMS 2024 finds a positive correlation between the number of women on the board of directors and the work participation of female workers in the company. If women occupy more than 50% of the board of directors, then the number of female employees in the company is 13% higher than in companies with less than 50% female directors.

Figure 10.7. Representation of Women as Leaders



Source: AMS 2024

Survey data also shows a positive correlation between the number of women on the board of directors and the number of female workers in the company. If the company's CEO is a woman, the proportion of women in the company is 10% higher when compared to companies led by men. Survey data also shows the number of female CEOs based on fintech business type. Based on business type, FSTI and P2P lending companies have the highest number of female CEOs compared to the other two types of companies, with 32.7% and 31%, respectively.

Manpower Policy

In line with the previous year's survey results, most fintechs have implemented anti-discrimination and anti-sexual harassment regulations following Minister of Manpower Decree Number 88 of 2023 concerning Guidelines for Preventing and Handling Sexual Violence in the Workplace.

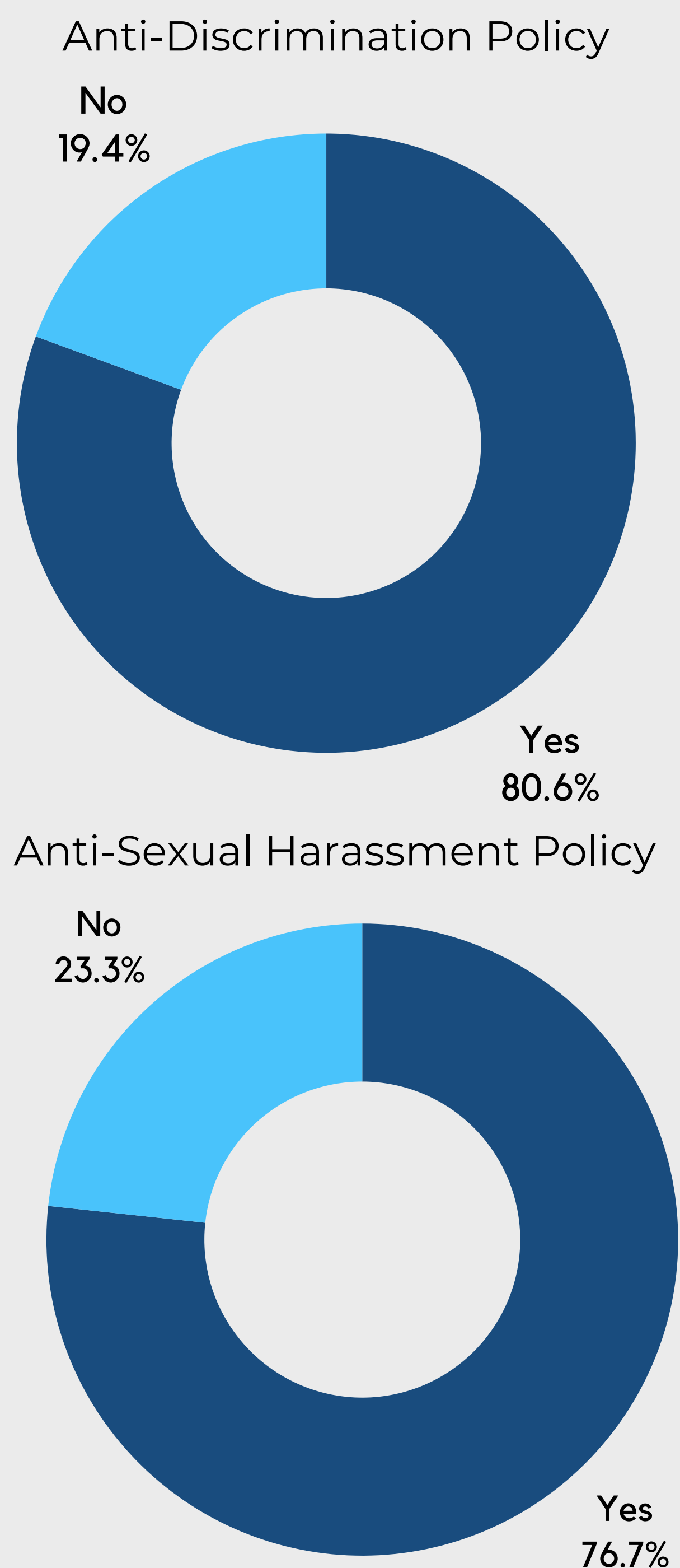
Almost all fintech companies have implemented maternity leave for mothers, and 37.2% have also implemented leave for husbands who accompany their wives giving birth. This good practice of implementing leave for husbands must continue to be encouraged so that men, in this case, as fathers, can take a bigger role in caring for children after birth.

Furthermore, fintech can adjust its internal regulations to the new Maternal and Child Welfare Law passed in June 2024. This law

[3] Report on Catalyzing Women's Advancement into Decision-Making Roles in Indonesia's Banking and Fintech Sectors by Women's World Banking. (2023, June 21). Retrieved from <https://www.womensworldbanking.org/insights/report-catalyzing-womens-advancement-into-decision-making-roles-in-indonesias-banking-and-fintech-sectors/>

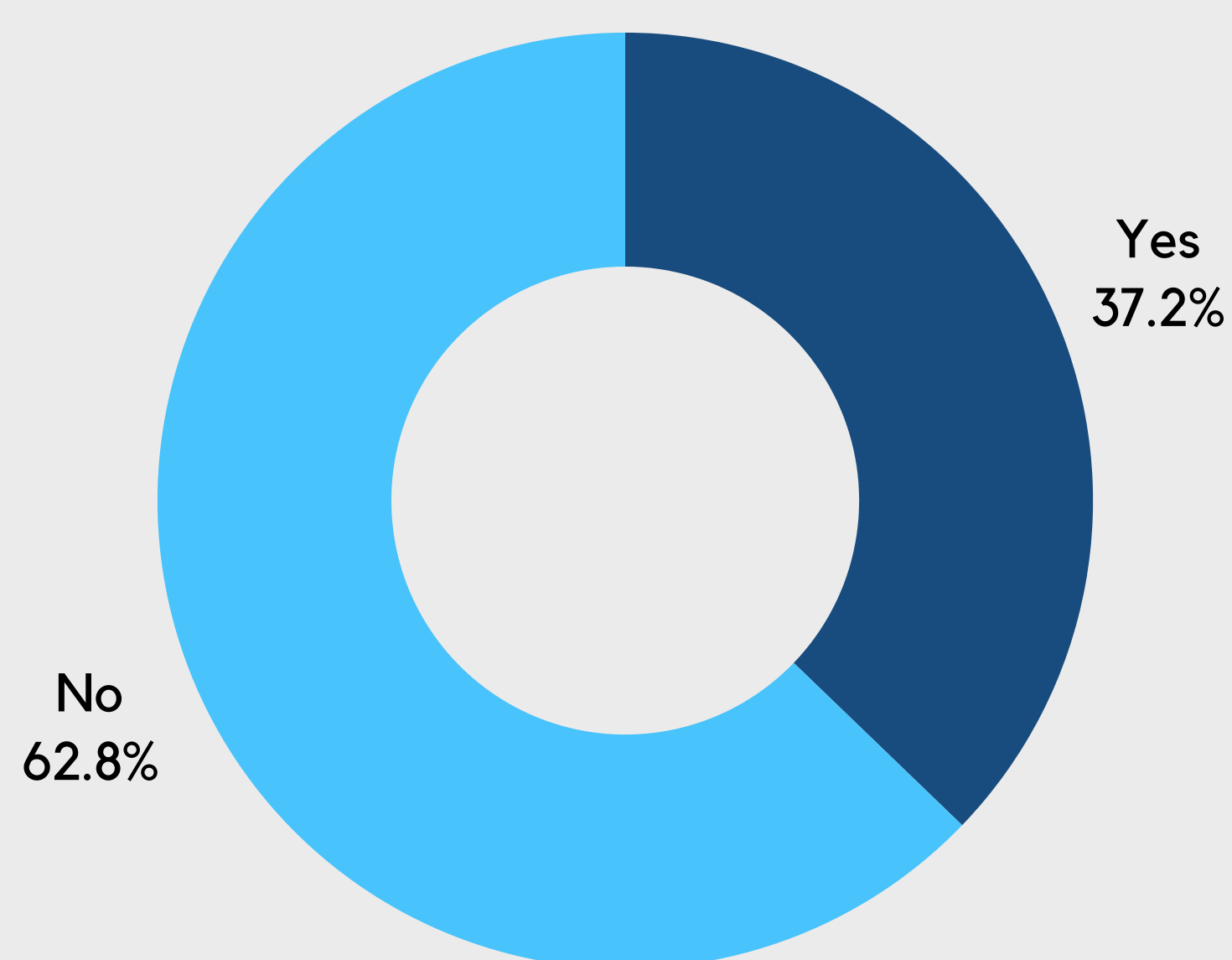
stipulates that working mothers are entitled to maternity leave of up to six months and leave provisions for husbands who accompany their wives giving birth for two months, up to three days, or as agreed.

Figure 10.8 Anti-Discrimination Policy and Anti-Sexual Harassment Policy



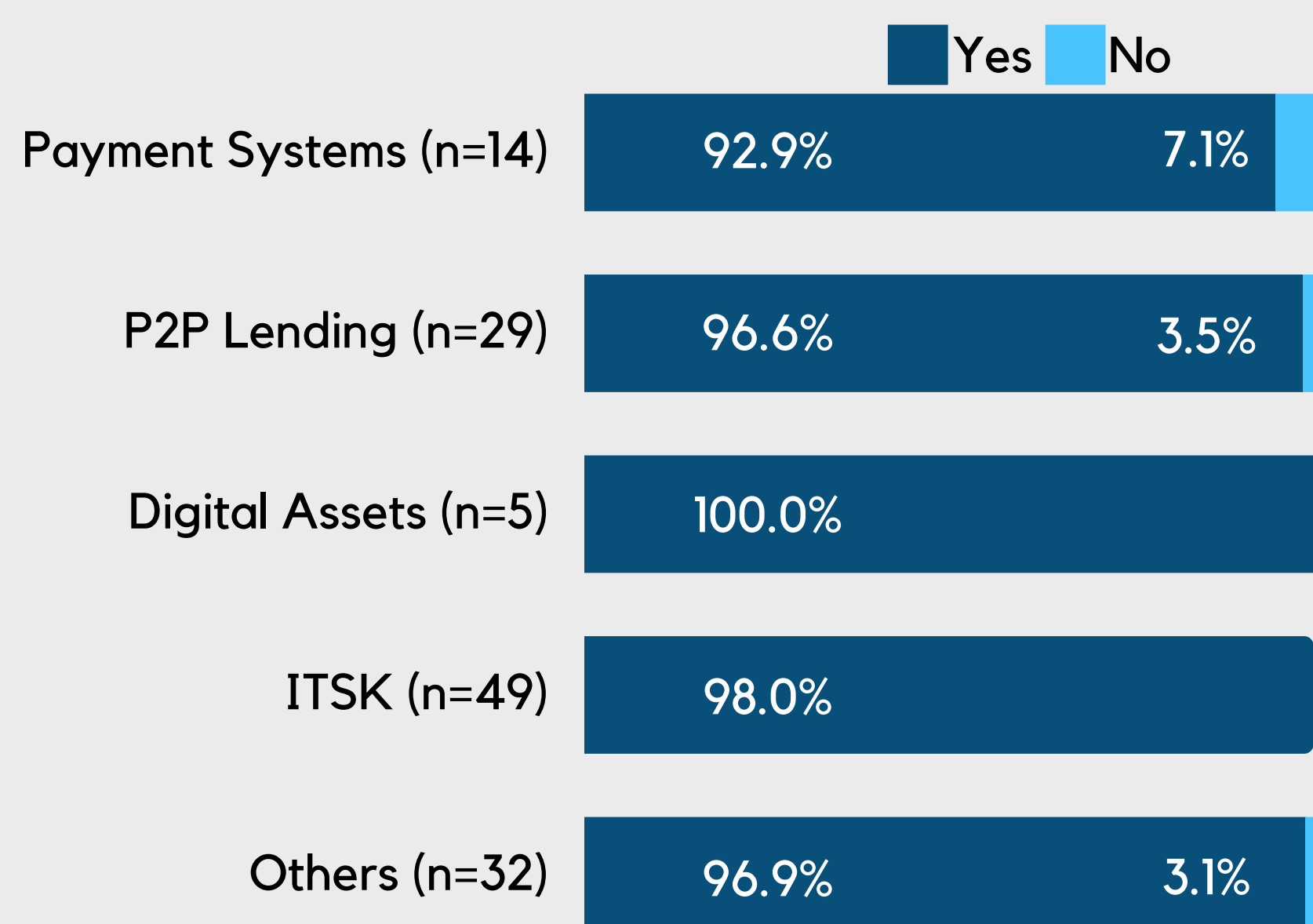
Source: AMS 2024

Figure 10.9. Company Percentage of Leave Policy for Husband



Source: AMS 2024

Figure 10.10. Availability of Maternity Leave



Source: AMS 2024

Note: Respondents who answered in the "other" category did not mean that they did not have maternity leave facilities because they answered with "parental leave or parental leave."

Gender Lens in Investment

Gender lens in investment known as Gender Lens Investing (GLI), aims to encourage gender equality by supporting women's involvement in business and the economy. GLI includes investments in businesses owned or managed by women, businesses that have a gender lens in their design, businesses that offer products/services that improve women's well-being, or businesses that increase women's employment opportunities[4]. GLI encourages companies to increase profits and social impact simultaneously, with the awareness that the financial system provides different benefits for men and women. Hence, a gender lens is important to apply at various levels of operationalisation and decision-making in companies.

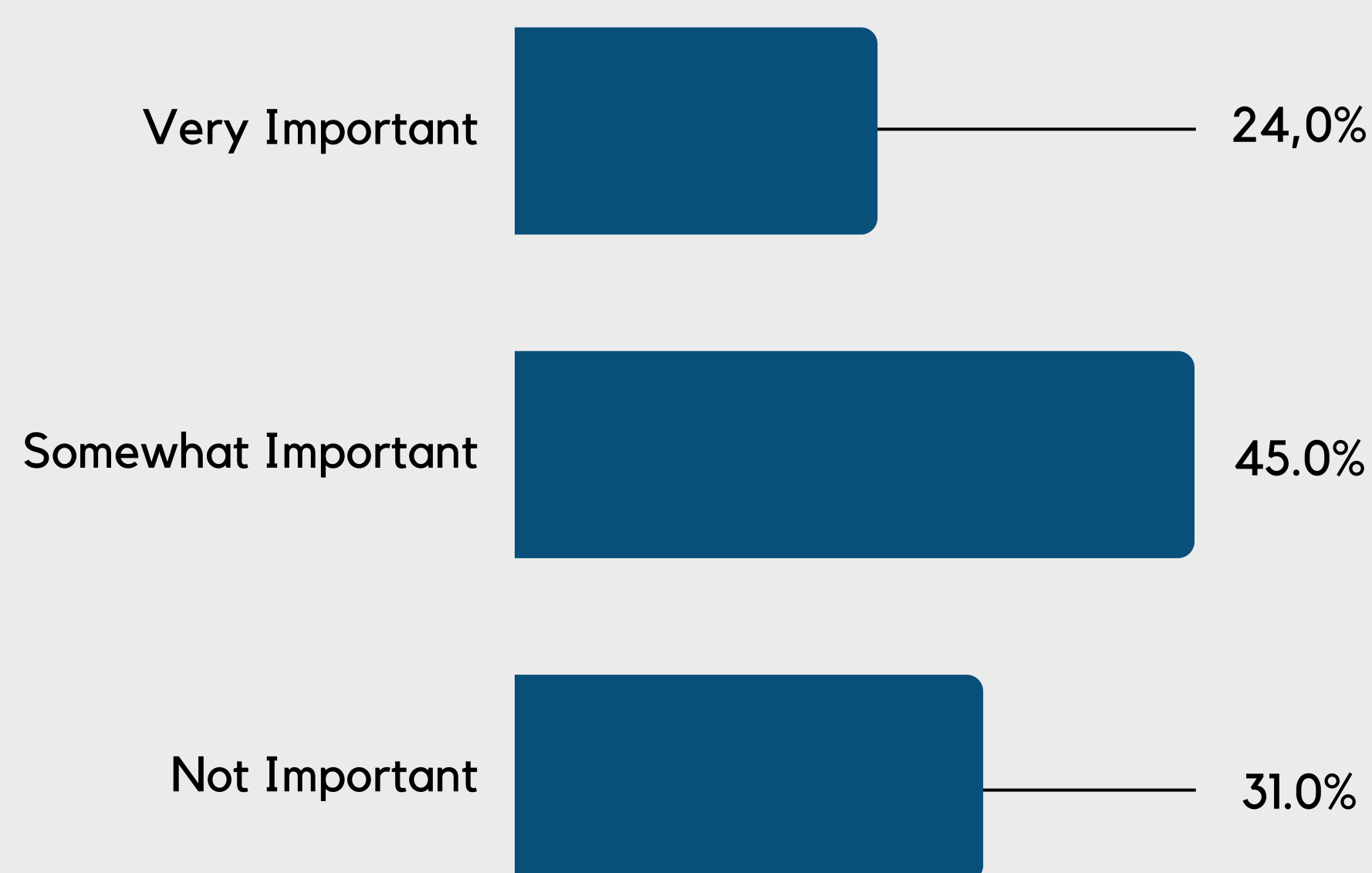
A report from GenderSmart found that of around USD40 trillion dollars of sustainable investment (sustainable or impact investment) in 2021, only USD17-20 billion.

[4] Gender lens investing: Driving financial returns and social impact. Women's World Banking. (2023, July 31). Retrieved from <https://www.womensworldbanking.org/insights/gender-lens-investing-driving-financial-returns-and-social-impact/>

dollars had a gender lens[5]. Gender-responsive investment has the potential to improve the global economy. According to data from the McKinsey Global Institute (2020)[6]. promoting gender equality and opening economic opportunities for women could increase global Gross Domestic Product (GDP) by 13 trillion US dollars in 2030[7].

Despite the growing gender lens in investing, only 24% of fintechs in the 2024 AMS survey consider it very important to their investors. In percentage terms, this figure has decreased compared to last year's survey, where 51% of respondents thought that a gender lens was very important for investors. In terms of numbers, there was a decrease in the number of fintechs, from 38 to 30, who assessed that their investors considered it important to apply a gender lens. However, it should be understood that this figure reflects respondents' perceptions of the importance of a gender lens according to their investors and does not indicate how many fintech investors use a gender lens.

Figure 10.11. Gender Lens for Investor



Source: AMS 2024

Targeting Women Users

Strategy to target women consumer

As many as 72% of fintech have less than 50% female users, while the rest have more than 50% female users. This shows that fintech understands user data disaggregated by gender. However, to increase product use, disaggregated data needs to be followed by a data analysis process whose results are used to design products, services, and strategies that target women.

From this survey, only 35.6% of fintech companies have a special strategy for targeting women as service users. This is important because companies consider women's needs. However, in the process, involving women in the product design process is much more impactful in filling the gender gap in access and use of financial services[8].

The practice of implementing product design using a gender perspective (looking at the perspective of women and men) was identified by 17% of fintechs who designed

[5] Gender lens investing: Driving financial returns and Social Impact. Women's World Banking. (2023. July 31). <https://www.womensworldbanking.org/insights/gender-lens-investing-driving-financial-returns-and-social-impact/>

[6] COVID-19 and Gender Equality: Countering the Regressive Effects. (2020. July 15). <https://www.mckinsey.com/featured-insights/future-of-work/covid-19-and-gender-equality-countering-the-regressive-effects>

[7] Gender lens investing: Driving financial returns and Social Impact. Women's World Banking. (2023. July 31). <https://www.womensworldbanking.org/insights/gender-lens-investing-driving-financial-returns-and-social-impact/>

[8] Report: Revolutionizing product design in financial services. Women's World Banking. (2023c, June 21). <https://www.womensworldbanking.org/insights/report-revolutionizing-product-design-in-financial-services/>

products with the understanding that women and men have different barriers and behaviours in using financial services. Of these 17% of companies, 40% are digital asset companies, and 21.4% are payment system companies. This strategy is one approach to applying a gender lens so that products and services appropriately target female and male users.

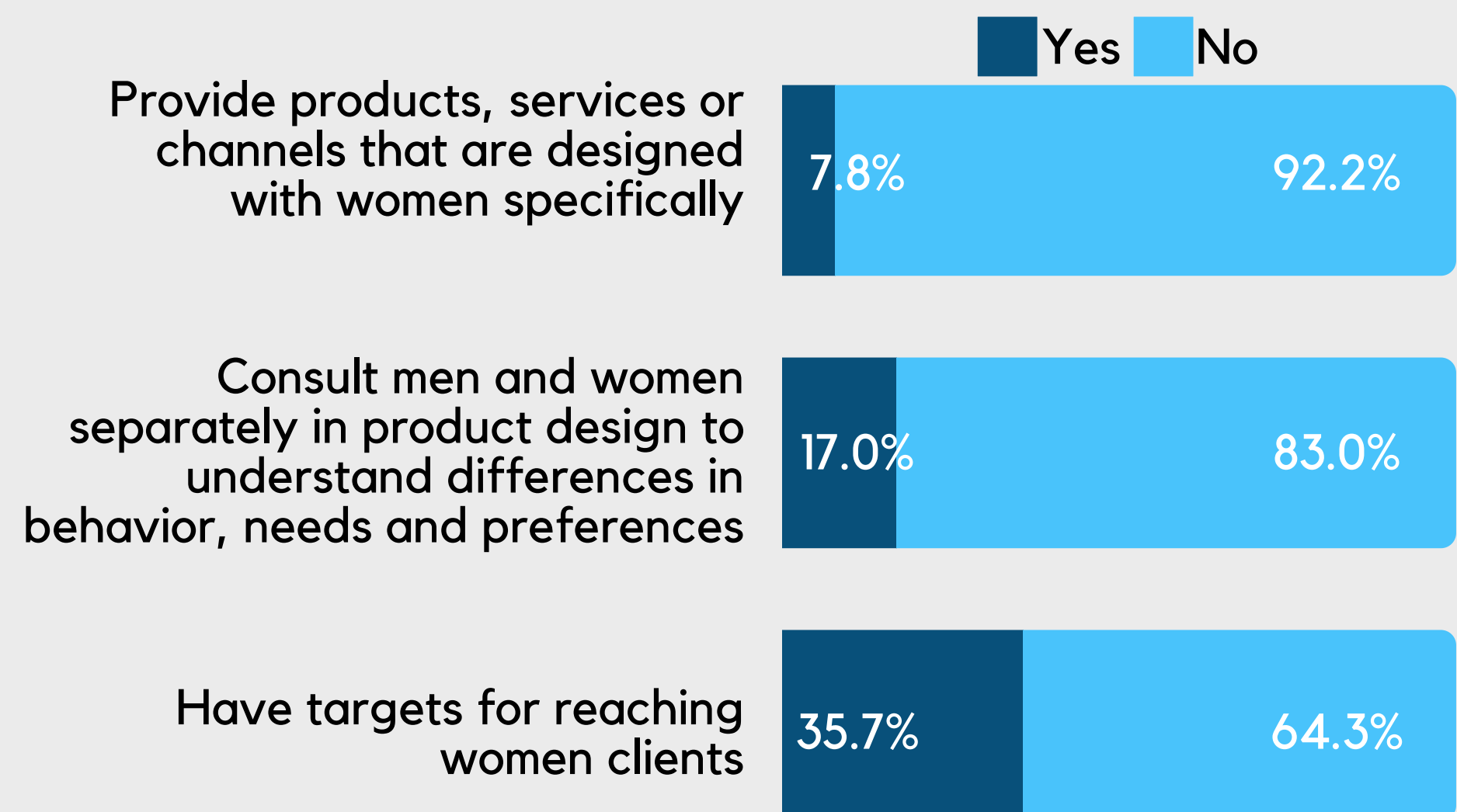
Consumer Segmentation

This survey shows that only 5.43% of companies consider gender-based retention strategies important to their business. This strategy is important, considering that retaining users or customers is relatively cheaper than acquisition costs. Using gender-disaggregated data to design business strategies is important in applying a gender lens in product design.

This survey found good practices in customer retention strategies based on gender in two types of fintech businesses, namely the FSTI/ITSK business type and the payment system business type.

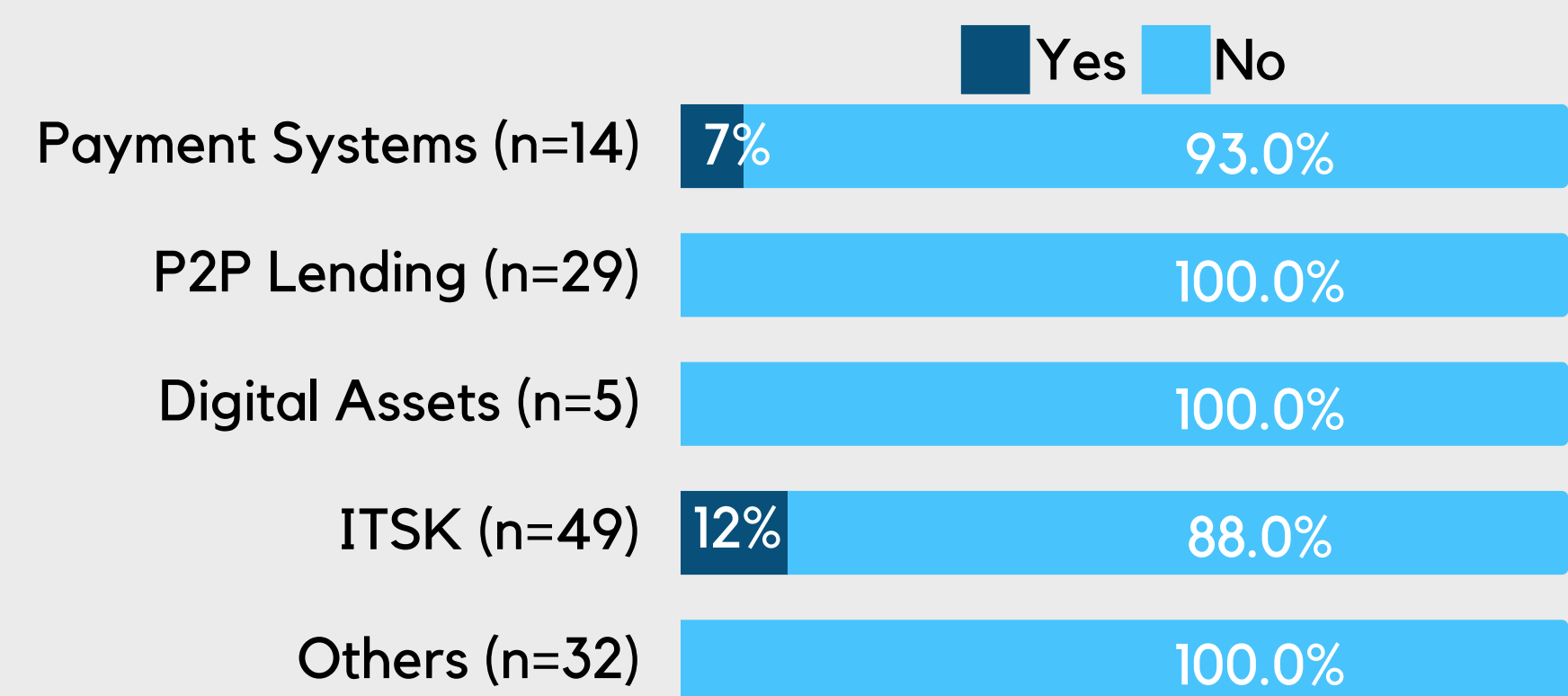
Fintech primarily uses job type data in its strategy to target female users. Other data used includes data on the demographic distribution of female users. Using various types of data other than disaggregated data can increase the impact of fintech companies' strategies in targeting female users from various segments.

Figure 10.12 Company Strategy Targeting Women



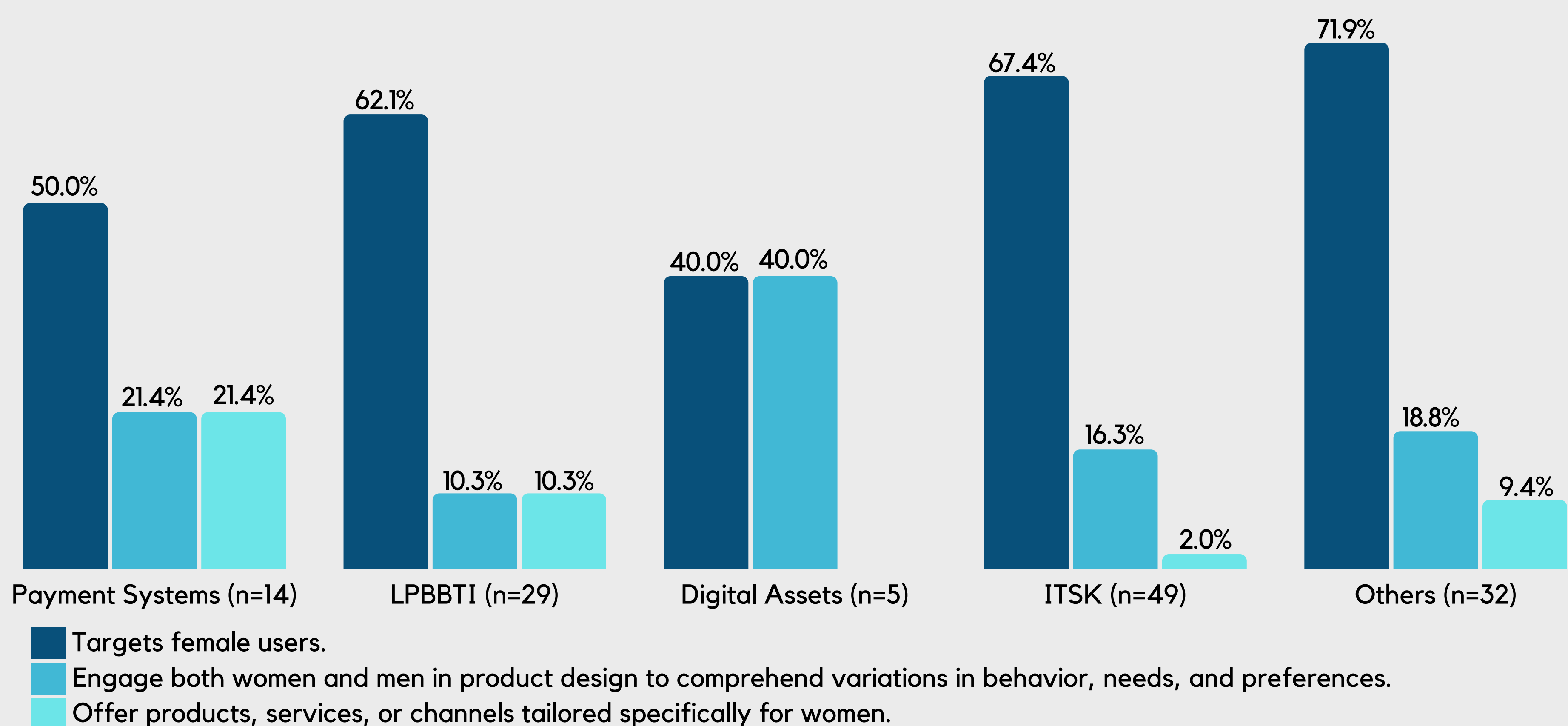
Source: AMS 2024

Figure 10.14 The Strategy of Client Retention Based on the Type of Business



Source: AMS 2024

Figure 10.13. Company Strategy on Segmenting Women Based on Type of Business



Source: AMS 2024

Conclusion and Recommendation

According to data from the Central Statistics Agency (BPS), the labour force participation rate for women in Indonesia in 2023 will be 54.5%, while for men, it will be 84.3%[9]. The still high gender gap in work participation levels encourages the government and industry to continue to increase women's participation. As the number of female workers increases, women tend to be required to continue to carry out household management and caregiving roles. For this reason, efforts to increase women's leadership and the representation of women workers need support from the institutions where they work by creating a work environment and infrastructure that supports women's work. For example, mentoring programs between female leaders and female workers or flexible working hours policies can reduce the burden on women in managing the demands of social and professional norms. McKinsey research from 2023 shows that this policy also benefits male workers[10].

There have been many good practices found in fintech to encourage gender equality in the fintech industry, including implementing leave for husbands, implementing anti-discrimination and anti-sexual harassment rules, as well as diversifying the diversity of the proportion of workers in various work units. The number of women in senior ranks and CEOs has also increased. However, several things still need to be encouraged to continue reducing the gender gap, including:

- 1.Regarding women's representation in various work units, data shows that the number of women workers in information technology is still quite disparate compared to men. For this reason, more affirmative efforts are needed to recruit women in the information technology field. This needs to be accompanied by efforts to build a talent pipeline in the digital sector by increasing the number of women taking study paths in the STEM fields (Science, Technology, Engineering, Mathematics).
- 2.Provide equal opportunities for women to fill decision-making positions based on skills and quality of work, and ensure the availability and implementation of rules and support capacity for women with care and household responsibilities.
- 3.Consistently collect and manage data disaggregated by gender (both for customers and internal employees) to monitor business growth and productivity.
- 4.Encourage equal involvement of men and women in designing products, services and strategies that address the different needs and challenges of women and men so that all customers can use products optimally.

[9] Tingkat Partisipasi Angkatan Kerja Menurut Jenis Kelamin, 2021-2023. <https://www.bps.go.id/id/statistics-table/2/MjIwMCMY/tingkat-partisipasi-angkatan-kerja-menurut-jenis-kelamin.html>

[10] Field, E., Krivkovich, A., Kügele, S., Robinson, N., & Yee, L. (2023, October 5). Women in the workplace 2023. McKinsey & Company. <https://www.mckinsey.com/featured-insights/diversity-and-inclusion/women-in-the-workplace>

11

Environmental, Social, and Governance



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Environmental, Social, and Governance

Fintech Focus on ESG

Environmental, Social, and Governance (ESG) is a new concept that prioritizes activities focusing on environmental, social and governance interests. In recent years, various industries have widely applied the ESG concept as a form of responsibility to the wider environment. The fintech industry is no exception, which has a big role in increasing financial literacy and inclusion. East Ventures, PricewaterhouseCoopers (PWC), & Katadata Insight Center (KIC) 2023) stated that financial products and services from fintech that can target people in tier 2 and 3 areas are also aligned with ESG principles to provide a more equitable economy. The presence of fintech as a complement to banking institutions can also increase green financing. A case study in the Philippines can exemplify the importance of applying ESG principles to the fintech industry. The Philippines Fintech Report (2023) indicated that the Central Bank of the Philippines (BSP) has endorsed a sustainable central banking roadmap. There are 11 main points in the roadmap that need to be achieved by all financial services players, one of which is financial support for environmentally friendly or sustainable projects. Apart from the Philippines, several fintech start-ups in developed countries like the United Kingdom (UK) have also implemented ESG principles through collaboration with other financial institutions.

Financial services businesses in Indonesia have recognized the importance of environmental, social, and governance (ESG) issues in their operations, including during the reporting stage. Several in-depth interviews with representatives of AFTECH members reveal that the implementation of ESG principles is closely linked to corporate responsibility toward the surrounding community, particularly through the Corporate Social Responsibility (CSR) program. The AMS results show that around 16% of AFTECH members simultaneously have ESG reports and implement CSR programs. In this in-depth interview, members explain that although the preparation of ESG reports is not yet regulated in writing by regulators such as OJK or BI, they are aware that implementing ESG principles provides many benefits for companies. For this reason, companies that do not yet have an ESG report are working to develop a framework for implementation and ESG reporting in the future.

AMS 2024 results show that 26.7% of respondents have a company ESG report (figure 10.1). Even though the figure is still low, this achievement is a sufficient indication of fintech companies' awareness of ESG issues. In the future, the application of ESG principles is expected to continue to increase, considering that several studies state that the application of ESG concepts in fintech companies will be able to increase engagement with workers, consumers and investors.

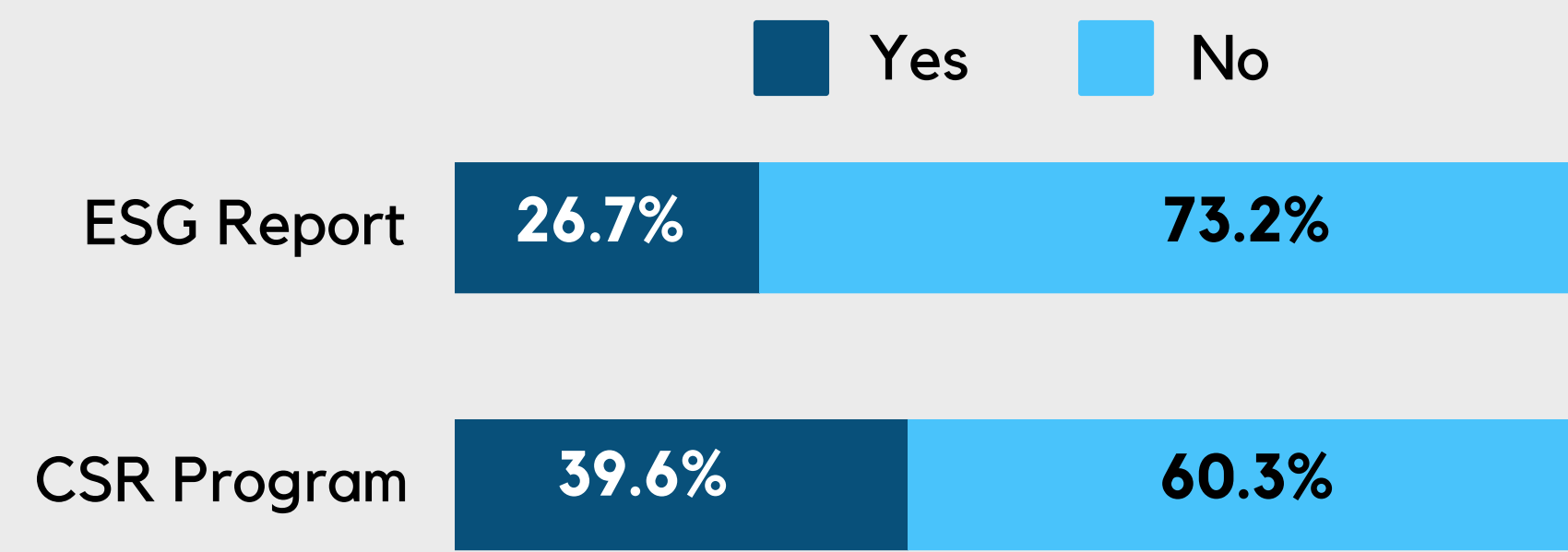
Based on in-depth interview results, several AFTECH members have published ESG reports more than five times, covering ESG policies, materiality tests, strategies, programs, and target setting. This case study proves that ESG principles are an integrated part of business processes. Forms of seriousness in implementing ESG principles can be realized by presenting the highest organizational position that handles sustainability issues. The significant benefits gained by fintech companies from applying ESG principles include the establishment of good governance within the company, attracting specific investors, creating positive impacts on society—especially for unbanked and underbanked populations—and making tangible contributions to the environment and climate. However, implementing ESG principles in fintech companies raises further questions and challenges. For example, how to educate consumers in small communities in the regions to support carbon emission reduction. However, implementing ESG principles in fintech companies raises further questions and challenges, such as how to educate consumers in small communities to support carbon emission reduction. One solution is to provide more incentives for MSME borrowers who have efforts to reduce waste and sell only to

local communities, thereby reducing transportation which produces carbon emissions. This strategy is commonly known as green financing.

AMS 2024 also analyzes further the implementation of CSR programs in fintech companies. Based on AMS 2024, 39.6% of respondents have implemented a CSR program. With CSR, local communities can feel corporations' benefits directly and indirectly. This survey further identified the types of CSR programs carried out by AFTECH members. If categorized based on program coverage, there are three categories: internal programs, external programs, and intersections of both. The survey results show that 90.4% of respondents carry out CSR programs internally, such as fair treatment of employees (48.1%) and recruitment processes (42.3%). Meanwhile, the other 84.7% also focus on implementing CSR programs on an external scope by having a wider impact on various stakeholders. For example, sponsoring social activities, especially regarding natural disasters and literacy (63.5%) to developing local MSMEs and providing business capital (21.2%).

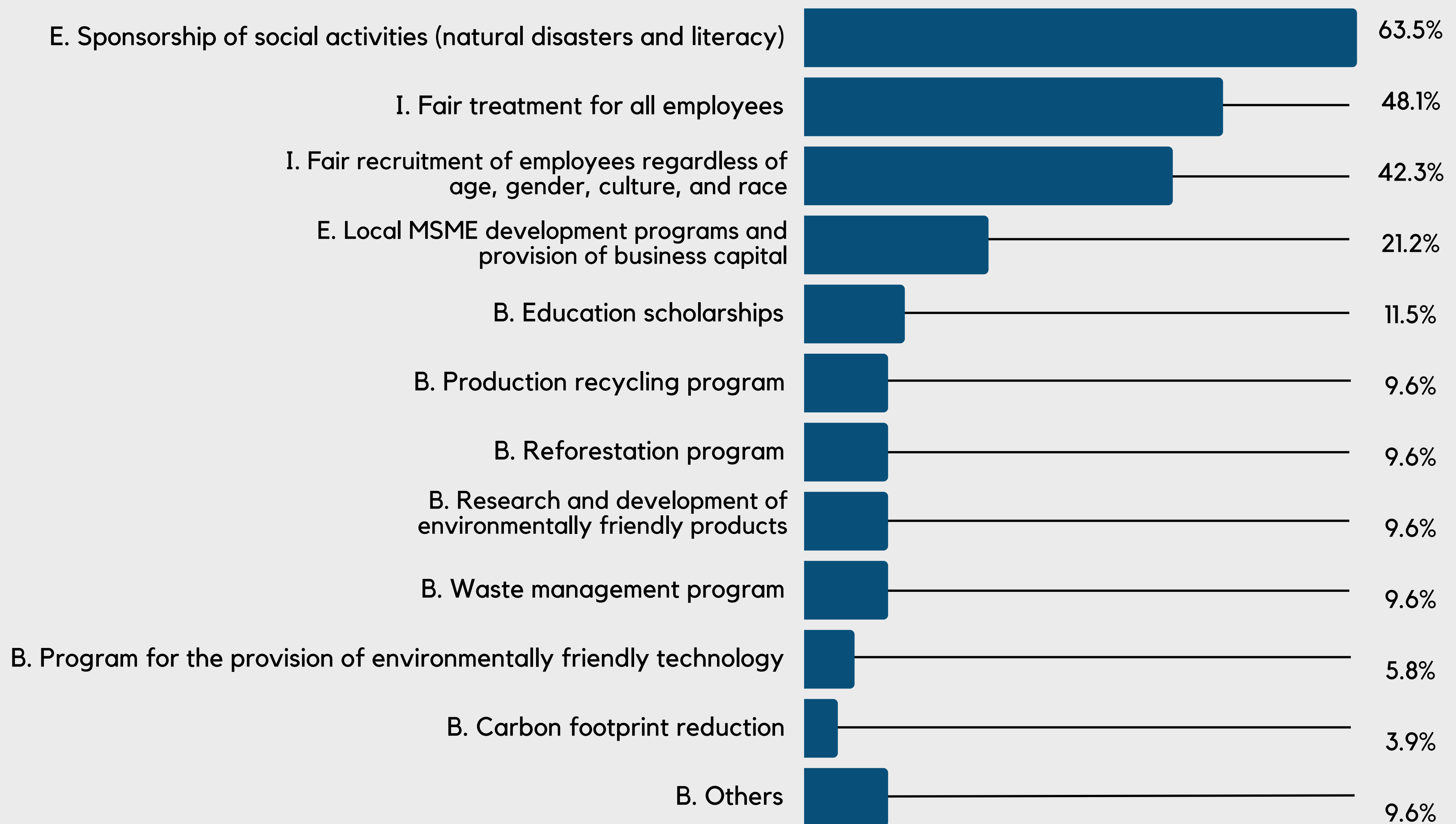
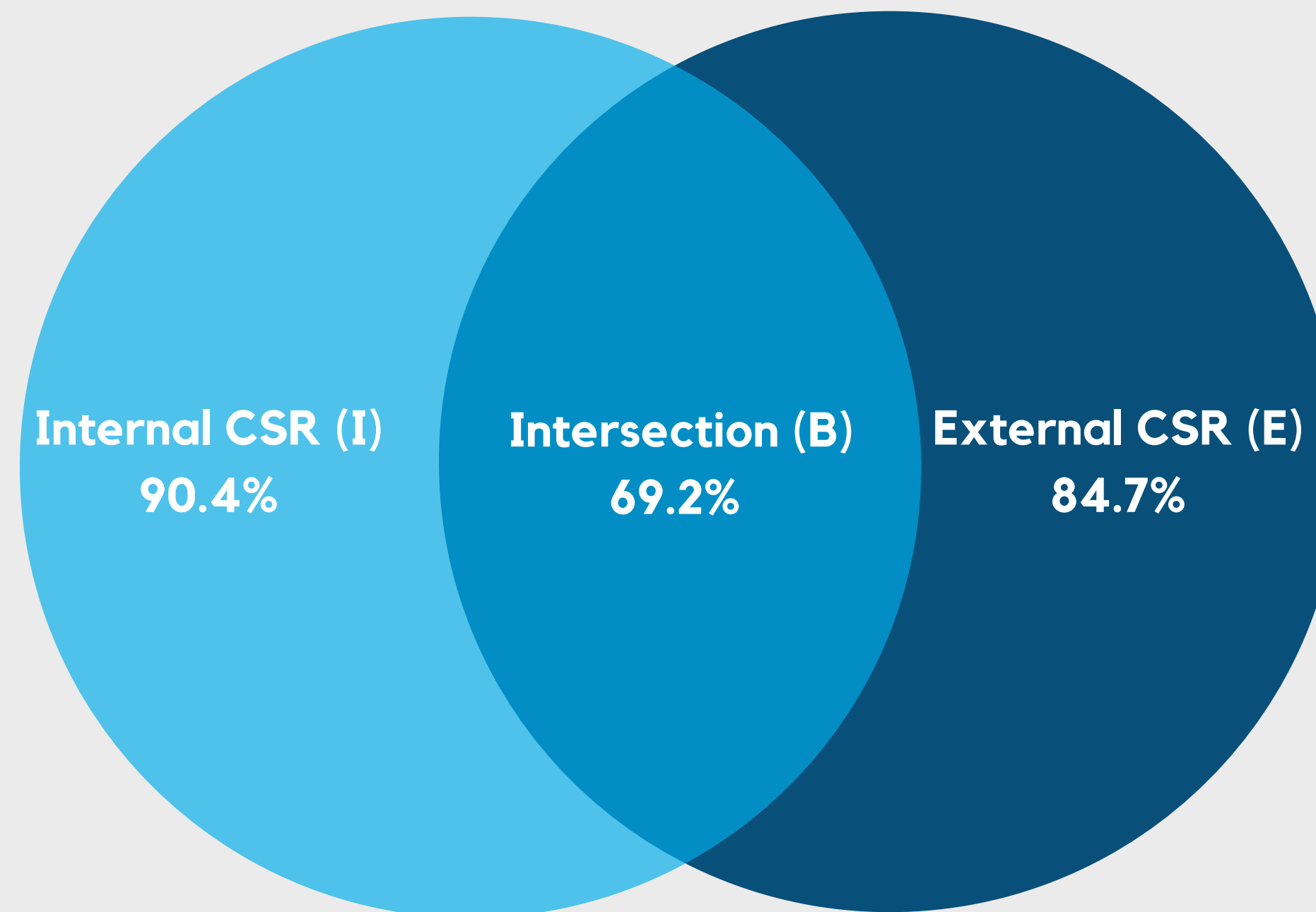
Moreover, as many as 69.2% of respondents with CSR programs are included in the two sections, including educational scholarships, management of environmental issues, and carbon footprint. During in-depth interviews, AFTECH members explained that philanthropic and small companies can implement CSR programs through products that broadly impact the surrounding community. This includes products aimed at unbanked and underbanked communities, female consumers, people with disabilities, or those that facilitate sustainable and environmentally friendly activities.

Figure 11.1 Company with an Environmental, Social, and Governance Report and a Corporate Social Responsibility Program (n=131)



Source: AMS 2024

Figure 10.2 Scope of Corporate Social Responsibility and Its Type (n=52)



Source: AMS 2024



12

Conclusion and Recommendations



Conclusion and Recommendations

AMS 2024 shows that the fintech industry can continue to develop. AFTECH members have experienced progress in various areas, such as implementing governance and strategies to increase financial inclusion. Fintech companies can increasingly adapt to ongoing dynamics, including when some policies and regulations are updated. Moreover, several issues that are closely related to the financial services business world, namely ESG, GRC, and women's empowerment were also able to be responded to well. These positive trends result from collaboration from all related parties, from fintech players and AFTECH to synergies with the government, business actors in other industries, and various elements of society.

In this case, AFTECH and all its members always strive to achieve the organization's vision and mission by continuing to encourage financial inclusion throughout Indonesia. This well-established effort can certainly still be improved. The space to continue making efforts can be done in various ways as follows:

1. Policy Advocacy

The policy-making process must be monitored consistently so that AFTECH members always have the latest information on policy developments. AFTECH's role as a "bridge" connecting fintech players and regulators is crucial to encourage policies that support innovation while protecting consumers.

2. Collaboration

The various growing business models in the fintech industry have great opportunities for collaboration, both among fintech players and with conventional financial services and other parties. As a forum, AFTECH has a strategic position to bring together these actors through forums or activities held regularly so that the fintech industry can progress further.

3. Literacy and Education

Financial and digital literacy awareness programs can be implemented simultaneously within AFTECH as well as with external partners. Education outreach to those in need is the key to accelerating the enhancement of financial literacy and inclusion across all regions in Indonesia. Therefore, new strategies and targets are needed aiming for a more massive coverage.

4. Knowledge Development

Fintech as a fast-growing industry must be adequately supported by a strong research and development capacity. Continuous dissemination of the latest information and knowledge about this innovative industry is vital for AFTECH members. As a result, AFTECH and its members are empowered to adapt to the latest developments in the fintech industry.

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13 Acknowledgments



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- Mr. Felix Sharief, Head of Government Relations DANA Indonesia
- Mr. Budi Hartono, Director of Transactions OttoCash
- Ms. Evita Soetjoadi, Director of Tokoscore

AFTECH:

The Indonesia Fintech Association (AFTECH) was officially appointed by the Financial Services Authority (OJK) as the Association for Organizing Digital Financial Innovation in Indonesia under POJK No. 13/2018. It has since transformed into the Association for Financial Sector Technology Innovation Organizers (ITSK) under POJK Number 3 of 2024. AFTECH also serves as the umbrella organization for all Fintech verticals. AFTECH has 306 registered members (per Q2 2024), which includes fintech startups, financial institutions, as well as knowledge and technology partners.

AFTECH works closely with the government, regulators, and other stakeholders in order to build a responsible fintech ecosystem that can serve all consumer segments and increase financial inclusion in Indonesia

INDEF:

The Institute for Development of Economics and Finance (INDEF) is an autonomous research institution founded in August 1995 in Jakarta. INDEF conducts research and public policy studies, particularly in economics and finance, aiming to stimulate policy debate, enhance public engagement, and promote awareness in the policy-making process. INDEF plays a role in identifying optimal solutions to economic and social challenges in Indonesia.

WWB:

Women's World Banking (WWB) is an international non-profit organization dedicated to enhancing the economic resources, involvement, and influence of underprivileged women by facilitating their entry to financial services, information, and markets. WWB works with financial institutions, service providers, policy makers, investors and donors to provide products, services, marketing practices, and policies that use a gender lens in their development.

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