

# Individual Pension System Risk Inventory

2021



PENSION MONITORING CENTER

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## Message from Senior Management

We are delighted to share our initial report on the Individual Pension System Risk Inventory Project conducted with active participation by our esteemed stakeholders.

Effective risk management requires systems thinking, namely a holistic approach that helps consider overall global, national, industrial, and corporate risks as well as all industry components. It also entails efficient internal control, risk management and digital governance systems at global standards, and successful implementation of good management principles.

Undoubtedly, the most important incident of 2020 in terms of risk management was the COVID-19 pandemic, emerging early in the year and still maintaining its strong impact.

The pandemic triggered radical changes worldwide. The interaction between work and private life as well as the balance between productivity, consumption, savings and leisure activities have taken on a brand-new paradigm for workers. Meanwhile, businesses have struggled to make decisions about employees, production, procurement, and investment. While the effects of the COVID-19 crisis differ across industries, the education industry that introduces capital for the labor market has been more severely impacted than others. The dynamics of social security and healthcare systems underwent profound changes. We transitioned from a period of workers working on the actual premises of their employment, where remote working was a matter of business continuity and cyber-security management, to a period of workers providing services remotely through digital systems, where the interaction between service providers and receivers has been redefined.

Studies estimate that the pandemic will lead to substantial changes in corporate risk profiles for 2021. According to OECD reports, risks in individual pension systems include increased use of retirement savings as urgent needs overtake long-term benefits due to rising unemployment and business interruptions worldwide, as well as damaging consequences for pensions because of disruptions in periodic payments and insufficient returns in financial markets. Similar studies list risks and opportunities regarding cyber-security, data privacy, artificial intelligence, new technologies, disaster and crisis management, climate change, and environmental sustainability with potential influences on all industries, including individual pension systems.

The individual pension industry and all its components and stakeholders, including the Pension Monitoring Center, swiftly and efficiently adapted to these changes and managed to survive 2020. However, considered critical for the desired structural transformation in our national economy, the individual pension industry calls for an exclusive risk assessment to ensure better preparation for the upcoming period. This is the purpose of our project. The first stage on “industry risk inventory” was conducted with valuable stakeholder contribution and academic cooperation. The following stages will evaluate the efficiency of measures in the design of alert mechanisms and in risk management.

We thank our esteemed stakeholders for their valuable contributions to our project and our efforts.  
Sincerely,

**Mustafa AKMAZ**  
CEO

**M. Firat KURUCA**  
Chairman

## Macro Evaluation

The year 2020 took off with an already packed agenda due to the pandemic and critical developments throughout the year, including natural disasters, exchange rate fluctuations, disruptions in global commerce, and pandemic-related business loss and shutdowns. These have brought about local and global pressures reverberating across economies, public administrations, civil society organizations, and individuals.

Risk management is a critical practice in management that prioritizes pro-activeness and necessitates strong stakeholder awareness. In this context, risk management needs to be specially structured at the levels of public administration, industry regulators and supervisory authorities, companies, and employees.

Our experience in the globalizing world and amid the pandemic has shown that risk management practices at the corporate level are not sufficient, either due to business blindness or traditional thinking structures, resulting particularly from profit-oriented management approaches.

Globalization has proven that corporate level risk management is not sufficient to achieve targets, and strategies considering global and national risks together with and at the same level as industrial risks are the prerequisites for successful risk management.

Corporate Risk Management focuses on integrated risk management in businesses. Unlike traditional risk management, an integrated approach considers it crucial to include all risk categories on the senior management agenda.

The most effective path for senior level solutions is to monitor change. There are various metrics of monitoring change ranging from technology and product development to customer expectations and leading economic indicators. Key Risk Indicators (KRI) are often in line with metrics of change. Their difference lies in the timing of actions taken against change.

Live monitoring of change metrics and KRIs is possible through a set of rules, scenarios, and algorithms. This is where robotic process integration comes into play. Artificial intelligence applications in line with corporate strategies can also be useful in risk management.

It is not possible to monitor what we cannot measure, to pro-actively manage what we cannot monitor, or consequently, to account for what we cannot manage.

I hope the Individual Pension System Risk Inventory 2021 will be a pioneering project that will continue to set an example, inspiring similar studies in other significant industries. I thank our CEO Mr. Mustafa Akmaz for the opportunity to work on this project, and express further gratitude to the project team and valuable employees in the industry.

Regards,

PhD. Davut Pehlivanlı

Istanbul University Faculty of Political Sciences / Founding Director of the Center for Research and Practice in Risk and Audit / GRC Management / 360 ° Customer Performance Management System

## Executive Summary



The project was officially launched following the Board of Directors decision dated April 29, 2020, convened upon the recommendation by the Pension Monitoring Center (PMC) senior management.

The main stakeholders of the project are the Insurance and Private Pension Regulation and Supervision Agency, Capital Markets Board, Turkish Association of Insurance, Private Pension and Reinsurance Companies, Turkish Capital Markets Association, pension companies, portfolio management companies and the Pension Monitoring Center.

As part of the project, five workshops, with a total of 74 participants from stakeholders, were organized under the coordination of PMC and in consultation with Prof. Dr. Davut Pehlivanlı. The final versions of the risk definitions suggested by PMC were discussed and approved at these workshops. Although it is possible to further vary potential risk definitions, only the risks agreed upon by relevant stakeholders are included in the risk inventory. The risk map drafted subsequent to the survey evaluation is presented in Appendix 1.

Next, the electronic survey designed by the PMC was distributed to the target audience of 618 people consisting of relevant specialists and managers in stakeholder institutions, and 45 percent completed the survey. The summary profile of survey respondents is presented in Appendix 2.

The respondents received 55 risk definitions and sorted them based on risk severity, calculated by multiplying impact and probability. The top ten risks listed in the responses are provided on pages 6, 7 and 8 of the report.

Survey results indicate a significant emphasis on issues such as “perception”, “reliability”, and “lack of financial literacy”, while “customer-oriented approach” is widely adopted by all management teams. The entire industry acknowledges the positive influence of state support on the advancement of the system, yet high on the list of risks is a concern for positive or negative developments in the economy impacting individual income, and subsequently, savings amounts.

These results may indicate further efforts in 2021 towards effective social media management, increased awareness and improved perception of the system, improved financial literacy, and in correlation, designs and products encouraging the right choices absent of advanced financial literacy, improved customer experience through process digitalization, and better management of potential cyber-threats.

## Substantial Risks According to Survey Respondents

The inventory focuses on the individual pension industry.

Risks discussed and approved by stakeholders during workshops were sent to survey respondents to be sorted based on impact and probability on a scale from 1 to 10.

## Risks by Severity (Impact\*Probability)

The risks included in the survey were sorted based on risk severity calculated by multiplying impact and probability values provided by survey respondents. The resulting top ten risks are listed below.

**Table 1 Top 10 Risks by Risk Severity (Impact\*Probability)**

Rank	Risk Definition	Type of Risk
1	Potential improvements and changes in state incentives to the system	STRATEGIC
2	Impact of potential fluctuations in the economy on new contract entries	EXTERNAL
3	Relative insufficiency of retirement income from the system and negative perceptions of the system	PORTFOLIO MANAGEMENT
4	Perception of lower returns compared to alternatives	PORTFOLIO MANAGEMENT
5	Risks concerning the perception of system reliability	STRATEGIC
6	Risk of customer dissatisfaction	STRATEGIC
7	Insecurity and investment costs stemming from frequent changes in system design and legislation	STRATEGIC
8	Natural hazard risk	EXTERNAL
9	Risks concerning the perception in social media and press created by groups opposing the supplementary pension system	STRATEGIC
10	Risk of damage to system infrastructures as a result of cyber attacks	INFORMATION TECHNOLOGIES

## Risks by Impact Level

Risk definitions were sorted based on respondent evaluations of impact level on a scale of 1 to 10. The top ten risks are presented in Table 2.

**Table 2 Top 10 Risks by Impact Level**

Rank	Risk Definition	Type of Risk
1	Potential improvements and changes in state incentives to the system	STRATEGIC
2	Perception of lower returns compared to alternatives	PORTFOLIO MANAGEMENT
3	Risks concerning the perception of system reliability	STRATEGIC
4	Risk of customer dissatisfaction	STRATEGIC
5	Relative insufficiency of retirement income from the system and negative perceptions of the system	PORTFOLIO MANAGEMENT
6	Risk of operating license revocation or bankruptcy for pension companies	STRATEGIC
7	Risk of sudden outflow of funds	STRATEGIC
8	Impact of potential fluctuations in the economy on new contract entries	EXTERNAL
9	Natural hazard risk	EXTERNAL
10	Risk of damage to system infrastructures as a result of cyber attacks	INFORMATION TECHNOLOGIES

## Risks by Degree of Probability

Risk definitions were sorted based on respondent evaluations of degree of probability on a scale of 1 to 10. The top ten risks are presented in Table 3.

**Table 3 Top 10 Risks by Degree of Probability**

Rank	Risk Definition	Type of Risk
1	Impact of potential fluctuations in the economy on new contract entries	EXTERNAL
2	Potential improvements and changes in state incentives to the system	STRATEGIC
3	Relative insufficiency of retirement income from the system and negative perceptions of the system	PORTFOLIO MANAGEMENT
4	Insecurity and investment costs stemming from frequent changes in system design and legislation	STRATEGIC
5	Natural hazard risk	EXTERNAL
6	Risks concerning the perception in social media and press created by groups opposing the supplementary pension system	STRATEGIC
7	Perception of lower returns compared to alternatives	PORTFOLIO MANAGEMENT
8	Risk of customer dissatisfaction	STRATEGIC
9	Missing opportunities due to the risk of over-regulation	OPERATIONAL
10	Risk of perception of the system fulfilling an individual's short-term needs versus the system's actual basis on long-term savings	STRATEGIC



## Notes on Risk Definitions in Tables

### **Potential improvements and changes in state incentives to the system**

This defines an opportunity that prompts evaluation of the impact of state incentives on industry growth, collection rates, and wider audience reach, and presents respective probabilities. In 2013, the tax advantage was redefined as direct state contribution of 25 percent of the payment amount, triggering a sizable increase in growth and improvement in performance indicators. Consequently, a potential improvement is expected to bear similar results, placing this definition on the top of the list.

### **Impact of potential fluctuations in the economy on new contract entries**

This refers to the risks of lower amounts of funds available for savings and withdrawal of current individual pension system savings to fulfill urgent needs should the pandemic economy continue for another year. However, it should be noted that the slow progress in vaccine development and the volatility of exchange rates at the time of the survey might have influenced respondent perception.

### **Relative insufficiency of retirement income from the system and negative perceptions of the system**

As the individual pension system is contribution-based, the retirement income from the system depends on the contribution amount and its returns. Participants may be dissatisfied if they made payments (widely) disproportionate to their expected pension income during their accumulation period and therefore could not receive the amount they expected in retirement. Their expression of this dissatisfaction through various communication channels might negatively impact others who lack basic information about the system.

### **Perception of lower returns compared to alternatives**

It is known that returns obtained in the system are often compared to widely used investment tools such as deposits and gold without consideration of factors such as risk level and differing payments. This comparison feeds the perception that returns in the system are lower than other investment tools and as financial literacy is substantially low in Turkey, as it is in the rest of the world, this perception might discourage participation in the system, while encouraging current participants to withdraw from the system.

### **Risks concerning the perception of system reliability**

Growth and improvement of private pension systems require continued trust in the system as it is a long-term structure and offers commitments for later years in life. With this in mind, industry stakeholders consider damage to the perception of reliability, a key and well-protected aspect of the system since its establishment, a substantial risk to system growth.

### **Risk of customer dissatisfaction**

As is known, private pension systems rely on regular payments and continuity to provide the expected benefits. Therefore, longer periods in the system is a global performance criterion in terms of meeting participant expectations of pension and minimizing corporate costs reflected on participants. Dissatisfaction with the system has become an important risk that needs to be addressed as social media interaction increases, reaching wider audiences.

## Notes on Risk Definitions in Tables

### **Insecurity and investment costs stemming from frequent changes in system design and legislation**

Previous changes and turning points in the individual pension system including state contribution, structural changes in deduction, and the auto enrollment system are significant factors to consider for industry managers, as the subsequent infrastructure changes inflict costs and impact short- and medium-term corporate projections and expectations.

### **Natural hazard risk**

Natural hazards directly affect business continuity, service provision capacity, income, and financial structure of all industries, including the individual pension system. Similarly, they may also impact the economy and human behavior, potentially reducing allocable savings amounts and prompting early withdrawal of individual pension system savings.

### **Risks concerning the perception in social media and press created by groups opposing the supplementary pension system**

An “artificial opposition” may be created through social media by groups radically opposing any and all reforms to the system based on political views, which may alter the overall perception of private pension systems. This ranks among the top ten risks to be monitored and addressed by the industry in the upcoming period.

### **Risk of damage to system infrastructures as a result of cyber attacks**

This is a growing threat induced by process digitalization and remote working practices and is considered a substantial risk as it might impact service continuity in all industries, including the individual pension system, and damage industry reliability.

### **Risk of operating license revocation or bankruptcy for pension companies**

While lower in probability thanks to firm supervision and audit mechanisms, this risk focuses on the possible impact on industry growth and potential damage to the perception of reliability of other companies in the industry rather than on direct consequences to participants, as participant funds are kept separate from corporate assets in individual accounts at Istanbul Settlement and Custody Bank.

### **Risk of sudden outflow of funds**

This risk includes the potential impact on pension companies of collective withdrawals from the system as well as negative consequences on the fund’s investment strategy, and accordingly, the returns for ongoing participants.

### **Missing opportunities due to the risk of over-regulation**

The risk refers to complex regulation and compliance requirements obstructing flexibility for creative ideas, initiatives and projects that might contribute to industry growth.

### **Risk of perception of the system fulfilling an individual’s short-term needs versus the system’s actual basis on long-term savings**

The individual pension system requires a long-term commitment to provide the expected benefits and to effectively implement appropriate investment strategies. This risk definition refers to the perception of the system as an ever-available investment tool to fulfill urgent short-term needs.

## Conclusion and Assessment

### State Incentives Are Considered the Most Important Growth Opportunity.

In 2013, 25 percent of contribution payments were redirected as state contribution and had a positive impact on industry growth. Aware of this impact, survey respondents seem to agree that a potential improvement in state support would be a major accelerator.

### Risks Related to Perception and Satisfaction Outmatched Operational Risks.

Four of the top ten risks by severity are correlated with “perception,” thus implying high awareness among respondents concerning the importance of the perception of reliability, a focus of the individual retirement system since the beginning.

It is noticeable that sales and marketing employees, closest to the field and comprising the majority of our respondents, consider risks pertaining to participants and public perception of higher importance.

Considering that system-specific operational risks stemming from the complex deduction structure, intercompany transfers and state contribution operations are not ranked in the top ten risks by severity; and that only six of the last ten risks are operational risks; and that not even employees in operations departments included operational risks in their top five risks indicates a widespread acknowledgment and perception that industry-specific operational risks are well managed.

### Respondent Answers May Have Been Affected by the Exchange Rate Volatility and Ongoing Pandemic at the Time of Survey.

Although the sudden rise in exchange rates at the time of survey somewhat affected the evaluations, it was the estimation that the pandemic economy would continue that carried economic risks higher on the agendas of all industries, including the individual pension system

### Risks Directly Related to the Pandemic Are Not Among the Top 10 Risks.

The risk defined as directly related to the pandemic that entered our lives in 2020 made it to the inventory only in 13th place by risk severity, 18th place by impact and 11th by probability. The belief that the majority of potential impacts had already come to pass and new developments regarding the vaccine likely influenced this evaluation.

### Internal Systems Departments and Regulatory and Supervisory Authorities Consider Cyber Risks Important.

Internal systems departments rank cyber risks higher than other departments. Management in regulatory and supervisory authorities also give higher priority to cyber risks.

It is noteworthy that Information Technologies employees surprisingly did not include cyber-risks in their top ten rankings of risk severity.

### Senior Management Risk Assessment Corresponds with Other Departments.

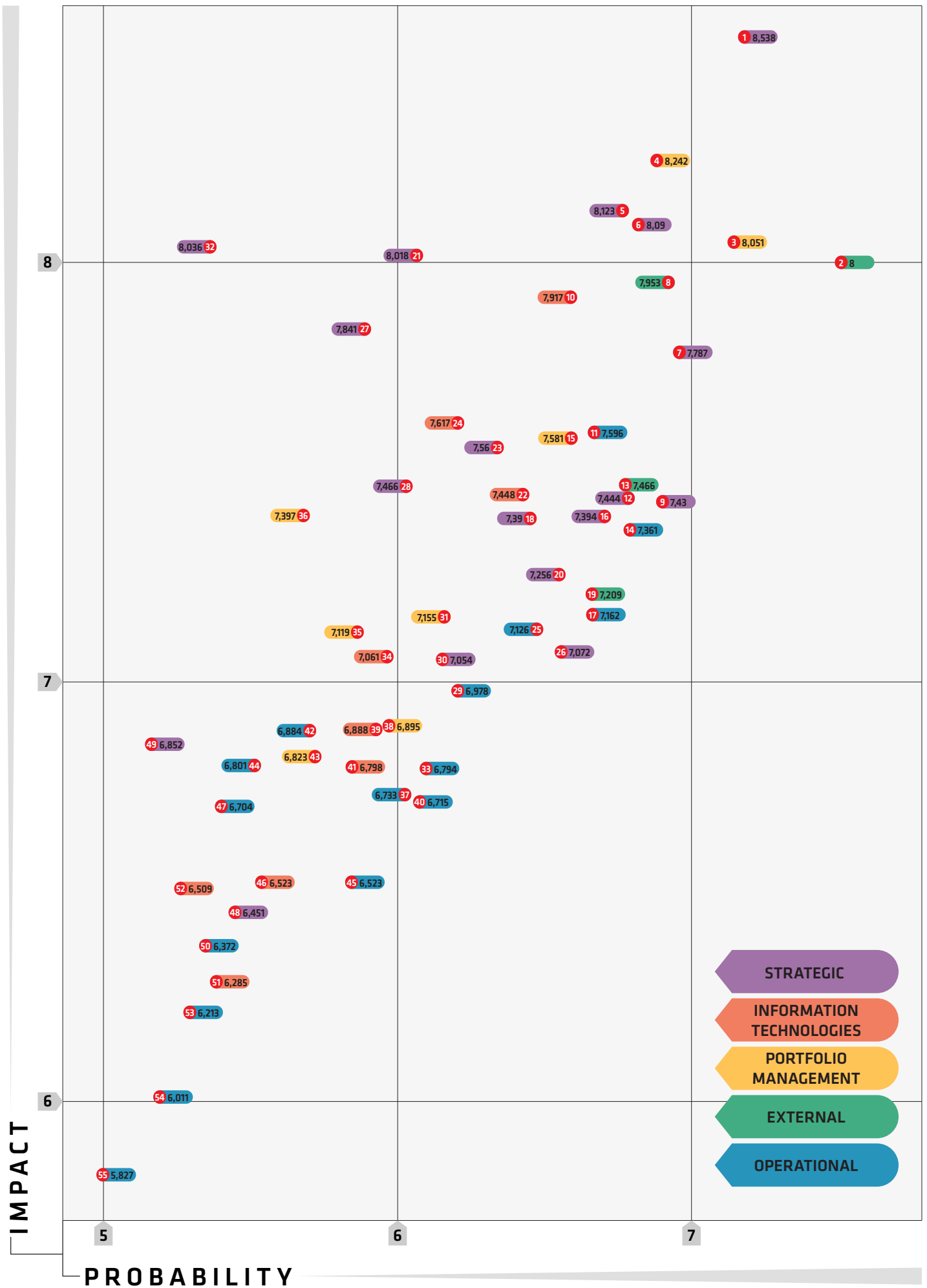
One of the striking points in the inventory is that the risk severity ranking of senior management substantially overlaps with that of other departments. This outcome indicates successful transfer of senior management’s approach to lower level employees and harmonization across departments.

Risk definitions related to potentially hindering impacts on fresh initiatives of complex regulations and brief legal periods for complying with new sub-regulations climbed higher in senior management rankings, unlike other departments.

### The Assessments of Women and Men on Natural Hazards and Cyber Risks Differ.

While men and women respondents defined the top two risks identically in terms of severity, cyber risks made it to the top ten in women’s lists but failed to do so in men’s. Likewise, natural hazard risk was included in the top ten by men, while it was not in the top ten for women respondents.

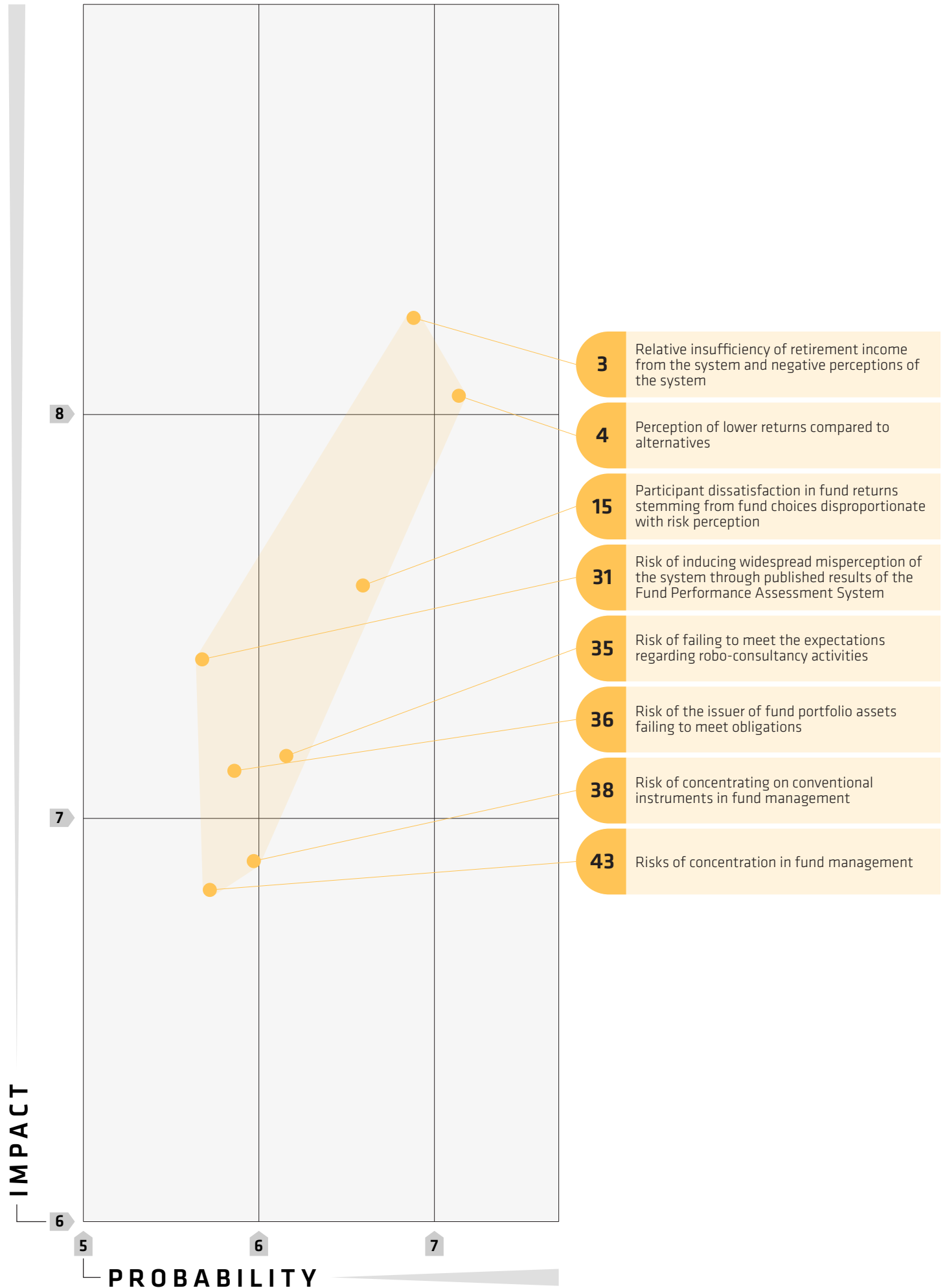
# APPENDIX 1. RISK MAP



# APPENDIX 1. RISK MAP / STRATEGIC RISKS



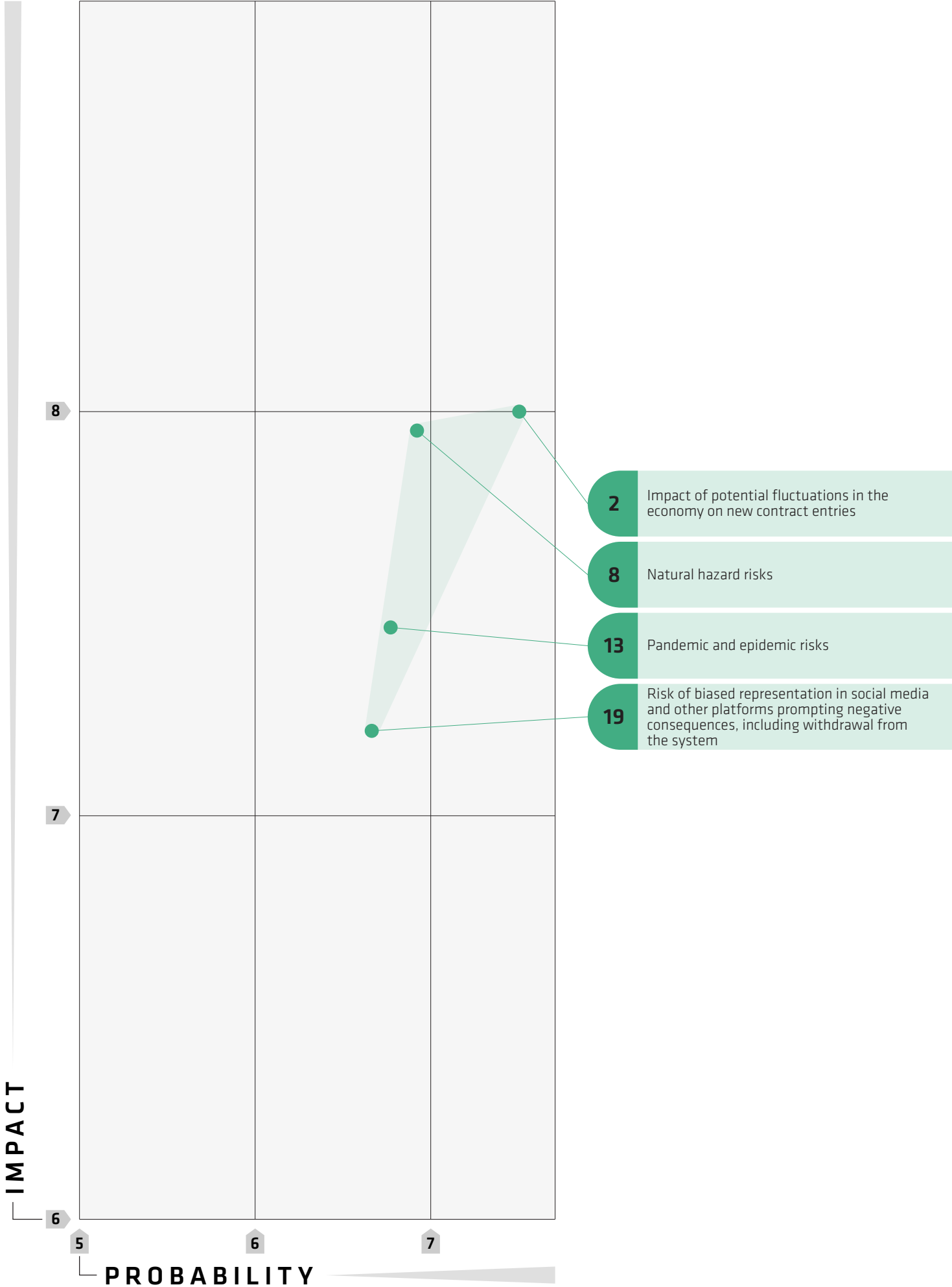
# APPENDIX 1. RISK MAP / PORTFOLIO MANAGEMENT RISKS



# APPENDIX 1. RISK MAP / INFORMATION TECHNOLOGIES RISKS

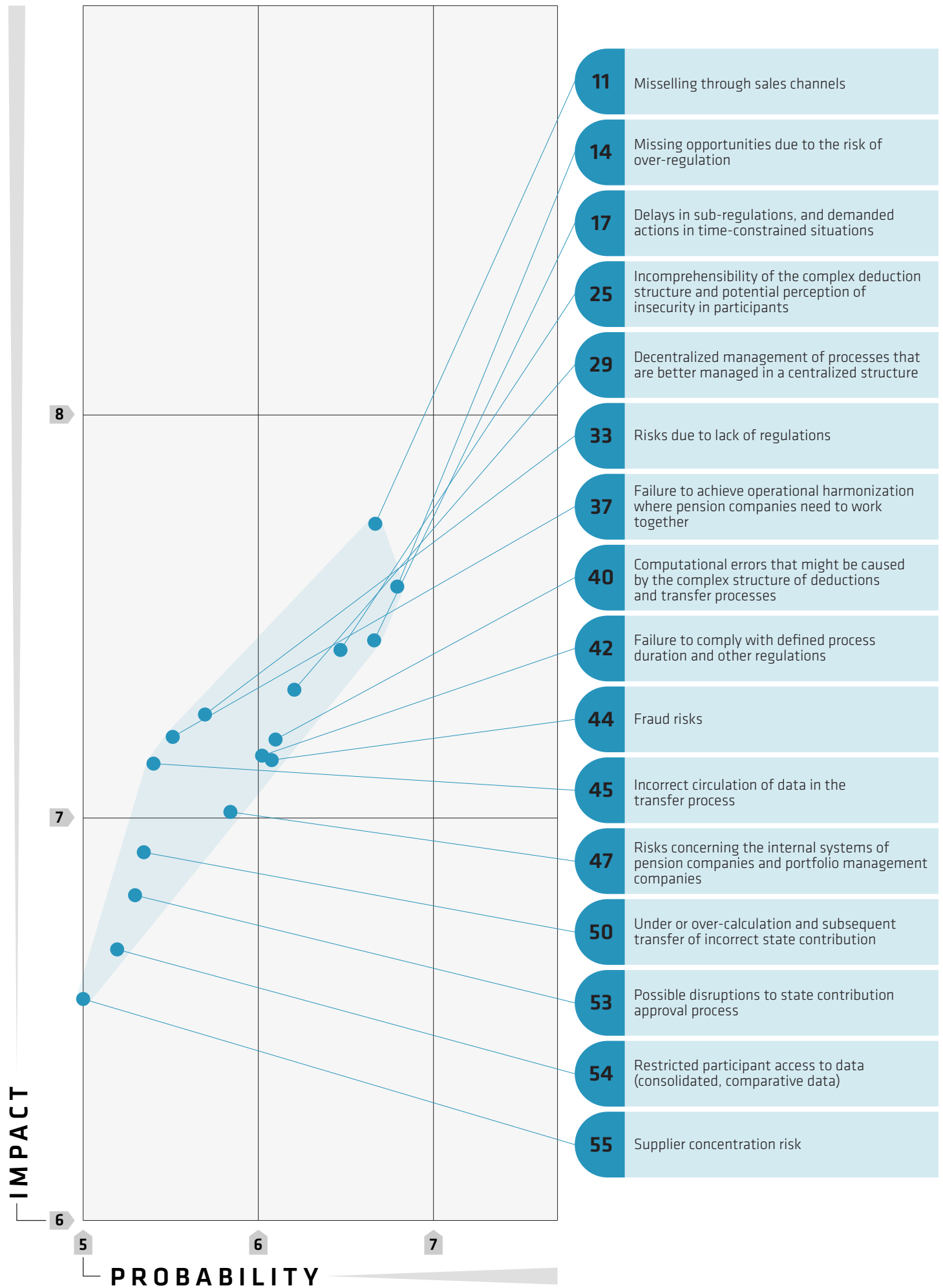


# APPENDIX 1. RISK MAP / EXTERNAL RISKS





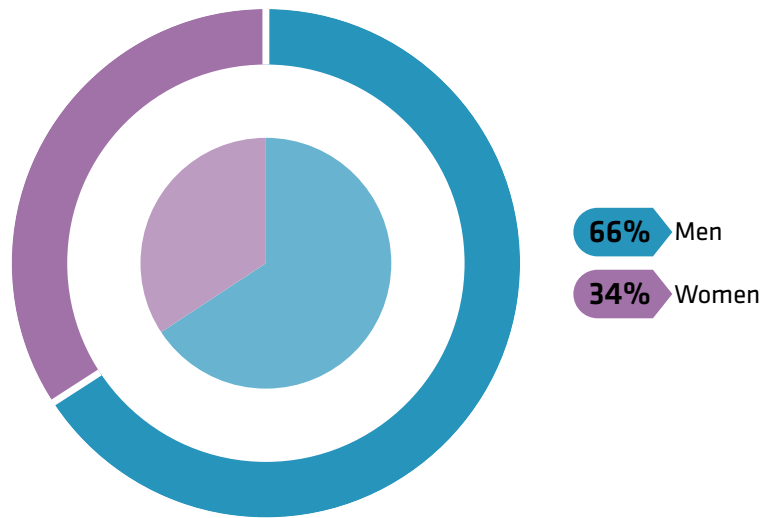
# APPENDIX 1. RISK MAP / OPERATIONAL RISKS



## APPENDIX 2. Profile of Survey Respondents

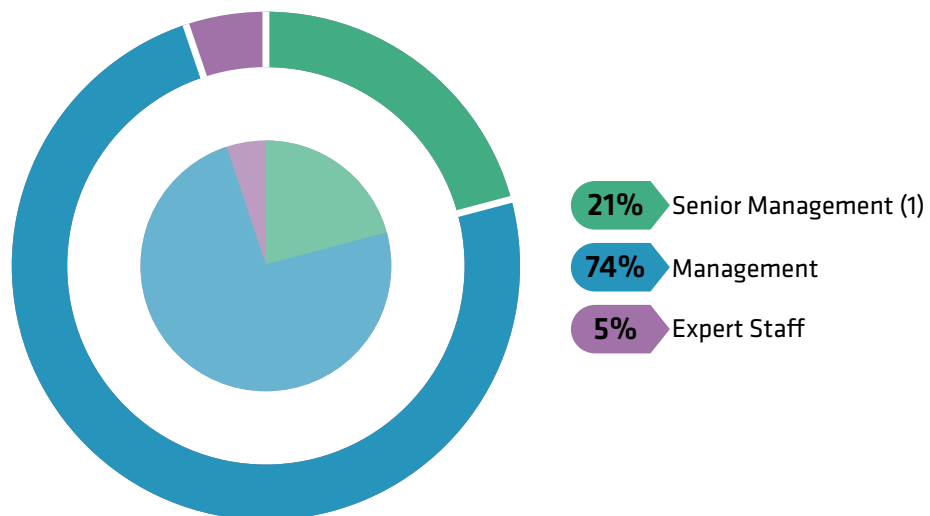
### DISTRIBUTION OF SURVEY RESPONDENTS BY GENDER

Of the 277 survey respondents, 95 are women and 182 are men.



### DISTRIBUTION OF SURVEY RESPONDENTS BY MANAGEMENT LEVEL

Of survey respondents, 74% are in management, while 21% are in senior management.

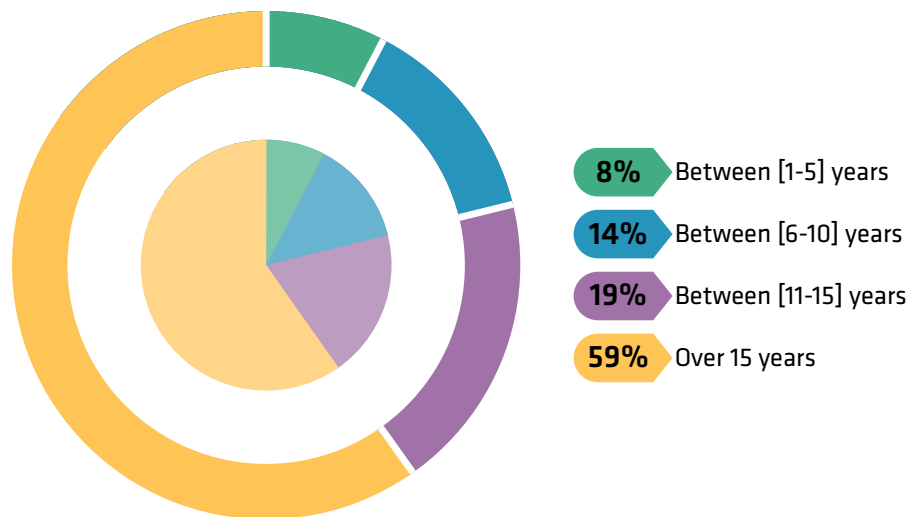


(1) Senior Management level refers to General Manager, CEO, CFO, CIO, CRO, Deputy General Manager, Director, Coordinator, Legal Consultancy, and senior management of Regulatory and Supervisory Authority.

## APPENDIX 2. Profile of Survey Respondents

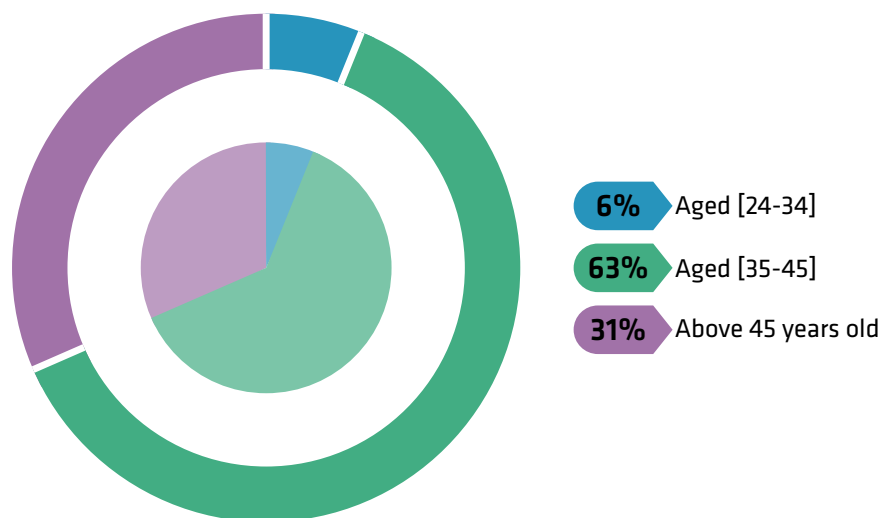
### DISTRIBUTION OF SURVEY RESPONDENTS BY INDUSTRY EXPERIENCE

Of survey respondents, 78% have over 11 years of industry experience.



### DISTRIBUTION OF SURVEY RESPONDENTS BY AGE

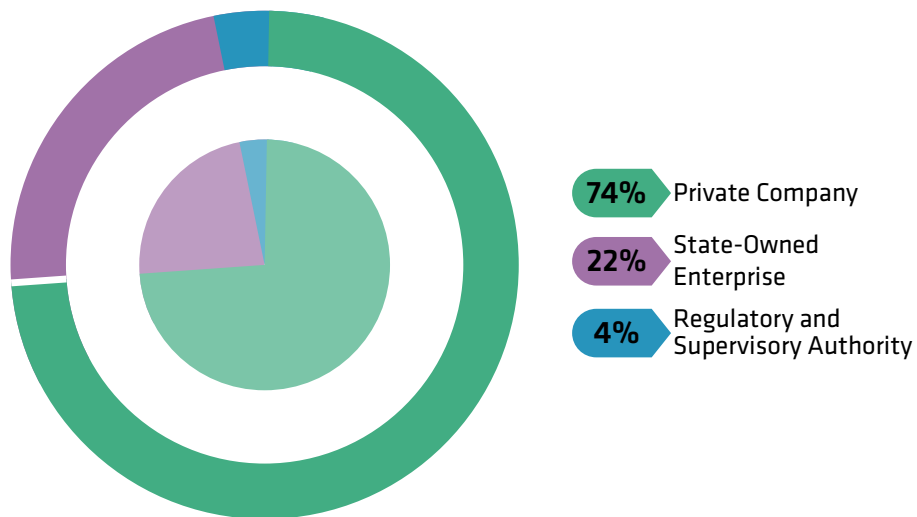
Of survey participants, 94% are aged over 35.



## APPENDIX 2. Profile of Survey Respondents

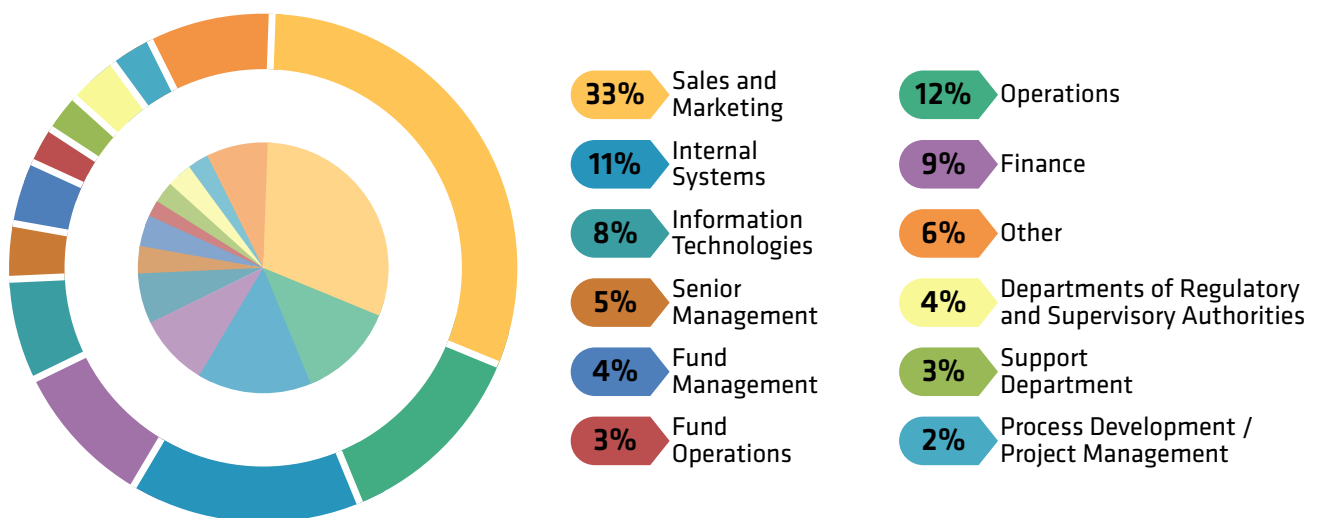
### DISTRIBUTION OF SURVEY RESPONDENTS BY EMPLOYMENT INSTITUTION

Of survey respondents, 74% work for private companies, 22% are public workers, and 4% work for regulatory and supervisory authorities.



### DISTRIBUTION OF SURVEY RESPONDENTS BY WORK DEPARTMENT

Of survey participants, 33% work in sales and marketing, 12% in operations, 11% in internal systems, and 9% in finance, and 8% in information technologies department.



This report  
was prepared and reviewed by the Internal Control and Risk Management and Internal Audit Departments of the Pension  
Monitoring Center based on workshop outcomes and survey results and was approved by the General Directorate.

Contact us on [https:// egm.org.tr/bize-ulasin/bize-yazin/](https://egm.org.tr/bize-ulasin/bize-yazin/) for further inquiries or suggestions concerning the report.

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