

# ENTERPRISE RISK MANAGEMENT HANDBOOK

## 1. Abbreviations

**ERM:** Enterprise Risk Management

**Akfen Group / Akfen Group of Companies:** Akfen Holding, Akfen Construction, Akfen HPP, Akfen Real Estate Investment Trust, Akfen Real Estate Investment Trust Russia

## 2. Purpose of the Procedure

The purpose of this procedure is to make the definition of the process of monitoring, controlling and following up of the risks that Akfen Group exposes /might expose to during activities.

Enterprise risk management provides identification of the significant risk of the companies, evaluation of control procedures, taking of the right amount of the right risks, managing these risks with appropriate processes and enabling the development of action plans to reduce risks to acceptable levels.

Enterprise risk management is a management and control tool and also it became a legal requirement with the new Turkish Commercial Code. This procedure also includes responsibilities of risk groups and functions to fulfill in order to achieve the objectives of ERM.

## 3. Akfen Group Enterprise Risk Management Program and Objectives

The objective of the Enterprise Risk Management Program is to ensure the creation of an environment of defined and measured risks and to give appropriate responses with the most effective and efficient techniques throughout the Akfen Group. Akfen Group takes both threats and opportunities into consideration during the enterprise risk management process.

As a standard procedure, companies should place the activities that will permit the consideration of the risks associated with the decision in their decision-making processes. A successful Enterprise Risk Management program is important to establish a dynamic structure.

Every company, department and employee is responsible for managing the risk in accordance with this procedure. While managing risk, all processes should be carried out in accordance with this procedure.

Companies should analyze and identify their risk reduction, risk transfer, risk acceptance and risk aversion capacities. This definitions should be consistent with the strategic objectives and risk appetite of the Companies.

Risk management programs are developed according to the corporate culture of companies. In this context, all the significant risk should be identified, prioritized, linked to strategic and operational objectives and evaluated.

Risk assessments begin with the perception of sector in which the company operates in, companies, strategies and targets of the departments as well as the outside / environmental impacts. Risk assessments result in detection of threats and opportunities and measurement of these threats and opportunities in line with the company's risk appetite. Ultimately, risk assessments provide companies with the conscious decisions on their risk mitigation, transfer, acceptance, receipt or aversion policies.

The main factor for the success of the risk management program is the support of all Akfen Group employees for the creation and maintenance of a corporate culture that is transparent and open to communication. After the launching of the Enterprise Risk Management program, performing of timely, open and sincere negotiations regarding risk will increase the risk awareness in companies.

Enterprise Risk Management program cannot be applied in a way that is contrary to the requirements of the applicable legislation. In the event of non-compliance of Enterprise Risk Management program with the requirements of applicable law, applicable laws have the priority.

## 4. Principles of Enterprise Risk Management at Akfen Group of Companies

- Risk management is the responsibility of everyone in the Akfen Group from senior management to employees at each unit of each department of each company.
- Akfen Group manages major risk at the level of all companies and departments by taking into consideration the balance of risk and opportunity.
- Companies carry out risk assessments regularly, being not less than once a year. Assessment of risky projects, activities, tasks and operational areas are carried out at more frequent intervals.
- In order to ensure the consideration of risk in decision-making stages, ERM program is integrated into the main processes such as strategic planning, business planning and operations management.
- ERM program is open to continuous improvement in order to reflect the needs of companies and the best practices of the industry.
- Policies and procedures of Akfen Group of Companies in other areas must comply with approaches described in this procedure.

## 5. Definitions

**Workshop:** A disciplined tool for idea generation and decision-making, providing a group to produce efficient solutions together.

**Natural (internal) Risk:** The risk that stems from the nature of the work of the relevant activity / process without regard to the controls performed and effects of those controls.

**Escalation:** To move it to the top / to inform top authorities.

**Impact:** The natural degree of risk faced before no action is taken and no controls are designed.

**Opportunity:** The probability of the occurrence of an event that creates a positive impact on the Company in achieving its objectives.

**Residual Risk:** The ongoing risk after prevention and control measures.

**Key Performance Indicator (KPI):** A measure that is used to calculate the past performance and increase the future performance.

**Enterprise Risk Management:** a mechanism that provides stability in the organizations by making it possible to identify, prioritize, mitigate and measure the effects of the decisions.

**Risk:** the uncertainty regarding losses and gains across the organization encountered as a result the choices and decisions.

**Risk Openness:** Refers to the residual risk. Residual risk is the ongoing risk after prevention and control measures.

**Early Detection of Risk Committee:** Pursuant to the new Turkish Commercial Code that entered into force as of July 1, 2012, the committee that publicly listed companies are obliged to set up and non-public joint stock companies are obliged to set up if deemed necessary by the independent auditors and that reports to the Board of Directors every two months about the potential risk.

**Risk Appetite:** the "expression of acceptable and unacceptable risks" by the management. Risk appetite reflects a company's "eagerness to assume risk" in conjunction with its risk-taking capacity.

**Risk Capacity:** A company's "risk resistance and toleration" ability.

**Risk Category:** Pre-defined risk groups that help identification, assessment and measurement of risks.

**Risk Portfolio:** Inventory of risks that the companies systematically identified and listed.

**Risk Response:** To choose of one of the actions among risk aversion, risk transfer, risk acceptance or risk reduction.

**Risk Tolerance:** The degree of acceptable deviation from the objectives set in relation to each of the main risks to achieve a company's strategic and operational goals.

**Risk Transfer:** Undertaking of a part or all of the risk by other party or parties.

**Risk Mitigation:** To reduce the possibility of occurrence of adverse effects and/or potential losses with the help of appropriate controls.

**Risk Acceptance:** To accept/undertake a risk by knowing / unknowing of losses that may occur as a result of the materialization of the risk.

**Risk Aversion:** Not to start / to avoid activities that cause the revealing or increasing of the risk. This might result in an increase of the significance of the other risks or loss of opportunities.

Risks that a company is facing can be classified in many different ways. This classification is significantly affected by the structural and sectorial characteristics of the business.

Risk can be classified under different headings.

- Financial risk
- Operational risk
- Strategic risk

**Financial risk:** Financial risk is the risk that might arise as a result of the organization's financial position and preferences. Financial risk includes risk to relating credit, interest rate, cash, financial markets and commodity prices.

**Operational risk:** Operational risk is the risk that might prevent the fulfillment of an organization to perform its core business activities. Risk relating to procurement, sales, product development, information management, legal affairs and brand management are some of the risks included in this category.

**Strategic risk:** The structural risks that might prevent an organization to achieve its short, medium or long term objectives are classified under this heading. Risk relating to planning, business model and business portfolio, corporate governance is market analysis are typical examples of strategic risks.

## 6. Vision, Mission and Strategies of Akfen Group Enterprise Risk Management Program

Vision, mission and strategies, which are determined for enterprise risk management of the Akfen Group of Companies, are described below.

### *Vision of Akfen Group Enterprise Risk Management*

To identify and measure the risk portfolio of Akfen Group of Companies and to raise awareness of all employees on this issue, to contribute to sustainable growth by evaluating the risks as a whole.

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### *Mission of Akfen Group Enterprise Risk Management*

To ensure a reasonable degree of assurance in identification, assessment and appropriate management of the risks and opportunities faced by Akfen Group of Companies during their activities in a systematic and effective way, to make risk management an integral part of the strategic decision-making process and the corporate culture.

### *Strategies of Akfen Group Enterprise Risk Management*

- To provide an effective enterprise risk management organization and to determine roles and responsibilities
- To ensure that risk management is in line with corporate strategies
- To ensure the implementation of corporate risk management in all group companies on a consistent basis
- To apply enterprise risk management program on a regular basis, to contribute to the developments of the necessary improvements in light of evaluations.

Risk appetite was determined on the basis of the scales shown in the following table.

**Table 1. Risk Appetite Scale**

	Open to risk	Risk-tolerant	Risk-neutral	Moderately risk-averse	Risk-averse
<b>Philosophy regarding risk taking</b>	Risk taking is perceived as part of the strategy of the company.	The company demonstrates an aggressive approach to take on risk.	The company demonstrates a balanced approach to take the risk.	The company demonstrates a cautious approach to take the risk.	The company accepts the lowest risk as possible.
<b>Risk-return relationship</b>	Exposure to risk in exchange for big returns is acceptable.	More priority is given targeted returns than the amount of the risk.	Risk and return objectives are of equal importance.	More priority is given to risk management targets than the returns.	Forgo high returns for more risk prevention.
<b>Preferred risk respond approach</b>	Risks are accepted to the fullest extent permitted by law.	The choice between accepting and controlling the risk is based on internal criteria / measures.	There is no preferred approach to respond to risk.	A choose made between the risk aversion and share with third parties (risk transfer).	The risks that cannot be effectively responded or transferred to third parties are avoided.
<b>Decision criteria to respond to risk</b>	No decision criterion is required to respond to risk.	Any action to respond the risk is taken only after a strong cost-effectiveness analysis is carried.	Action to respond to risk is taken according to the cost-effectiveness and priorities of management.	Action to respond to risk is taken by giving priority to the occurrence / emergence cost.	Action to respond to risk is taken even in cases where the cost of prevention of risk are more than the cost of occurrence / emergence of the risk.

While determining risk appetite, companies should focus on their risk portfolio consisting of the main risks. Risk appetite should be identified in operating basis, on the basis of group companies or products and on the strategic basis where possible.

Companies, by collecting their risk into different risk groups described above considering their main activity areas, may prefer to avoid some risks and to be open to some other risks.

### **7. Risk Appetite and Risk Tolerance Akfen Group**

Risk appetite refers to the "expression of acceptable and unacceptable risk" recommended by the Risk Committee and approved by the Board of Directors. In conjunction with a company's risk-taking capacity, risk appetite reflects the "eagerness to take risk". On the other hand, risk capacity is defined as a company's "risk resistance and toleration" ability. Therefore, a company's risk appetite should not be more than its risk-taking capacity and capability.

Among the factors to be considered in determining the risk appetite should be the factors such as risk philosophy of companies, business strategies, the total financial and operational risks and expectations of stakeholders and the relevant third parties such as regulatory authorities.

## 8. Roles and Responsibilities of Akfen Group Enterprise Risk Management

The executive bodies that have roles and responsibilities in the corporate risk management program of Akfen Group are as follows:

- General Managers of the Companies, Related Business Units, sector and topic-based experts in appropriate cases
- Risk Management Unit
- Risk Committee
- Board of Directors
- Internal Audit

**Table 2. Risk Management Roles and Responsibilities**

Task	Key Role and Responsibility
<b>Board of Directors</b>	<p>Key role and responsibility: <b>Approval</b></p> <ul style="list-style-type: none"> <li>• Approval of ERM policies</li> <li>• Approval of recommended risk appetite and risk tolerances</li> <li>• Approval of risk authorities</li> <li>• Approval of Risk Committee regulation and methodology</li> <li>• Approval of exceptions to the risk limit</li> <li>• Allocation of risk management resources</li> </ul>
<b>Risk Committee</b>	<p>Key role and responsibility: <b>Monitoring</b></p> <ul style="list-style-type: none"> <li>• Risk Committee also assumes the roles of Early Detection of the Risk Committee, as provided by the new Turkish Commercial Code.</li> <li>• To monitor risk management strategies and to provide them to be associated with the strategic plans of the company</li> <li>• To provide risk management strategies to meet the operational and legal obligations</li> <li>• To monitor risk trends at corporate-level</li> <li>• To provide recommendations on risk policies (including risk appetite) and risk limits</li> <li>• To monitor ERM program and improvement efforts</li> <li>• To perform periodic reporting to the Board of Directors</li> </ul> <p>The purpose of the Risk Committee: To assure the occurrence or probability of occurrence of a major event / change is reported to the management (Board of Directors).</p>
<b>Company Risk Officers (General Managers and Related Business Units)</b>	<p>Key roles and responsibilities: <b>Taking and Managing Risk</b></p> <ul style="list-style-type: none"> <li>• As a minimum, participating annual risk assessment</li> <li>• Performing periodic updates of the risks of their Companies</li> <li>• Escalating the risk events identified during the period</li> <li>• Contributing to the process of identifying risk indicators and monitoring indicators</li> <li>• Making decisions about risk-taking (as defined by their level of competence)</li> <li>• Implementing improvement actions to reduce the risk</li> </ul> <p>Managing Directors may share with their teams / assigned employees the above given tasks subject in their companies, with the condition that the ultimate responsibility remain with themselves.</p>
<b>Risk Management Unit</b>	<p>Key roles and responsibilities: <b>Monitoring, Consolidating Data and Analysis</b></p> <ul style="list-style-type: none"> <li>• Controlling and operating ERM program in accordance with the methodology approved by the Board of Directors</li> <li>• Training all group on risk management and supporting their work</li> <li>• Gathering of risk information, analyzing and preparing regular reports</li> <li>• Receiving information regularly regarding risk from department leaders</li> <li>• Supporting decisions of the Risk Management Committee via reports and data flow</li> <li>• Performing continuous improvement activities to promote and enhance ERM techniques</li> </ul>
<b>Internal Audit Unit</b>	<p>Key roles and responsibilities: <b>Verification</b></p> <p>Giving independently reasonable assurance of</p> <ul style="list-style-type: none"> <li>• Internal controls,</li> <li>• action plans related to risk,</li> <li>• the effectiveness of the ERM program and</li> <li>• integrity and operability of risk models.</li> </ul>

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### 9. Working Principles of Enterprise Risk Management of Akfen Group

#### 9.1. Determination of ERM Framework and Content

- The organizational structure of the Corporate Risk Management and the roles and responsibilities are reviewed by Board of Directors on an annual basis and approved after the necessary amendments are made.
- Risk Management Unit creates the annual calendar of corporate risk management and submits to the Board of Directors via the Risk Management Committee. Enterprise Risk Management calendar is determined in accordance with Budget and Performance Evaluation calendar and related persons are notified in advance.
- Taking into account feedbacks during the year, Risk Management Unit draftly identifies the main framework of the risk assessment process, the main risk categories to be included in the coverage and the main risks, and presents for approval following the consultation of Risk Committee.
- Risk Committee determines draft risk categories, on the basis of companies, strategies, and the risk appetite and risk tolerances for specific issues, for the approval of the Board of Directors.
- Risk appetite is incorporated into risk portfolio at detail necessary using the following scale:

	Open to risk	Risk-tolerant	Risk-neutral	Moderately risk-averse	Risk-averse
<b>Philosophy regarding risk taking</b>	Risk taking is perceived as part of the strategy of the company.	The company demonstrates an aggressive approach to take risks.	The company demonstrates a balanced approach to take on risk.	The company demonstrates a cautious approach to risks.	The company accepts the lowest possible risk.
<b>Risk-return relationship</b>	Exposure to risk in exchange for big returns is acceptable.	More priority is given targeted returns than the amount of the risk.	Risk and return objectives are of equal importance.	More priority is given to risk management targets than the returns.	Forgo high returns for more risk prevention.
<b>Preferred risk respond approach</b>	Risks are accepted to the fullest extent permitted by law.	The choice between accepting and controlling the risk is based on internal criteria / measures.	There is no preferred approach to respond to risk.	A choose made between the risk aversion and share with third parties (risk transfer).	The risks that cannot be effectively responded or transferred to third parties are avoided.
<b>Decision criteria to respond to risk</b>	No decision criterion is required to respond to risk.	Any action to respond the risk is taken only after a strong cost-effectiveness analysis is carried.	Action to respond to risk is taken according to the cost-effectiveness and priorities of management.	Action to respond to risk is taken by giving priority to the occurrence / emergence cost.	Action to respond to risk is taken even in cases where the cost of prevention of risk are more than the cost of occurrence / emergence of the risk.

- The impact and risk openness criteria, which are used in the risk assessment process, are reviewed by the Risk Management Unit and the Risk Management Committee, if necessary, updated and submitted to the Board of Directors.

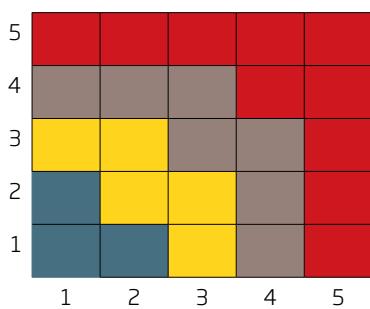
#### 9.2. Identification of Risk

- Corporate Risk Management Unit shares the main risk categories with Risk Officers of the companies and demands from them to provide with their current and future risks, which are to be used to create risk portfolio, in the format specified, by associating risk with these categories and creates the consolidated risk portfolio of Akfen Group of Companies using these information provided.
- Existing and potential risks identified during the year - in the newly created processes, during strategic decisions process, in other than routine cases or as a result of the internal audit - are added to the risk portfolio by the Corporate Risk Management Unit for the propose of reviewing in the future risk assessments.
- Of the existing risk in the Risk Portfolio; the ones no longer valid are removed and others need to be updated and revised.
- The root risks in the Risk Portfolio are associated with the related main risk and risk categories.

#### 9.3. Assessment of the Risks

- Risk Management Unit invites Company Risk Officers, the related unit managers, industry and sector experts to risk assessment workshops at a predetermined time frame.
- All the main risks in the risk portfolio and impact (financial, compliance / regulatory, reputation, impact on operations) and openness to risk (internal controls, fraud or error history, human resources, automation and integration) criteria are evaluated using the risk assessment model during these workshops.
- Following the assessment of risks on an individual basis, in particular the main risks based on the same root or have the same impact are subject to an additional assessment, as to the realization of their cumulative effect would do if they occur at different units or locations; and, if necessary, impact values will be updated accordingly.

- During the risk assessment process when assessing the impact criteria, internal (natural) risk is evaluated by ignoring of all available controls. The impact criteria, which are directly related to risk, are assessed and the impact criteria with the highest value during the calculation is considered to be the impact value of risk directly.
- Following the assessment of impact criteria, current situation and residual risk after existing controls are included as value in the calculation of the risk openness.
- After the assessment of impact and risk openness criteria for the whole risk portfolio and on the basis of all companies, risk is prioritized on an individual basis by considering the weights given to companies. The criterion that the weights are based on is the company's turnover, profit and number of personnel.
- The risk exposure values are determined according to the results of the impact and risk openness values. Accordingly:



**GRAPHIC VALUE AT RISK SCALE**

Low
Medium
High
Very high

- Risk reduction: Risk reduction is to develop controls in a way so as to minimize risk exposure levels and / or effects. This process also includes the acceptance of the residual risk and can be applied with the aim of reducing both the impact and risk openness values.
- Risk sharing: Risk sharing is to transfer a portion of the risk or a portion of the activities that result in the risk through contracts with third parties like customers, suppliers and insurance companies; and to undertake the residual risk. Especially for high-impact risks, this process is applicable.
- Risk Committee and the Risk Management Unit determine appropriate follow-up periods for the accepted risks and submits for the approval of the Board of Directors.
- When responding to risk, first the root reasons are understood of, the current controls are assessed, risk respond strategy is decided, the action plan is developed, a consensus on the plan is ensured with the parties that implement and approve the plan and the action plan is started.
- While responding to the risks, the following risk appetite and value at risk tables can be used.

Risk Appetite	Risk Response	Risk Acceptance	Risk Reduction	Risk Avoidance	Risk Transfer
Risk Vulnerable	Optional	✓	✓	✗	✗
Risk Tolerant	Optional	✓	✓	✗	✓
Indifferent to Risk	Mandatory	✓	✓	✓	✓
Avoiding Risk Moderately	Mandatory	✗	✓	✓	✓
Avoiding Risk	Mandatory	✗	✓	✓	✓

Value at Risk	Risk Acceptance	Risk Reduction	Risk Avoidance	Risk Transfer
Low	✓	✓	✓	✓
Medium	✓	✓	✓	✓
High	✗	✓	✓	✓
Very high	✗	✓	✓	✓

#### 9.4. Responding to Risk

- The Risk Management Unit determines a response to each risk assessed and prioritized in conjunction with the companies' risk officers, considering risk appetite and risk tolerances. The risk response might be in the form of risk avoidance, risk acceptance, risk reduction or risk sharing depending on the risk appetite and value at risk resulting from the risk assessment.
- The respond to each risk may be a combination of one or more of the methods detailed below.
- Risk aversion: Risk aversion is to redesign business processes so as to avoid specific risk or avoidance of activities that cause an exposure to risk. In cases where the benefit to be gained from risk reduction or risk sharing is greater than the cost, to avoid rather than to take the risk might be appropriate.
- Risk acceptance: In case of risk acceptance, management might accept the risk and take no action to reduce the level of risk exposure. Risk awareness and monitoring is required. For this type of risk, a follow-up period should be determined and the risk should be re-evaluated at the end of this period. Risk acceptance is deemed applicable to especially in cases with high cost of action against the risk and in terms of determined risk appetite the consequences of risk are of to be in acceptable level and possible advantages of the return on risk are to be visible.

#### 9.5. Taking Actions to Mitigate Risks and Control of Effectiveness

- As a result of the risk assessment method, especially for the risks decided to be mitigated in response, controls are designed, and responsible and the delivery dates are determined for corrective actions.
- During Risks assessments, the functioning of the existing controls are audited by the tests run by Internal Audit function and any identified areas for improvement are shared with the companies' Risk Officers and Risk Management Unit.
- Following the risk assessment, responses and actions to be taken against the prioritized risks are submitted to the Board of Directors via the Risk Management Committee.

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### 9.6. Monitoring, Assurance, Reporting and Continuous Improvement

- Risk Management Unit gives training on enterprise risk management to all Akfen Group Companies at least once a year and supports the work of companies' risk officers and if necessary, the relevant industry and sector experts throughout the year.
- Each risk should be monitored until it decreases, loses validity, or realizes and removed from the risk portfolio at the end of the specified conditions.
- Monitoring and re-evaluation work is performed for accepted risk at intervals approved by the Board of Directors.
- In order to maintain the effectiveness of the Enterprise Risk Management, it should be audited by Internal Audit Function once a year and the assessment of whether the applications performed in accordance with the set objectives and the methodology should be carried out. As per the new Turkish Commercial Code, the work of the Early Detection of Risks Committee is evaluated by independent auditors.
- All stakeholders are encouraged to propose their improvement suggestions according to continuous improvement of Enterprise Risk Management process. While preparing the annual report at the end of each year, the lessons learned during the implementation of the Enterprise Risk Management in the previous year, identified points of improvement and the best practices learned are determined and shared with all group companies.

#### Enterprise Risk Management Reports

Subject of the Report	Reporting Period	Report prepared by	Authority the Report prepared for
Working Calendar and Methodology of Enterprise Risk Management	Annual	Risk Management Unit	Risk Management Unit Board of Directors via Risk Committee
Updating of Procedure	Annual	Risk Management Unit	Board of Directors via Risk Committee
Risk Assessment Results (Comparative)	Annual	Risk Management Unit	Board of Directors via Risk Committee
Action Follow-up Report	2 Months	Risk Officers of Companies / Risk Management Unit	Risk Management Committee
Risks Early Detection Report	2 Months	Risk Management Committee via Corporate Risk Management Unit	Board of Directors
Risk-Special Investigation Report	When needed	Risk Officers of Companies / Risk Management Unit	Risk Management Committee / Board of Directors
Enterprise Risk Management Annual Report	6 Months	Risk Management Unit	Board of Directors via Risk Committee

Companies initiated the enterprise risk management program and managed to make a standard part of the company's culture are able to assess opportunities while also assessing the risk and manage them as well as risk in a systematic manner. After the enterprise risk management program was initiated by Akfen Group and became a standard process starting from the stage of risk detection, the inclusion of opportunities as well as risk to all working steps is important in terms of getting closer to best practices.

With the entry into force of enterprise risk management program with this procedure, company risk officers and all employees are responsible for reporting/informing the Enterprise Risk Management Unit the risks well as the opportunities that might benefit Akfen Group, in the condition of being compatible with the laws.

### 10. Workflow of Enterprise Risk Management Process

The main steps of Enterprise Risk Management are as follows:

**Figure 1.** ERM Process General Business Flow Diagram

