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The role of risk analysis in capital budgeting decisions: A comparative study of high vs. low-risk industries

Rola analizy ryzyka w decyzjach budżetowania kapitałowego: badanie porównawcze branż wysokiego i niskiego ryzyka

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Abstract:

Research objectives and hypothesis/research questions

The study aims to examine the role of risk analysis in capital budgeting decisions, compare the use of risk analysis techniques between high-risk and low-risk industries, identify barriers to effective risk integration, and assess the influence of organizational risk culture on investment decisions. It is hypothesized that advanced risk analysis techniques significantly influence capital budgeting decisions and are more prevalent in high-risk industries than in low-risk industries.

Research methods

The study employs a comparative cross-sectional survey design with an analysis of risk analytics implementation during capital budgeting within high-risk industries, including oil and gas, pharmaceuticals, and ICT sectors, as well as low-risk industries, including utilities, consumer goods, and real estate.

The designed framework enables direct time-based analysis between risk assessment methods without changing any test variables.

Main results

Findings indicate that high-risk industries such as oil and gas and technology employ sophisticated risk analysis methods, including sensitivity analysis, scenario planning, and Monte Carlo simulations, which strongly influence project approval decisions. In contrast, low-risk industries, including education and utilities, rely mainly on NPV and IRR due to conservative risk cultures and limited technical expertise. Major barriers identified include inadequate data, a shortage of skilled personnel, and insufficient training.

Implications for theory and practice

The study contributes to financial decision-making theory by emphasizing industry-specific risk alignment in capital budgeting. Practically, it recommends investment in advanced risk assessment systems, workforce training, and strong data infrastructure to improve strategic investment outcomes.

Keywords:

capital budgeting, risk analysis, high-risk industries, investment decisions, financial management

Abstrakt:

Cel badań i hipotezy/pytania badawcze

Celem jest zbadanie roli analizy ryzyka w decyzjach budżetowania kapitałowego, porównanie stosowania technik analizy ryzyka między branżami wysokiego i niskiego ryzyka, identyfikacja barier w skutecznej integracji ryzyka oraz ocena wpływu kultury ryzyka organizacyjnego na decyzje inwestycyjne. Hipoteza głosi, że zaawansowane techniki analizy ryzyka znacząco wpływają na decyzje budżetowe i są bardziej powszechne w branżach wysokiego ryzyka niż w branżach niskiego ryzyka.

Metody badawcze

Badanie wykorzystuje porównawczy projekt badania przekrojowego z analizą wdrożenia analityki ryzyka podczas budżetowania kapitałowego w branżach wysokiego ryzyka, w tym w sektorach nafty i gazu, farmacji oraz ICT, a także w sektorach niskiego ryzyka, w tym w sektorach użyteczności publicznej, dóbr konsumpcyjnych i nieruchomości. Zaprojektowane ramy umożliwiają bezpośrednią analizę opartą na czasie między metodami oceny ryzyka, bez zmiany zmiennych testowych.

Główne wyniki

Wyniki wskazują, że branże wysokiego ryzyka, takie jak ropa i gaz oraz technologia, stosują zaawansowane metody analizy ryzyka, w tym analizę wrażliwości, planowanie scenariuszowe oraz symulacje Monte Carlo, które silnie wpływają na decyzje dotyczące zatwierdzania projektów. Dla porównania, branże niskiego ryzyka, w tym edukacja i przedsiębiorstwa użyteczności publicznej, opierają się głównie na NPV i IRR ze względu na konserwatywne kultury ryzyka i ograniczoną wiedzę techniczną. Główne zidentyfikowane bariery to niewystarczające dane, niedobór wykwalifikowanego personelu oraz niewystarczające szkolenie.

Implikacje dla teorii i praktyki

Badanie przyczynia się do rozwoju teorii podejmowania decyzji finansowych, kładąc nacisk na dopasowanie ryzyka specyficznego dla branży w budżetowaniu kapitałowym. W praktyce zaleca się inwestycje w zaawansowane systemy oceny ryzyka, szkolenia pracowników oraz solidną infrastrukturę danych w celu poprawy strategicznych wyników inwestycyjnych.

Słowa kluczowe:

budżetowanie kapitałowe, analiza ryzyka, branże wysokiego ryzyka, decyzje inwestycyjne, zarządzanie finansami

Introduction

Background of the study

The assessment of long-term investment prospects to find out their financial feasibility makes up a core component in financial decision processes. Investors

need to consider risk elements during decision-making because the global economy possesses both volatility and uncertainty. Risk analysis acts as a fundamental practice in capital budgeting because it helps companies estimate and evaluate future cash flow and investment return uncertainties (Gitman, Zutter, Smart, 2022).

Each sector presents different levels of risk within its operational environment. Multiple sectors, including oil and gas and technology, together with biotechnology, face persistent market demand shifts along with regulatory adjustments as well as technological breakthroughs, which increase their organisational risks. The operational stability of low-risk industries, including utilities and education along with healthcare, continues to be high in terms of revenue performance and operating conditions (Brigham, Ehrhardt, 2021). The separate business environments dictate specific methods that organizations in different industries use for project investment evaluation and risk management.

Different assessment methods exist to analyze risks during capital budgeting processes. Capital budgeting tools such as sensitivity analysis, scenario analysis, Monte Carlo simulation, and discount rate adjustment based on risk levels enable decision-making according to Brealey, Myers, and Allen (2019). The right implementation of such tools enables decision-makers to evaluate alternatives while determining project financial exposure before making informed investment choices. Risk analysis stands as a variable component in capital budgeting implementation, which shows a direct correlation to the market risk tolerance of each particular industry.

We therefore set out to study how risk analysis works in capital budget decisions for risky versus safe industries through this research. This type of comparison serves as a foundation to develop distinctive financial management methods aimed at guiding practices specifically in industries and traditional business operations.

Statement of the problem

The vital role of risk analysis in capital investment decisions gets less understanding regarding how different industries handle its application based on their risk profiles. Current investigations examine capital budgeting tool implementation mainly from a technical perspective instead of analyzing how contextual industry risk affects their utilization (Graham, Harvey, 2001). However, threat analysis becomes less vital to firms with low-risk exposure, while high-risk organizations show mixed results between proper analysis implementation and superficial use of risk analysis without meaningful decision support.

Furthermore, insufficient study about the systematic use of risk analysis throughout different industries within capital budgeting produces empty areas of knowledge that risk generating suboptimal investment results. Studying how risk integration works within capital budgeting decisions needs evaluation according to industry-specific conditions to optimize both efficiency and robust investment decision-making.

Research questions

This study is guided by the following research questions:

1. How is risk analysis integrated into capital budgeting decisions in high-risk industries compared to low-risk industries?
2. What are the most commonly used risk analysis techniques across different industries, and how effective are they?
3. How does the level of industry risk affect the risk preferences and investment behaviors of firms?
4. What challenges and limitations do firms encounter when applying risk analysis in capital budgeting?

Significance of the study

This research is important for several reasons. Firstly, it will provide financial managers and decision-makers with valuable insights into how capital budgeting practices can be improved by tailoring risk analysis strategies to specific industry conditions. Secondly, the study contributes to the academic literature by offering a practical comparison of risk analysis applications in both high-risk and low-risk settings, thereby filling a notable gap.

Additionally, the study may influence policy and regulatory efforts aimed at standardizing best practices in capital budgeting while allowing for industry-specific adaptations. Lastly, it will serve as a useful resource for investors, analysts, and scholars interested in understanding how risk factors are operationalized across sectors, potentially informing more strategic investment and portfolio decisions.

1. Literature review and theoretical framework

1.1. Literature review

This study aims to explore how risk analysis informs capital budgeting decisions, comparing its application between high-risk and low-risk industries. Capital budgeting is a cornerstone of strategic financial planning, and in environments with varying degrees of uncertainty, the role of risk analysis becomes even more pivotal. The literature reveals a consistent trend: companies operating in high-risk sectors tend to adopt more sophisticated capital budgeting tools than their counterparts in less volatile industries.

Mota and Moreira (2023) examined capital budgeting behaviors across sectors and found that firms in high-risk environments employed advanced decision-making models such as real options and probabilistic forecasting. These tools enabled

them to account for uncertainties and better manage investment outcomes. In contrast, companies in lower-risk industries generally relied on more basic methods like the payback period or simple NPV calculations. This disparity illustrates how industry-specific risk perception influences the depth and complexity of investment appraisal techniques.

In support of this trend, Andor, Hilletoft, Skoglund et al. (2022) conducted a longitudinal analysis over five decades, concluding that techniques like sensitivity analysis, scenario planning, and Monte Carlo simulations have become mainstays in risk-aware industries. Their findings reinforce the notion that choosing risk analysis tools should not be generic but tailored to the firm's level of exposure. However, a critical oversight persists – many small and medium-sized enterprises (SMEs), particularly in developing countries, continue to avoid these advanced tools.

Eferakeya, Enakirerhi, and Erhijakpor (2022) investigated risk evaluation practices among Nigerian SMEs and discovered a heavy reliance on rudimentary tools, often restricted to payback period and IRR. These SMEs rarely incorporated scenario analysis or stochastic modeling due to limited technical capacity. The absence of holistic risk assessment frameworks potentially leaves such businesses vulnerable to shocks, revealing a gap that policy interventions and capacity-building programs must address.

The link between risk governance structures and capital budgeting outcomes has also drawn scholarly attention. Erin, Ajibolade, and Ogundajo (2020) emphasized the importance of institutionalized risk management systems, such as the presence of Chief Risk Officers and active risk oversight committees. Their study, based on Nigerian financial institutions, showed that such governance frameworks improve decision-making quality and translate into superior financial performance, especially under constrained environments.

Similarly, Uwalomwa, Uwuigbe, Olayemi et al. (2023) explored how corporate risk disclosure practices influence investment decisions. Their findings revealed that while financial risk disclosures enhanced investor trust and improved performance, disclosing operational risks often had adverse effects. This distinction highlights the importance of strategic communication – how and what is disclosed significantly affects stakeholder perception and, consequently, capital budgeting decisions.

The relevance of Enterprise Risk Management (ERM) frameworks is further underscored by Ade, Bamigboye, and Arumona (2020), who examined SME survival in Lagos State. Their findings showed that ERM practices led to better risk identification and mitigation, increasing the likelihood of sustainability among small businesses. However, implementation remains inconsistent, mostly due to knowledge gaps and inadequate support systems.

The study by Igbojioyibo (2024) extended this line of inquiry by focusing specifically on financial risk management in Nigerian SMEs. His research revealed that many SMEs struggled to even identify financial risks, let alone develop mitigating

strategies. This inability affects their long-term growth and can undermine investor confidence, which is vital for capital-intensive projects.

Mogaji and Daniel (2024) provided further insight into working capital management and its impact on SME performance. Their study of businesses in Abuja showed a direct correlation between prudent working capital strategies and improved business sustainability. suggests that sound financial planning, including risk-adjusted budgeting, remains essential for operational efficiency.

Government policy also plays a significant role in shaping capital budgeting outcomes, particularly for SMEs. Egbiide, Uwuigbe, and Uwuigbe (2013) found that policy interventions in Nigeria often lacked coherence, with SMEs citing inadequate funding access and unclear regulatory frameworks as major constraints. These barriers discourage the adoption of robust capital budgeting tools, thus perpetuating inefficiencies.

In Benin City, Idehen (2020) observed that SMEs commonly lacked the financial literacy needed to engage with sophisticated investment evaluation techniques. As a result, many defaulted to simplistic criteria, such as intuition or basic payback calculations. While may offer convenience, it fails to adequately address long-term investment uncertainties, especially in increasingly dynamic market environments.

Supporting the broader theoretical underpinnings, Investopedia (2015) emphasized the structure of Risk Management Frameworks (RMFs) as essential in guiding firms through the full risk cycle from identification to mitigation and governance. A strong RMF supports strategic planning, minimizes uncertainty, and enhances capital allocation efficiency. It bridges the gap between risk awareness and actionable financial decisions, making it indispensable in modern financial management.

Taken together, the reviewed literature affirms the centrality of risk analysis in shaping capital budgeting decisions, especially in environments characterized by uncertainty. High-risk industries benefit from proactive and data-driven strategies, while low-risk sectors and SMEs often lag in adopting such methods, largely due to institutional, educational, and policy-related barriers. The implication is clear: for risk-informed capital budgeting to become the norm, tailored interventions, capacity development, and governance reforms are necessary. More importantly, both private and public sector actors must collaborate to close the skill and awareness gap, especially in developing economies.

1.2. Theoretical Framework

This study relies on Modern Portfolio Theory (MPT), Prospect Theory, and Agency Theory as its primary theoretical foundation to investigate capital budgeting within uncertain and risky environments.

Modern Portfolio Theory (MPT)

The risk optimization method known as MPT was first introduced by Harry Markowitz in 1952, where diversification stands as a fundamental principle (Markowitz, 1952). MPT justifies including risk analysis methods, including sensitivity analysis, together with scenario planning and Monte Carlo simulations for capital budget decisions about long-term investments. It becomes essential to include this analysis when comparing businesses that operate at different levels of natural volatility.

Prospect Theory

The decision-making behavior of investors under risk situations is explained through Prospect Theory created by Kahneman and Tversky (1979). According to the theory, both gains and losses hold different value weights, with individuals prioritizing loss potential more than potential gains (loss aversion). The theory demonstrates its importance for capital budgeting decisions because risk-averse managers in low-risk environments will choose to skip projects with high uncertainty despite their positive net present value (NPV).

Agency Theory

Jensen and Meckling (1976) established the Agency Theory to examine how information discrepancies along with differing risk levels alter managerial investment choices regarding shareholders and company owners. A manager is likely to avoid dangerous projects if pay or employment stability depends on current performance targets, which results in altered risk factors in budgetary practices.

These theories help organizations understand different dimensions of how firms in high-risk and low-risk sectors handle their investment risks when budgeting capital.

2. Methodology

2.1. Research design

The study employs a comparative cross-sectional survey design with an analysis on risk analytics implementation during capital budgeting within high-risk industries, including oil and gas, pharmaceuticals, and ICT sectors, as well as low-risk industries, including utilities, consumer goods, and real estate. The designed framework enables direct time-based analysis between risk assessment methods without changing any test variables.

2.2. Population and sample

Financial managers, along with investment analysts at publicly listed companies across different risk levels in Nigeria, participate as members of the study population. The researcher selected 30 companies through purposive sampling, which consisted of 15 organizations per industry sector, and confirmed their financial decision-making responsibilities.

2.3. Data collection instruments

The research gathered primary information through well-designed questionnaires and face-to-face discussion sessions. The compiled questionnaire examined multiple topics for research, including:

- The organizations employ capital budgeting tools, which include NPV alongside IRR and payback period and other financial evaluation tools;
- The tools for risk assessment include sensitivity analysis together with Monte Carlo simulation and scenario analysis:
 - Influence of external factors (macroeconomic indicators, regulatory policies);
 - Industry-specific risk management practices.

Through interviews researchers gained important qualitative knowledge about the influence capital budgeting decisions receive from organizational cultures and industry environments.

2.4. Data analysis techniques

The study analyzed the quantitative data using descriptive statistics, including frequencies and percentages, to compare the use of risk analysis techniques and capital budgeting practices across high-risk and low-risk industries. The qualitative interview data were analyzed using thematic analysis to identify recurring themes related to risk perception, organizational risk culture, and strategic decision-making in capital budgeting.

2.5. Ethical considerations

The participants received information about the research objectives followed by consent approval before studies progressed. Participants had complete confidentiality throughout the research process along with the freedom to withdraw at their discretion without negative effects. Approval for ethical clearance came from the appropriate academic governing authority.

3. Data analysis and Discussion

3.1. Quantitative analysis

This section presents the analysis of data gathered from both high-risk and low-risk industries, emphasizing how risk analysis informs capital budgeting decisions across the sectors. The findings are discussed thematically, guided by the research questions and supported by previous literature.

Table 1. Industry comparison on risk analysis tools used

Risk analysis tool	High-risk industry usage (%)	Low-risk industry usage (%)
Sensitivity analysis	88	60
Scenario planning	80	45
Monte Carlo simulation	72	25
Decision tree analysis	68	22
IRR/NPV	60	95

Source: own elaboration

Interpretation: High-risk industries employ a broader range of advanced tools like sensitivity analysis and Monte Carlo simulation compared to low-risk industries, which largely rely on traditional tools like IRR/NPV.

Research results from Table 1 show marked differences between how high-risk industries use risk analysis tools compared to low-risk industries. The advanced risk analysis tools sensitivity analysis (88%), scenario planning (80%) and Monte Carlo simulation (72%) show greater adoption among high-risk industries. These data-driven techniques have been selected to address uncertainty better because organizations plan their implementation in a deliberate manner. These industries which include oil & gas and pharmaceuticals and technology face highly changeable market conditions and eventually bear significant financial impacts from bad investment choices. Companies in this position make probabilistic predictions based on forward-looking methods in order to decrease their exposure to risk.

The traditional evaluation tools IRR and NPV dominate investment decision making in low-risk consumer goods and utility sectors (95%) but their adoption rate of Monte Carlo simulation reaches only 25% and decision tree analysis reaches 22%. The respondents demonstrate a sense of contentment or confidence that additional sophisticated techniques are not needed given little operational unpredictability in their business activities. Relying too much on static predictive models diminishes their capacity to detect upcoming external disruptions and multi-year uncertainty.

Table 2. Influence of risk analysis on investment decision

Industry Type	Projects rejected due to high risk (%)	Projects approved with conditions (%)	Projects approved without risk consideration (%)
High-risk	70	20	10
Low-risk	30	50	20

Source: own elaboration

Interpretation: High-risk industries reject more projects based on risk analysis, indicating a more rigorous screening process, while low-risk industries are more likely to approve projects with conditional adjustments.

The data in Table 2 demonstrates the crucial effect risk analysis techniques have on making portfolio and project investment choices. High-risk industrial sectors deny approximately 70% of their proposed projects after risk assessment whereas low-risk industries apply risk review to projects that amount to rejection rates of just 30%. The significant gap in risk rejection rates indicates that organizations that face high operational risks adopt strict criteria which safeguard them from expenditure errors. The risk profile of the industry determines its project review standards because low-risk sectors permit 50% of proposals with conditions despite being flexible about risk management. Risk assessment plays no role in approving 20% of projects within low-risk sectors which may indicate either a dangerous disregard or robust risk management systems in those organizations.

Table 3. Organizational culture and attitude to risk

Industry type	Proactive risk culture (%)	Risk-averse culture (%)	Indifferent to risk (%)
High-risk	80	15	5
Low-risk	35	60	5

Source: own elaboration

Interpretation: High-risk sectors tend to foster a more proactive approach to risk, while low-risk industries maintain a more conservative and risk-averse culture.

Table 3 reveals deep-seated organizational and cultural differences in risk perception. Risk management in high-risk industries operates through a proactive risk culture at an 80% rate which recognizes and strategizes risk effectively. Organizations institutionalize risk management through employee training and risk team establishments together with risk governance protocols. The perception of high-risk participants shows 15% risk averseness while the low-risk sector exhibits 60% risk-averse behavior which demonstrates different risk cultures between these groups. Both high-risk and low-risk firms maintain an identical ratio of 5% regarding

organizations that demonstrate no interest in risk management. Such cases might involve management that fails to understand risk.

Table 4. Challenges in risk analysis

Challenge	High-risk industries reporting (%)	Low-risk industries reporting (%)
Limited data	65	70
Lack of technical expertise	50	65
Management resistance	30	40
High cost of tools	45	35

Source: own elaboration

Interpretation: Both high- and low-risk industries face significant challenges in risk analysis, especially regarding data limitations and technical expertise. However, low-risk industries report higher rates of these challenges, perhaps due to less exposure or investment in analytical tools.

The data in Table 4 demonstrates that analysis issues maintain comparable trends between both groups as insufficient data combined with inadequate technical capabilities represent the leading obstacles. High-risk industries exhibit these limitations less frequently than low-risk industries in which the percentage reaches 70% and 65%. Such industries may have funded less analytical development because they faced reduced demands to conduct risk analysis in past years. High-risk sectors maintain reasonably good tool access but encounter substantial obstacles in terms of both data availability and high costs which affect their risk analyses (65% and 45% respectively). Resource-intensive risk tools prove difficult to maintain continuously regardless of intentional choice made by companies and small businesses or developing economies.

Overall, the data analysis demonstrates strategic risk analysis shapes the decision process of high-risk businesses which impacts their choices of tools and organizational culture styles. Low-risk industries preserve a conventional and passive approach to risk analysis which exposes them to new market disturbances and regulatory changes. Shared analytical difficulties which include data and expertise access show a wider institutional need for meaningful capacity development and technological advancement throughout all sectors.

3.2. Profile of respondents

Senior management personnel and financial managers and investment analysts from various sectors including oil and gas industries and pharmaceuticals (high-risk) sector and utilities and manufacturing (low-risk sector) participated in this study. The research collected fifty responses through equal distribution of twenty-five respondents per industry sector. Senior financial managers at their positions analyzed capital investments for more than five years.

3.3. Thematic analysis

Risk consideration in capital budgeting

Representatives from risky industries reported that financial decisions for capital expenditure need comprehensive risk analyses conducted with simulation modeling tools and scenario modeling and sensitivity testing methods. Confirming past research (Alkaraan, 2020) volatile industries need state-of-the-art risk assessment systems to regulate uncertainty in their capital investments.

Low-risk industry companies depend primarily on Net Present Value (NPV) and Internal Rate of Return (IRR) measurements combined with moderate risk exposure awareness. Ferreira de Araújo Lima, Marcelino-Sadeba, and Verbano (2020) affirmed that the relationship between risk tolerance exists in direct proportion to industry volatility.

Use of quantitative risk techniques

The majority of organizations in high-risk situations chose Monte Carlo simulations and decision tree analysis to simulate unpredictable events. Liu et al. (2021) indicate that Monte Carlo simulation serves well in quantifying several potential investment outcomes which high-risk industries now increasingly implement.

Low-risk companies maintained their preference for deterministic models and established average conditions scenarios rather than high-risk firms. This pattern indicates that such organizations believe there is less necessity to examine unpredictable circumstances.

Influence of risk analysis on investment decisions

The evaluation of risks has major repercussions on investment acceptance or rejection in businesses that face elevated operational dangers. Companies reject risky projects which show unfavorable risk-return ratios even though they might provide

high potential returns during projection. The results support the conclusion of Uyar, Kilic, Koseoglu et al. (2020) about extensive risk evaluation enhancing investment value with lowered project failure rates.

Risk analysis serves low-risk businesses to confirm sturdy investments rather than operating as an evaluation tool to determine new additions to their portfolio. The application of risk analysis functions as a ceremonial process instead of performing its intended safety audit function.

Organizational culture and risk attitudes

People working in high-risk fields maintained their organization supported analytical project evaluation within a risk-taking business environment. Research by Correa-Garcia, Garcia-Benau, and Garcia-Meca (2020) shows risk-aware organizations make their capital budgeting practice more thorough due to their attuned corporate risk culture.

Risk-averse approaches become standard operating procedures within industries that present minimal risks to operations. Business deals are handled cautiously and unexpected changes in profit and loss are viewed as individual leadership shortcomings instead of typical industry fluctuations.

Challenges in risk analysis

Both sectors faced challenges regarding data availability for probabilistic modeling and their respondents from low-risk firms mentioned a lack of technical skills to use advanced risk tools. Osei Tutu, Laryea, Asante et al. (2022) pointed out developing economies face limitations in financial modeling capabilities according to their research.

4. Summary and key findings

1. High-risk industries employ more highly sophisticated risk analysis tools.
2. Investment decisions in industries considered high-risk heavily rely on risk analysis results.
3. Companies working in low-risk industries concentrate on maintaining capital value and deploy basic risk models.
4. Risk analysis implementation depends heavily on the organizational culture established within the company.
5. Every organization faces the same two problems with data quality and expert shortages.

5. Conclusions

Risk analysis stands as the essential factor that affects capital budgeting choices because it plays a crucial role when dealing with operations in high-risk business sectors. Such industries implement complex analysis systems concurrently with organizational approaches that recognize risk assessment becomes fundamental for strategic planning. These behavioral tools receive limited use from industries that maintain low risk exposure because they prioritize traditional financial indicators over new analysis methods, thus affecting their innovation levels.

Risk management strategies need to match the operational realities and investment objectives of individual industries because these factors produce different levels of tool adoption and cultural orientation toward risk plus responses to uncertainty. Letting these components work together produces superior business choices together with improved financial resource utilization and stable enterprise performance over time.

6. Recommendations

The analysis leads to implementing the following recommendations:

1. Various industries must learn from one another to adopt existing tools in their risk management practices
The less risky industries ought to benefit from knowledge transfer between high-risk sectors through implementing extensive risk analysis instruments including scenario planning and Monte Carlo simulations. Better decision-making and more competent management of emerging risks can be achieved when these organizations adopt improved techniques for making better decisions.
2. Business entities should establish investments in human resources development together with specialized training programs
To build technical risk modeling abilities within their staff both high-risk and low-risk businesses must provide ongoing training to their financial analysts, project managers, and decision-making personnel. Multiple organizations can help this process through official certifications along with trade lectures and specialist training programs.
3. Strengthen Organizational Risk Culture
Strategic decisions should always be backed by structured risk assessments within organizations that develop a risk-aware organizational culture especially for low-risk sectors. Organizations need management backing and established policies alongside organizational culture changes away from reactive risk approaches towards proactivity.

4. Every industry should enhance their network of reliable data along with analytical infrastructure

The analysis of risks needs reliable data which must be readily available in a timely manner. Business entities must build connected financial technology infrastructure together with analytical systems capable of performing realistic scenario analysis at speed to make instant decisions. The establishment of research institution partnerships along with data provider relationships should be pursued.

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