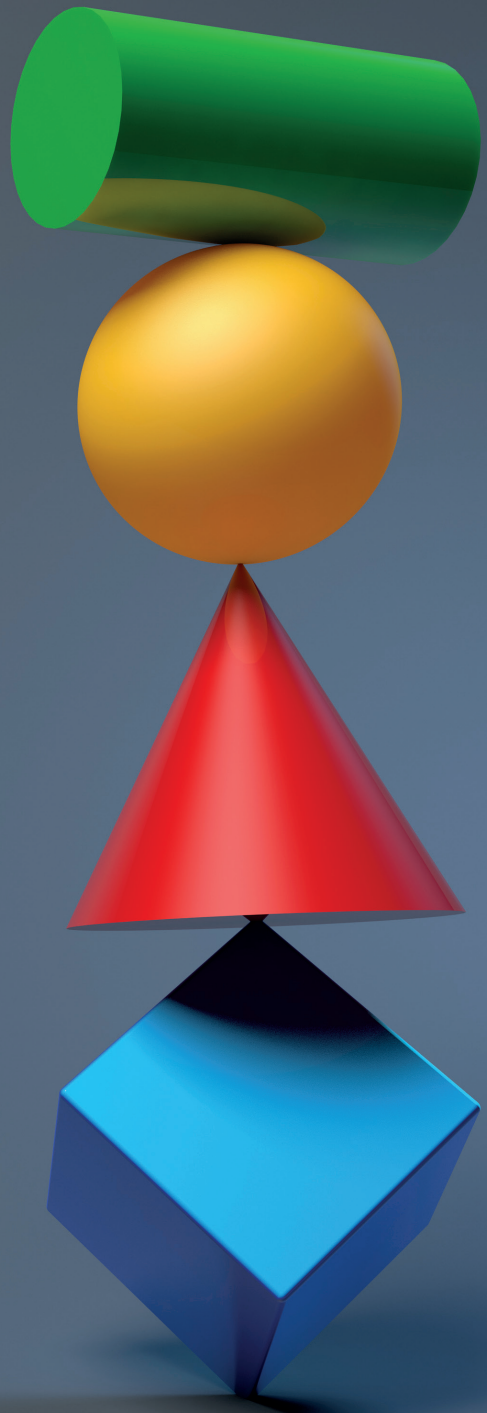
RISK REPORT SERIES VOL. 4

TURKEY RISK REPORT 2023

Prof. Dr. Davut Pehlivanlı



GRC

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Risk Comparison By Years: 2020 – 2023

Top 5 National Risks in Terms of Likelihood

	2020	2021	2022	2023
1	Youth unemployment risk	Exchange rate risk	Exchange rate risk	Market risk
2	Fraud risk in enterprises	Market risk	Market risk	Exchange rate risk
3	Media echo chambers and risk of "fake news"	Economic crisis risk	Economic crisis risk	Risk of deepening inequality
4	Exchange rate risk	Unemployment risk	National political polarization risk	Risk of regional conflicts and potential problems with neighbors
5	Loan repayment problems risk	Risk of continuation of pandemic	Risk of interference with freedom of opinion	Brain drain risk and associated qualified personnel problems risk

Economic Technological Geopolitical Societal Environmental

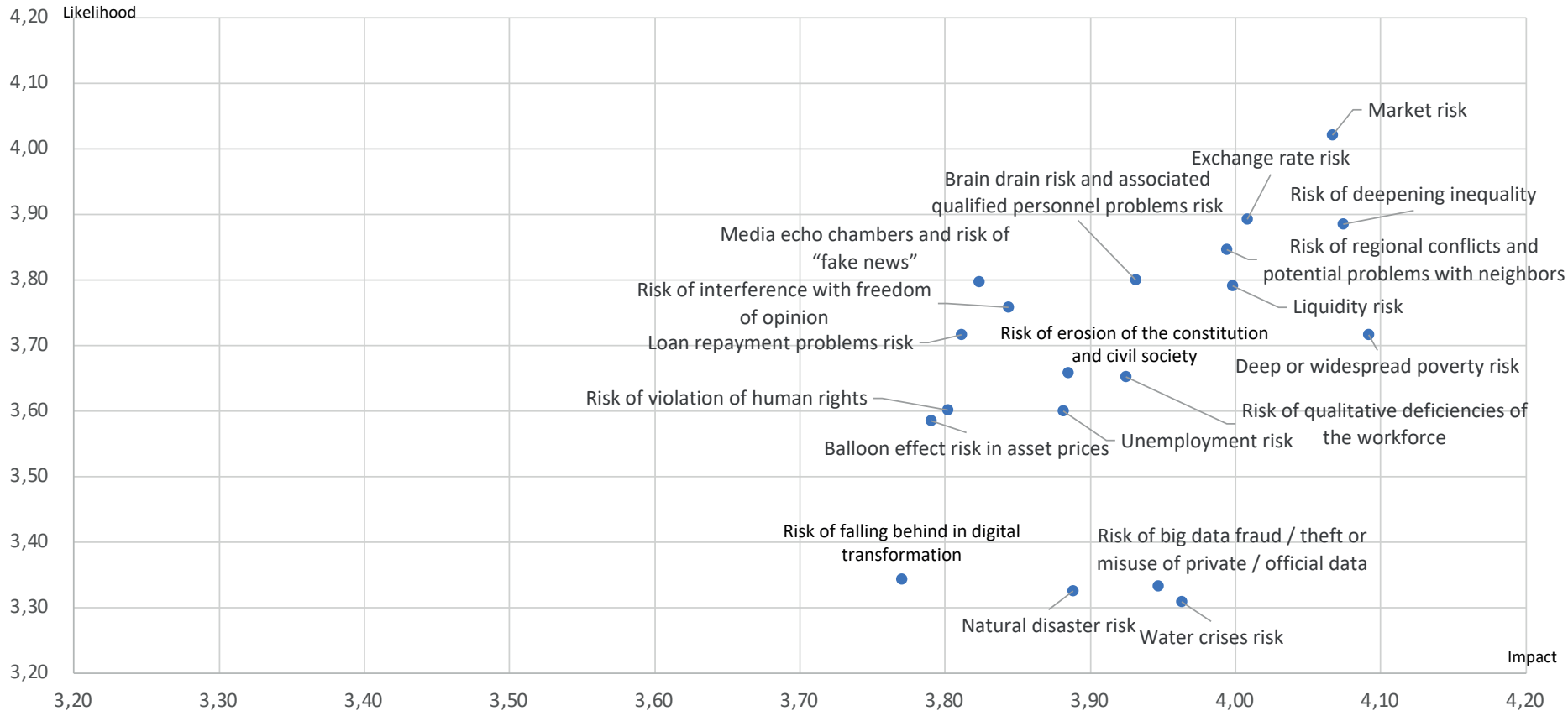
Risk Comparison By Years: 2020 – 2023

Top 5 National Risks in Terms of Impact

	2020	2021	2022	2023
1	Natural disaster risk	Economic crisis risk	Exchange rate risk	Deep or widespread poverty risk
2	Exchange rate risk	Exchange rate risk	Economic crisis risk	Risk of deepening inequality
3	Collapse of ecosystem and water crisis risk	Risk of continuation of pandemic	Market risk	Market risk
4	Loan repayment problems risk	Market risk	Risk of disruption in the supply chain and goods/ products shortages	Exchange rate risk
5	Youth unemployment risk	Unemployment risk	Risk of collapse of information technology infrastructures	Likidite riski

Economic Technological Geopolitical Societal Environmental

Risk Map 2023



Risk Map 2023

TOP 10 RISKS IN TERMS OF LİKELİHOOD	TOP 10 RİSKS İN TERMS OF IMPACT
Market risk	Deep or widespread poverty risk
Exchange rate risk	Risk of deepening inequality
Risk of deepening inequality	Market risk
Risk of regional conflicts and potential problems with neighbors	Exchange rate risk
Brain drain risk and associated qualified personnel problems risk	Liquidity risk
Media echo chambers and risk of “fake news”	Risk of regional conflicts and potential problems with neighbors
Liquidity risk	Water crises risk
Risk of interference with freedom of opinion	Risk of big data fraud / theft or misuse of private / official data
Deep or widespread poverty risk	Brain drain risk and associated qualified personnel problems risk
Loan repayment problems risk	Risk of qualitative deficiencies of the workforce

Introduction

We hereby present you the 4th Turkey Risk Report for 2023. This kind of studies are highly critical in terms of both serving as an inventory and showing the developments and shifts in risks over the years.

The first study was about 2021 risks, and over the years, we have observed that most of the expected risks have actually realized and that the risks are taking their place in the heart of the economy with each passing year.

In the ranking of 2023 risks, economic risks are at the top. There are many factors bringing economic risks to the top of the list, such as global inflation, high inflation faced by Turkey, energy and grain crises arising from Russia-Ukraine war, and the recession on a global scale.

In addition to the factors listed on a global scale, considering the economic policies implemented in Turkey, the problems experienced due to forced migration and internal turmoil in neighboring countries, it is estimated that Turkey crisis will be longer-term and the effects of the crisis may spread over many years.

The pressure of the international community, including NATO, under the leadership of the United States, on China in 2021 and the sanctions imposed against Russia following Russia's invasion of Ukraine, and the possibility of exclusion of different countries from the international community in 2023 also increase the short-term and medium-term risks. The pandemic news coming from China in the last days of 2022 and the restrictions that push the limits of humanity also trigger uncertainties.

At this point, if we take a look at these developments within the framework of sustainability, which is the popular concept of recent years, from the point of view of the individual, we can see that the justice in income distribution has deteriorated, the pressure of unemployment has increased on a global and national scale, the problems in housing supply have increased on a global and national scale, individual bankruptcies have been experienced due to inflation, and employment areas have narrowed down as a result of technological developments. Therefore, the mobility in the workforce is increasing and exceeding the borders today.

When we look at Turkey's position in these global dynamics, we see that Turkey is the mediator in the war between Russia and Ukraine, the leader in the creation of the grain corridor, and a transition point in the solution of the energy crisis. Contrary to these positive elements, the possibility of sanctions due to Russian-origin transactions, expectations regarding the continuation of high inflation, rising energy costs, pressure on the exchange rate and the increase in uncertainties stemming from the policies in practice pose serious threats for 2023.

The main objective of this study is to identify and assess the key risks that the public and private sectors may encounter at the national level. This study aims to be a guide document for the senior management of enterprises and public sector managers in the formation and updating of their corporate strategies.

The data in this report was collected through survey method. 501 people participated in the survey and 491 of them were included in the study. Senior executives and Board Members, mainly comprised of finance experts, risk management experts and audit experts, took part in the survey.

I would also like to render my sincere thanks to Prof. Dr. Erhan Aslanoğlu, the author of the section Economic Outlook of the World and Turkey Turning Toward 2023, to Prof. Dr. Selim Yazıcı, the author of the section Innovation and Resiliency, to Prof. Dr. Serhat Yanık, the author of the section 2022 Insurance Industry Risks and 2023 Expectations, to Assoc. Prof. Dr. Serhat Yüksel and Prof. Dr. Hasan Dinçer, the authors of the section Analysis Of Turkey's Energy Risk, to Assoc. Prof. Dr. İbrahim Sırma, the author of the section Financial Sanctions, and to Assoc. Dr. İdil Işık, the author of the section Psychosocial Risks and Psychological Health.

I would also like to express my gratitude to the Non-Governmental Organizations, academic circles and professionals for their contributions to the survey study, which constitutes the basis of the report.

Should you have any questions or comments about the report or would like to discuss the conclusions of the report, please do not hesitate to contact me.

Best regards,

Prof. Dr. Davut Pehlivanlı

Turkey Risk Report Director

Director / Risk and Audit Research Center / Istanbul University - Faculty of Political Sciences

Founder / GRC Management / Risk Referans

Executive Summary

Let's start by defining the year 2022. It has been a year in which we talked about energy crises a lot, the inflation increased constantly affecting all walks of life, we lived on the verge of an foreign exchange crisis, and for enterprises, it has been a difficult year to balance the cost and break-even point.

In 2022, as our companies remembered inflation once again, the decision-making dynamics of 90s came up again in stock management, purchasing and many critical business decisions for companies.

We are leaving behind a year in which access to credit has been restricted, stock investments have contributed to income and turned into business models, and in terms of human resources, the problems arising out of lack of qualified personnel, especially due to brain drain, have reached an unmanageable point.

Uncertainties create price hikes

Every measure taken at the level of companies due to inflation and foreign exchange, the inability to predict developments even for short terms like 3 to 5 months, increase in uncertainties and other factors result in addition of an unusual margin to the prices.

On the other hand, these unusual margins added to the prices were not even enough for the enterprises. In fact, this situation was caused by the suppression of the exchange rate, and the increase in the wages along with the inflation made it inevitable that the profitability balances would deteriorate and prices would be increased. As a result, businesses which were unable to "meet the price" due to constant price updates started to lose their turnover in 2022 and then the periods that were closed with loss began to increase.

No more fixed costs - Now each item has variable cost

These developments have led to the fact that fixed costs are no longer fixed and the ever-changing fixed cost reality affects business decision-making processes. The excessive prudence of price policies may be partly associated with this situation.

Currency intervention and sunk cost

How much sunk costs do currency interventions cause? We do not have an answer to this question yet. Actually, the answer is partially insignificant. However, it is partially significant because the exchange rate intervention policy triggers uncertainties and it is used in many critical decision processes for companies, including price decisions.

Executive Summary

We expect that increasing crypto investments during the pandemic and the collapses in crypto exchange markets on a global scale as of December 2022 will continue in 2023. Crypto company bankruptcies were at the top of the agenda during 2021 and 2022 in Turkey, and serious losses were incurred. Here, the biggest shortcoming is the lack of legal regulations addressing companies operating in this field.

This brings to mind the following question: Do crypto exchange markets not fulfill the transaction orders of their customers and do they actually hold positions?

The answer is probably yes. Then, can we say that nation-states have fulfilled their duties in this regard?

5-year projection and risks

Unlike the risk reports of previous years, this year's study addressed the expected risks for the next 5 years. Within this framework, we tried to measure the expectation for the high risks assessed in the past years.

The average score of 9 risks measured within the scope of the 5-year projection was determined to be high and very high. These results have the potential to adversely affect the decisions -especially investment decisions- to be taken by the enterprises in the upcoming years.

Top 10 risks and acceptance of societal risks

When we look at the top 10 risks foreseen for 2023, under the societal risks category, the deepening of inequality (2), deep or widespread poverty (5), media echo chambers and "fake news" (8), interference with freedom of opinion (9) and qualitative deficiencies of the workforce" (10) are at the top, which creates an extremely negative image. Almost all of these risks are related to fundamental rights.

Moreover, the fact that the brain drain risk and qualified personnel problems arising in relation to this risk are among the top 10 risks should be interpreted as brain drain is accepted and enterprises fail to fill the vacancies emerging in related to brain drain.

Out of these top 10 risks envisaged for 2023, the only risk which is not included in the economic risk category or societal risk category is the risk of regional conflicts and potential problems with neighbors, which is of geopolitical origin.

Migration and evolving demographic structure

Forced migration still continues at high speed and continues to disrupt social dynamics. The lack of objective discussions on forced migration and the fact that the issue is only brought up from a political point of view is another potential problem for the future.

Executive Summary

Although there are many questions regarding migration, such as what is going to happen to the immigrant population or how will they adapt to the society, the answers to these questions are unknown.

The business world experienced the technological transformation along with the pandemic. It is a solid fact that the technological transformation is not only a matter of investment. It should be also ensured that the target audience adapt to the new technologies and applications; otherwise, enterprises would suffer from a serious loss of turnover.

Another obstacle to the transformation in technology is the lack of qualified personnel. Lack of qualified personnel is partially due to the brain drain, and reversing the brain drain is only possible through consistent policies in the medium and long run.

The energy crisis is not the result of Russia's intervention in Ukraine

The energy crisis is essentially a capacity problem. Therefore, the energy crisis emerged before Russia's intervention in Ukraine. From a different perspective, the energy bottleneck is associated with the probability of harming the environment and the restriction of investments in certain energy generation areas and, accordingly, the restriction of financing in these areas. Within this framework, the energy crisis is the result of a transmission mechanism positioned as an obstacle against the development of peripheral countries.

Going back to the potential problems to be faced by the enterprises in 2023, as in 2022, the following problems seem to be on the agenda of the senior executives in 2023 as well: exchange rate and related pricing problems, constantly rising costs, energy and input-oriented cost increases, the transformation of fixed costs into variable costs and their natural reflection on prices, lack of qualified personnel and sustainability issues.

Top 10 Risks of 2023 and Aftermath: Expectations



The risk classification within the scope of the Risk Inventory study is as follows;

- Economic risks
- Geopolitical risks
- Technological risks
- Societal risks
- Environmental risks

This kind of studies should be evaluated from 2 different perspectives. The first one is the assessment of the likelihood that the study results (risks) will guide the behaviors of individuals and institutions. The second one is the possible consequences of the decisions made by individuals and institutions from a behavioral perspective.

Among the top 10 risks, there are 5 societal risks, 4 economic risks and 1 geopolitical risk. 3 out of 5 societal risks are economy-oriented risks. As such, 7 of the top 10 risks arise directly or indirectly from economic factors.

The fact that environmental risks and information technology risks are not among the top 10 risks, and that these risks are at the bottom of the list, is a result of the fact that economic risks have become more prominent due to general conditions.

Top 10 Risks of 2023 and Aftermath: Expectations

Risk of adverse developments in the markets (such as interest rate) ranked 3rd in 2021 risk inventory and 2nd in 2022 risk inventory. This risk has risen to the 1st rank for the year 2023. Market indicators' turning negative is certainly an extremely important leading indicator for both national economy performance and enterprises and individuals.

The risk of deepening inequality ranked 10th in 2022 risk inventory, whereas it ranks 2nd in 2023 risk inventory, which shows that there is a kind of "despair" because of both negative expectations for 2023 and the fact that individuals and enterprises have no room for action in the face of risks.

Exchange rate risk and crisis risk rank the third in the risk inventory. Exchange rate risk is the result of volatility expectations of individuals and rise in exchange rates. Foreign currency asset movements of individuals and businesses are critical for the analysis of this risk. From this perspective, the fact that the expectation is still high despite the Currency Protected Deposit (KKM) product and interest policy in place is a result of the perception that these measures are tentative.

The 4th rank in the risk inventory is occupied by the risk of regional conflicts and potential problems with neighbors. Although the risk of regional conflicts is not at the top of the ranking in the risk inventory even during the Syrian civil war, this risk has risen after Russia's intervention in Ukraine, which should be interpreted as exceeding expectations and increase in the likelihood of realization of critical risks.

The fact that the risk of deep or widespread poverty ranked 9th in the 2022 risk inventory and 5th in the 2023 risk ranking should be considered in parallel with the rising risk of deepening inequality.

Compared to the 2022 risk ranking, another risk rising in the ranking is the liquidity risk. It ranked 8th in the 2022 risk inventory and 6th in the 2023 risk inventory. It is not surprising at all that the liquidity risk ranks high in the risk inventory at a period with a narrowed credit access and increased market risks.

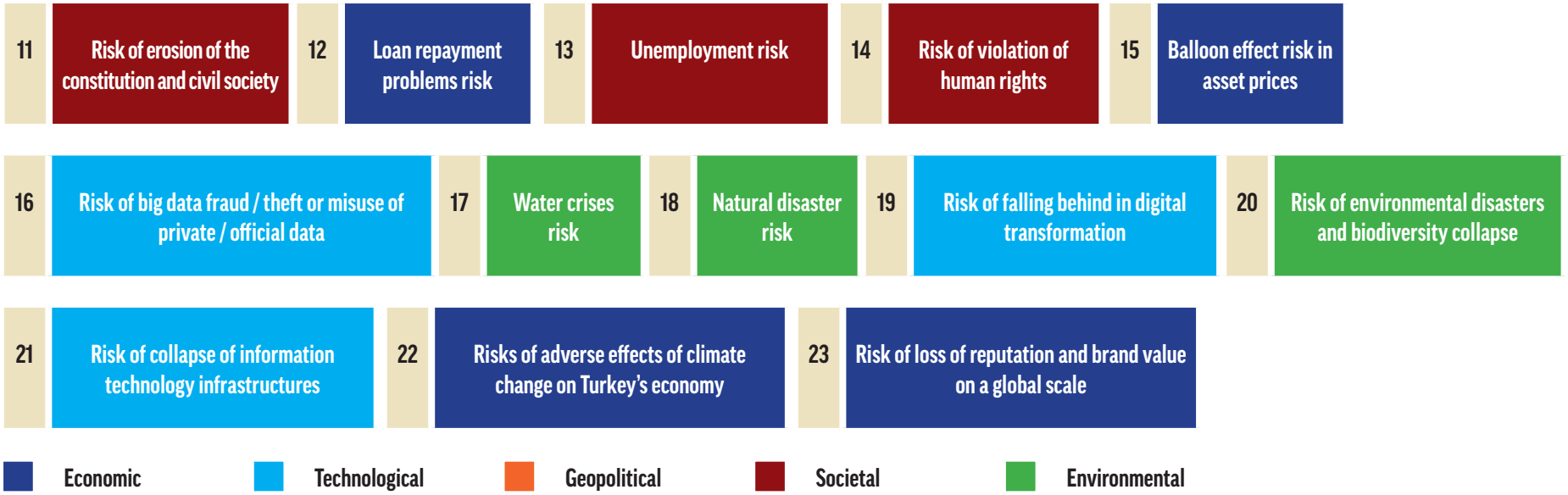
The brain drain risk and associated qualified personnel problems risk ranks 7th in the risk inventory. The risk of brain drain should be evaluated together with the change in the global work life patterns with the adoption of remote working culture during and after the pandemic, and the change in national economy factors.

Media echo chambers and risk of "fake news" ranks 8th in the risk inventory.

The risk of interference with freedom of opinion ranks 9th in the risk inventory. In 2021, this risk ranked 16th overall and has risen in the ranking over time.

The risk of qualitative deficiencies of the workforce ranks 10th in the risk inventory. In Turkey, the unemployment risk and the risk of qualitative deficiencies in the workforce are experienced simultaneously. On a sectoral scale, we see that the risk of lack of qualified personnel applies to both blue collar and white collar workers.

Top 10 Risks of 2023 and Aftermath: Expectations



Risks and Expectations in 5-Year Projection

Risks which were ranking high in the list in previous years have different positions in this year's risk inventory and they are interpreted within the scope of a 5-year projection.

The risks assessed within this scope are listed below:

1. High inflation expectation
2. Economic conflicts / embargo / sanctions
3. Economic crisis
4. Supply chain disruptions
5. Foreign currency access problems
6. Energy crises
7. Facing sanctions
8. Bankruptcies in real sector
9. Forced migration and its continuation

Risks in 5-Year Projection

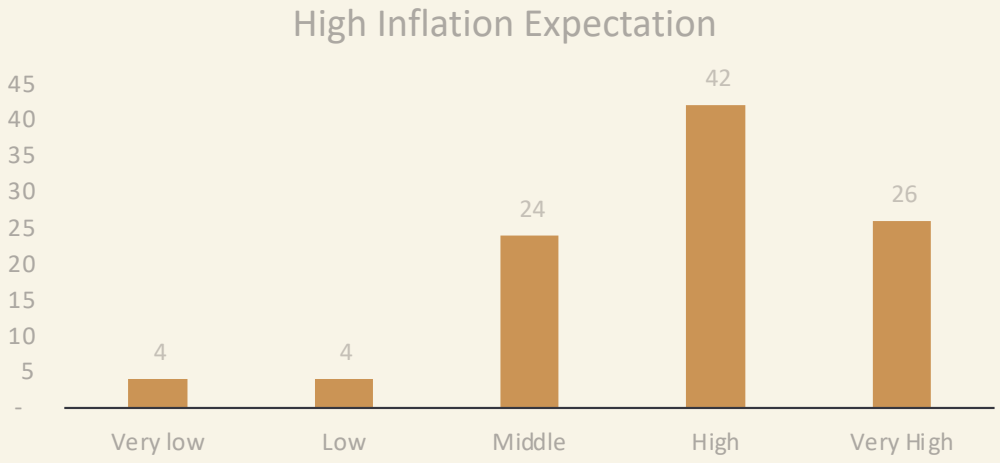
High Inflation Expectation

The course of inflation in Turkey is in an increasing trend with the pandemic and the energy crises following the pandemic. The supply problems in grain, energy and other critical products occurred after the invasion of Ukraine by Russia made the increase in inflation permanent.

In addition to global developments, national economic policies also contribute to the constant rise in inflation.

The inflation data for the last 4 years is presented below. Based on this data, inflation expectations for 2023 and the following years were examined. In parallel with the 5-point assessment, the 68% of respondents predicted that the high inflation would continue and gave it a High or Very High probability.

Year	CPI	D-PPI
2019	11.84	7.36
2020	14.6	25.15
2021	36.08	79.89
10.2022	85.51	157.69



Risks in 5-Year Projection

Economic Conflicts

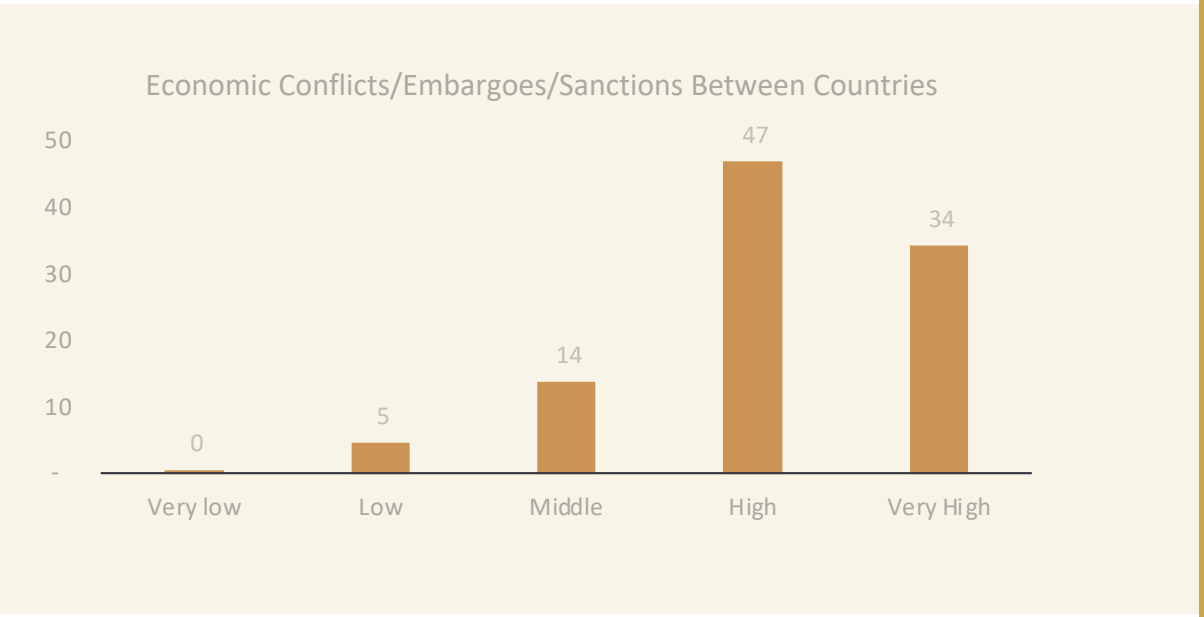
In the last 20 years, full-scale sanctions imposed against Iran and Colombia and the limited sanctions that Turkey has been exposed to have turned into a serious threat to trade on a global scale.

The arrest of the daughter of the owner of the technology giant Huawei in 2018 with the allegations of breaching the Iran sanctions in Canada was actually a sign that the West positioned against China went into a new phase.

In October 2021, the Financial Action Task Force (FATF) put Turkey in Grey List on the grounds that it had deficiencies in anti-money laundering and preventing financing of terrorism, which was another important milestone.

Under the Strategic Concept document published by the NATO in June 2022, China was mentioned as a threat for the first time and Russia as a direct threat, which was actually declaration of the start of the 2nd phase.

Within this framework, the participants were asked if they thought the economic conflicts / embargoes / sanctions would continue in the following 5 years and 81% of them said that there was High or Very High Probability that they would.



Risks in 5-Year Projection

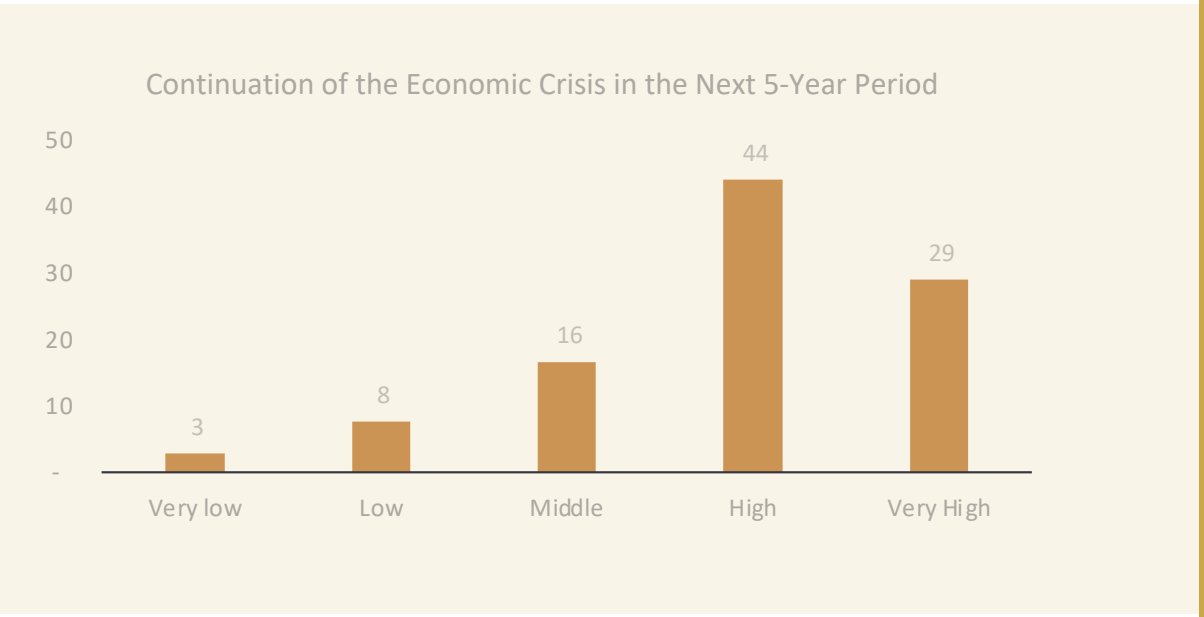
Economic Crisis

It is an undeniable fact that we are going through a crisis on both global and national scales.

The reality in the economy affects various behaviors of individuals and companies from investment decisions to saving habits and spending routines to social life activities.

From this point of view, contrary to popular belief, expectations about the course of the general economy affect all individuals in the society deeply with its results reflected even in daily life.

When we questioned the likelihood of the continuation of the economic crisis during the next 5-year period, 73% of the participants predicted that there was High or Very High probability that the current economic conditions would continue.



Risks in 5-Year Projection

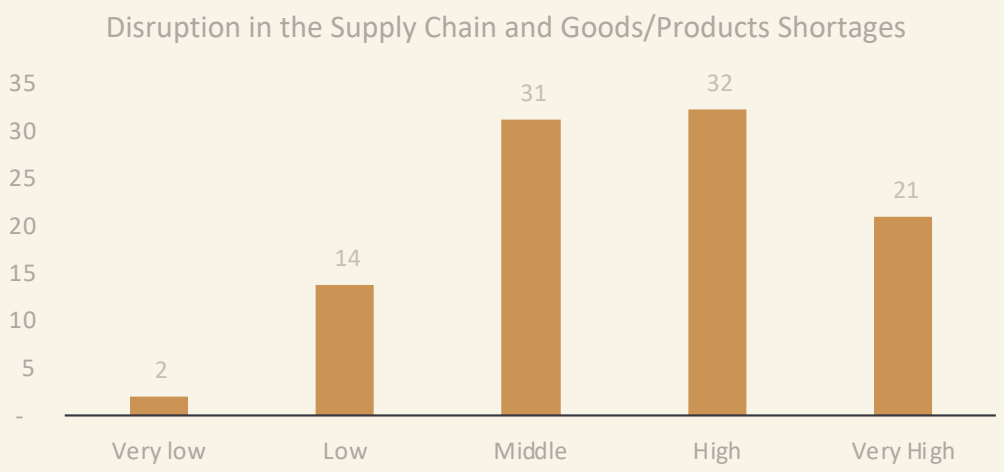
Supply Chain Disruptions

With the pandemic, we started to experience disruptions in the supply chain in an intensive way, and starting with the technological components, supply problems occurred in many raw materials, commodities and finished products in time.

Although this issue cannot be totally associated with access problems and it is considered as an intentional access problem, the supply chain disruptions eventually caused price hikes.

While the impacts of the pandemic have eased, the disruptions in energy supply and access to grain products this time due to the sanctions against Russia which started with Russia's invasion of Ukraine clearly show that the supply chain problems will continue for a long time.

When we questioned the likelihood of the continuation of the supply chain disruptions in the following 5 years, 53% of the participants had the foresight that there was High or Very High probability that the supply chain problems would continue.



Risks in 5-Year Projection

Foreign Currency Access Problems

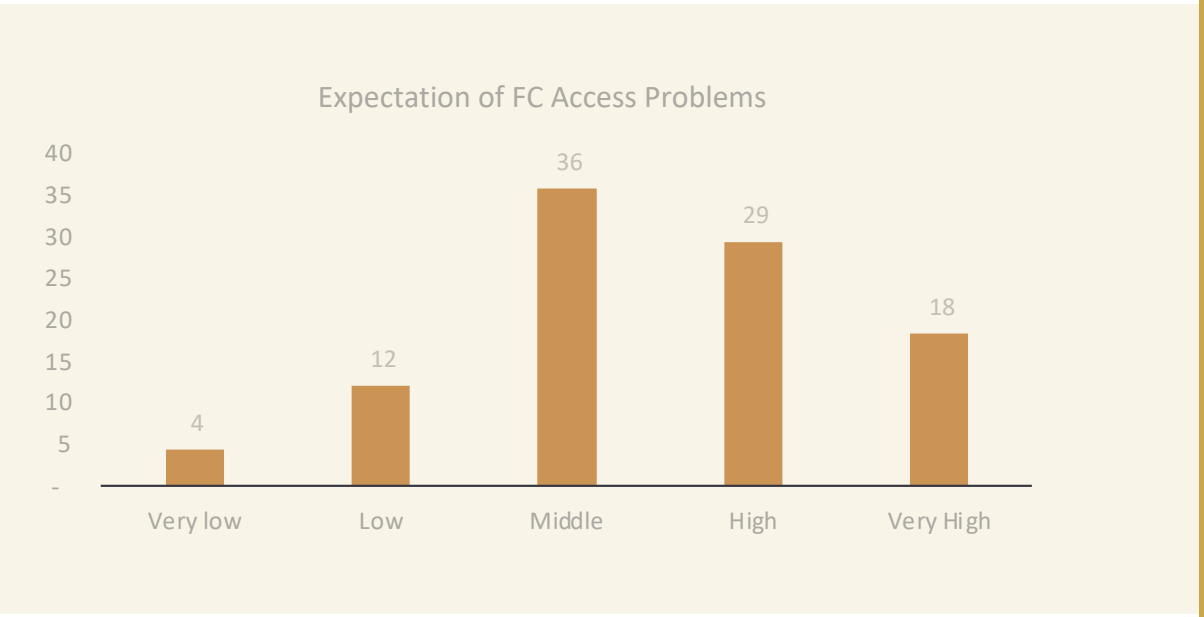
Starting with the pandemic, in the unstable process experienced in the economy, the measures on the liquidity restrictions reached a level that could be interpreted as restrictions on access to foreign currency over time.

Just as dollarization is a risk for the country's economy, so the legislation-based TL-like foreign exchange practices introduced for protection against dollarization are equally risky.

While such practices support the achievement of certain goals in the short term, they can cause serious damage to national economies in the long term.

We questioned the likelihood of the continuation of the practices addressing the access to the foreign currency during the next 5-year period, and 47% of the participants predicted that they would continue with a High or Very High probability.

When we review the answers, the striking point is that 36% of the participants do not see the current practices as a restriction on access to foreign exchange or do not find such regulations risky at the moment.



Risks in 5-Year Projection

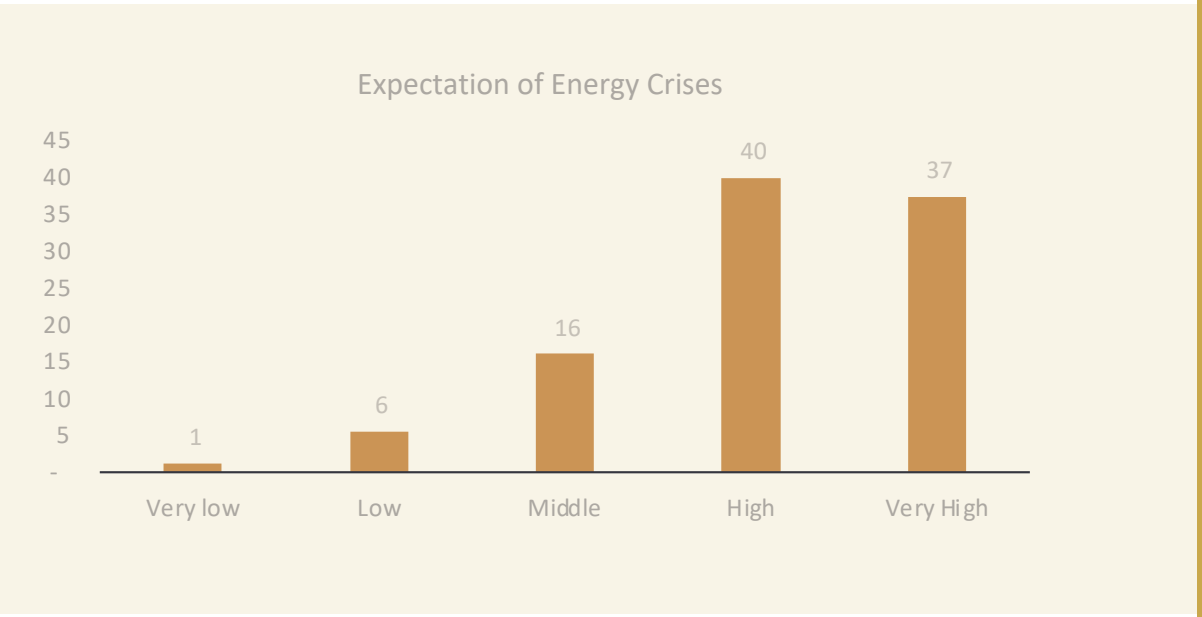
Energy Crises

Energy has always been a hot topic, causing invasions and wars, and it will probably be on the agenda forever.

On the other hand, when energy investments were suppressed on the grounds of climate change in the last 20 years, the foundations of today were laid.

We questioned the likelihood of the continuation of the energy crises in the following 5 years, and 77% of the participants predicted that there was High or Very High probability that the energy-oriented problems would continue.

Considering the slowdown in traditional energy investments due to environmental and climate change reasons, we can predict that there is a high probability that energy-related crises will continue to exist for many years.



Risks in 5-Year Projection

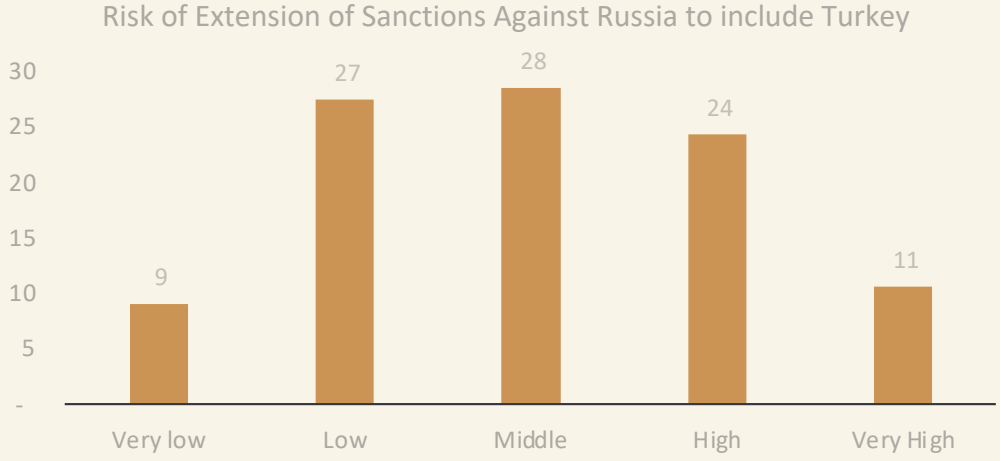
Expectations on Sanctions

Following the sanctions imposed on Russia, during the time of crisis experienced in the supply of energy and grain products, many countries either “met their needs” or “turned the crisis into an opportunity”.

In Turkey case, the share of the Russia market in Turkey’s exports increased, and as a result of the pressures that followed, Turkish banks had to exit the Russian payment system.

In the study, we questioned the possibility of Turkey to face sanctions as a result of the policies it implements.

To the question regarding the possibility of encountering sanctions, 35% of the participants answered that Turkey may face sanctions with a High or Very High probability.



Risks in 5-Year Projection

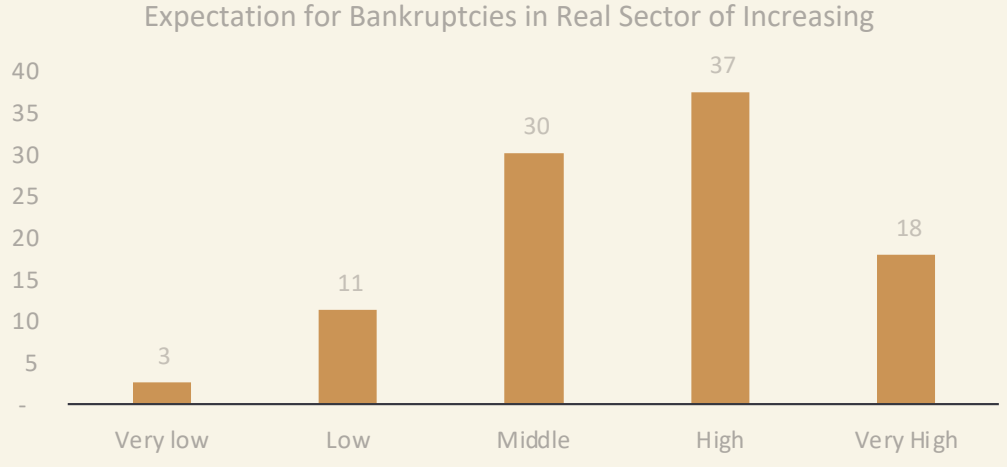
Expectations on Bankruptcies in Real Sector

Assessment models for SMEs and start-up companies have not developed much in banking credit underwriting processes. Assessment and credit scoring of SMEs and startups are done based on traditional models, that is why these companies are considered high-risk enterprises.

Public authorities, especially the Credit Guarantee Fund, support such enterprises using different methods in order to manage both serial bankruptcies and unemployment to a certain extent.

We questioned the likelihood of the continuation of the bankruptcies in real sector during the next 5-year period, and 55% of the participants predicted that there was High or Very High probability that the bankruptcies would continue.

The answers to this question should be considered together with the expectations on the Receivable Risk.



Risks in 5-Year Projection

Expectations on Receivable Risk

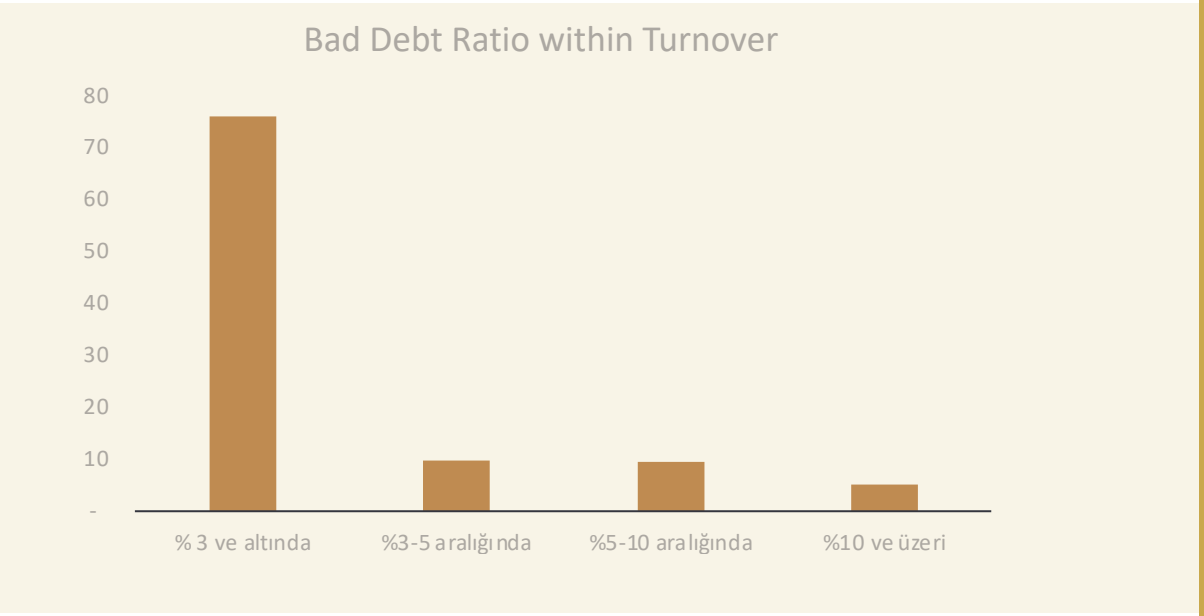
In response to the question about the realization of the risk of receivables in the last 1 year, 43% of the participants stated that they had bad debt.

In 76% of enterprises where the receivable risk was realized, the amount of loss was 3% or less of the turnover. Only 9% of the participants stated that the loss incurred as a result of the receivable risk amounted to 5-10% of the turnover.

At this point, it can be seen as an advantage that there are a large number of SME-scale enterprises in Turkey, boss-oriented risk management and a dynamic structure based on experience.

In addition to the macro policies implemented, the aid provided to SMEs, the KGF (Credit Guarantee Fund) practices and insurance on receivables were also effective in minimizing the risk of receivables.

However, we can emphasize that due to the inflationary conditions experienced, working capitals have melted and fragility has increased for the coming years.



Risks in 5-Year Projection

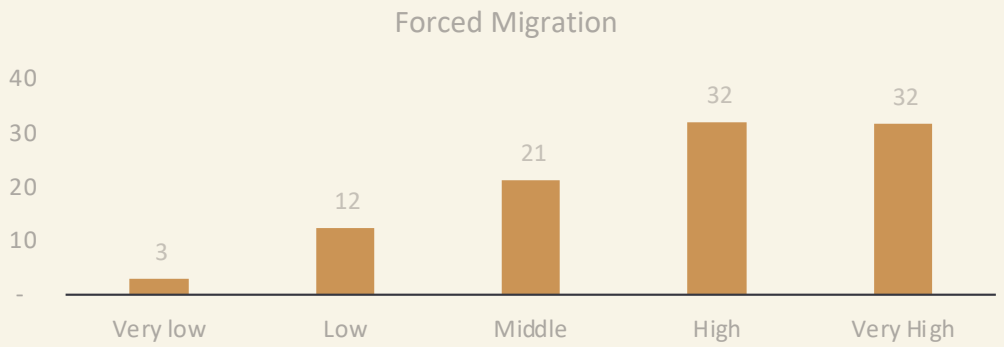
Forced Migration Expectations

News agencies first reported on the forced migration from Syria in April 2011.

"After the outbreak of the Syrian Civil War in 2011, the first refugees fleeing the war began to enter Turkey. The first refugee caravan of 252 people entered the country on 29 April 2011 through the Cilvegözü border gate in Hatay, Reyhanlı."

This was neither the first caravan nor the last one. Over time, Turkey's demographics have changed with immigration from different countries, especially Afghanistan. While the immigrant population was experiencing adaptation problems, Turkey was introduced with many different problems on the other side of the story.

We questioned the likelihood of the continuation of the forced migration in the following 5 years, and 64% of the participants predicted that there was High or Very High probability that the forced migration would continue.



Risks in 5-Year Projection

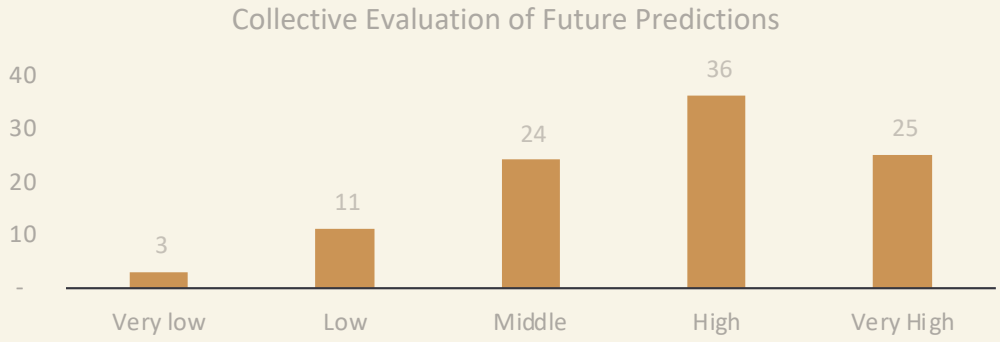
Collective Evaluation of Future Predictions

When the responses of the participants to the questions regarding the risks under the 5-year projection are evaluated as a single risk, the results show that we should be worried about the future.

When the answers given to the questions about the risks within the scope of the future projection are evaluated collectively, 61% of the participants expect the risks to continue with High and Very High probability.

When the answers are examined, the striking point is that 24% of the participants see these risks as medium level problems.

The total rate of participants who evaluated the risks with medium and high importance is 85%, which is a significantly high population.



2023 SPECIAL CHAPTERS

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Istanbul Chamber of Industry (ISO) Top 100 Large Enterprises and Risk Management Maturity Assessment

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Turkey's Gross Domestic Product in 2020 was approximately 717 billion dollars. In 2021, GDP was 806.8 billion USD and 7 trillion 209 billion 40 million TL.

15% of 2021 GDP, that is, a volume of approximately 99 billion dollars, was realized by the top 100 companies in the ISO 500 list.

The companies in the ISO top 100 list produce 124 billion 521 million dollars of the total GDP. The 2021 annual reports of 71 companies (constituting a total volume of 80 Billion Dollars) in the ISO top 100 list,

- cannot be accessed on their websites, or
- it is understood that these companies did not issue annual reports.

Public Enterprises Have No Annual Activity Reports and Hence No Risks !!!

It is seen that the total volume of 8 public enterprises has reached approximately 9.4 billion dollars and not all of these enterprises announce their annual activity reports. We reached the previous annual reports of these enterprises and it was noteworthy that there was no explanation on Risk Management in any of the reports.

Especially for public enterprises, it should be obligatory to publish an annual activity report. Furthermore, considering the achievements of the pandemic, mandatory risk management structuring for public enterprises will be a step in the interest of society.

Annual Activity Report in Critical Sectors

In the period starting with the pandemic until now when we also witnessed the war between Russia and Ukraine, the critical sectors can be named as energy sector, food sector and precious metals sector (restrictions introduced including those on gold export to Russia), which can be defined as a new field of crisis. In addition, with the sanctions against Russia, precious metals, especially gold, crypto currencies and crypto-based transactions, and non-banking money transfers (hawala) can be listed among the critical sectors.

In the ISO top 100 list, there are 18 enterprises fitting the critical sector definition above, and their total GDP is approximately 20 billion dollars. Only 3 of these 18 companies have published annual reports; the remaining 15 companies do not have an annual report. These 18 critical enterprises operate in the fields of energy, food and precious metals. It is a basic expectation that businesses operating in critical areas that are particularly vulnerable against sanctions should disclose more information to the public, but the legal infrastructure to guarantee this is lacking.

All of the 3 enterprises whose activity reports were obtained operate in the field of food production. Considering that 15 enterprises do not have annual activity reports, we were not able to collect enough data to make an assessment on risk management of enterprises operating in critical sectors.

Risk Inventory Classification

Reviewing the risk inventory explanations on the annual reports of the enterprises which share sufficient information regarding the risk management, we see that the risk management teams of these enterprises also focus on the fields listed on the right side of the page, as well as the risks included in the conventional risk classification (strategic, financial, operational, market, compliance, information technologies and reputation risks).

Risk Inventory Classification

- Biodiversity loss
- Climate change
- Receivable risk
- Product Safety Risk
- Technical Safety and Environmental Risks
- Water management
- Sustainability and environmental impact of packaging
- Shifts in channel structures
- Skill management
- Energy efficiency
- Changing consumer preferences
- Emission regulations
- Project risks
- Environmental, Social and Governance (ESG) risks



Recession, Receivables Risk at Foreign Suppliers and Sustainability

Within the scope of 2023 projections, we can emphasize that the China-centered supply structure may face another crisis after the pandemic, the risk of prepayments to China-based suppliers has increased, and the possibility of damage to the sustainable supply chain structure has increased.

Risk Management and Obligation to Issue Annual Report

We believe that obligation to issue an annual report should be gradually introduced for the purposes of sustainability, rather than technical reasons. Again, we can recommend that the Risk Management structuring be made compulsory for both the public and private sectors gradually.

Risk Management and Obligation to Issue Annual Report

Furthermore, critical sectors are at the risk of being sanctioned, which is a critical risk that can have an impact in the long run, including the collapse of national economies. Especially the sanctions originating from target countries in the past and even the likelihood of being imposed to sanctions caused great adversities. In this respect, critical sectors should be defined and it should be mandatory to establish internal control, internal audit, risk management and compliance departments within the scope of internal systems in these sectors.

Finally, in addition to the obligation of independent auditing of businesses operating in critical sectors, annual activity reports should also be subject to audit, and an Independent Board of Directors membership should be established within the boards of directors.

Otherwise, we will have to learn by experience that what we know to be true is false and what we do not know is true.

Economic Outlook of the World and Turkey Turning Toward 2023

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In 2020, the global economy shrank by 3.1%, which was the sharpest shrinkage since World War II. In 2021, there was a growth of 6.1%, which was the strongest growth since World War II. So, the period we are in is same as the World War II. We are passing through a historic period. Pandemic was something like a war. Unfortunately, large number of people lost their lives.

We had seen supply and demand shocks and supply chain problems, which continued in 2022 Q1, as well. Because of both base effect and the increasing demand elements specific to pandemic as homes turned into schools and offices, the world economy experienced a strong growth in 2021, and for 2022, around 4.7% growth was expected. The companies established their production plans and budgets based on this expectation and started off the year with a rather optimistic prospect.

However, the conflict between Russia and Ukraine turned the tables. With the supply issues re-emerging and the acceleration of the energy and food inflation, the growth forecasts for 2022 first fell down to 4%, then down to 3.5% and finally down to 2.7%. When the growth rate of the global economy falls down to 2.5% or below, this is called recession. The leading indicators during the last weeks of 2022 show a macro outlook which rapidly goes toward in this direction. The growth rate of Euro Zone decreased from 5.1% in 2021 to 0.2% in 2022 Q3.

As a sharp slow-down is observed in the growth rate, the inflation, which is another macro data, is realizing at peak levels. The average inflation of OECD countries, which declined between 1980 and 2000 and remained around 2% until the pandemic after 2000, reached 10% in 2022. Core inflation, excluding energy and food, reached 7.5%. Euro zone inflation, which was 1.5% last year, rose up to 10.7%. Therefore, with its growth declining rapidly and inflation increasing strongly, Euro zone entered into stagflation. A similar situation began to be experienced in many countries of the world.

Although stagflation has emerged more prominently recently, inflation has continued its strong upward trend since the beginning of the year; therefore, Central banks, especially the FED, have started to take very serious tightening measures. The Fed policy rate, which was zero at the beginning of the year, is going towards above 5%. Similarly, the European Central Bank (ECB) policy rate, which was -0.40%, is going towards above 3%. In the USA, the slowdown is more limited. The service sector is particularly strong. Unemployment is at historically low levels. Therefore, the Fed, US Federal Reserve, has no growth concerns.

On the other hand, the Euro zone seems to be at much more imminent risk of sliding into recession. There is an inhomogeneous structure within the region. There are countries like Spain with an unemployment rate of 14% and like the Netherlands with an unemployment rate of 3.5%. The ECB, which is the central

bank for 19 countries, is expected to be more cautious in interest rate hikes and to raise rates in a more gradual fashion. Therefore, the increasing interest rate attraction of the USA strengthened the US dollar for most of 2022; and it seems highly likely that the dollar will continue its strong course until the interest rate hikes come to an end. We expect the rate hike to continue until spring.

Within this framework, we believe that the most fundamental macroeconomic attributes of the global economy in 2023 will be recession and disinflation. Inflation rates will decrease; however, it seems that it will not be so easy for developed countries to reach the 2% inflation target. Due to the reasons explained above, especially in terms of the USA, the probability of encountering a temporary but persistent inflation seems quite high. Possible geo-political risks and energy&food price shocks, of course, may not bring disinflation, but a higher inflation.

Commodity prices remained depressed in the global economy which is heading towards recession. This depression may continue for a while at the beginning of 2023. Although energy prices are under pressure, depending on the geopolitical developments, they may also be volatile or rise up. Food prices, on the other hand, seem more like to rise up mainly due to the climate crisis.

In 2023, the most important macroeconomic indicator of the global economy will be inflation, especially US inflation. A rising inflation will also increase the risk of a deeper stagflation, which is the state of both stagnation and inflation. A deeper stagflation will increase both the credit risk and interest risk. Uncontrolled sharp declines in bond prices, which have an inverse relationship to interest rates, and non-performing loans may spread the problem experienced in the real sector to the financial sector and lead to greater risks.

The macro outlook of the Turkish Economy, which will enter the year with such a global economy outlook, also goes along with high inflation and slowing growth. The inflation of the Turkish economy is too high to be compared with the global economy. However, in the first months of the year, a disinflation will be also experienced in the Turkish Economy with the base effect. If exchange rates do not experience a shock increase, there is a possibility that the inflation rate which exceeds 80% will decline down to 40%.

The Turkish economy, which grew by 7.5% in the first six months of this year, grew by 3.9% in the third quarter. Leading indicators show that the growth in the last quarter was around 2%, and that we will close the year with a growth of slightly above 5%.

The most significant reasons behind this decline in the growth rate seem to be the slowdown in the Euro zone and the decline in export orders. The slowdown in the export trend is not only due to the European and global recession, but also to the decreasing competitiveness of the exporters. Normalization in supply processes, declining transportation prices and falling commodity prices lead to stronger integration of our Far Eastern competitors into the European market. While decreasing costs lead to price cuts by competitors, excessively increased domestic production costs and flat exchange rates make our products more expensive.

Despite the slowdown in growth, pre-election economy is expected to focus on policies that support growth. The budget deficit target, which is updated and has increased with the Medium Term Program (MTP), as well as the wage adjustments and possible KGF packages, may cause the growth rate to exceed 4% in the first half of the year. It seems likely that policies aimed at stimulating domestic demand will limit the disinflation caused by the base effect and increase the external deficit. The policy framework that will come into effect in the second half of the year after the election may have significant effects on growth, inflation and external balance. If an extensive disinflation scheme based on tightening in monetary policy is put into effect, along with a slowdown in the economy, there will be a decrease in inflation and stabilization in the current account balance and exchange rates after a certain while.

Innovation and Resiliency

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New Vital Necessities

In 1935, companies listed on the S&P 500 had an average lifespan of 90 years. Today, this lifespan has decreased to 18 years. It is expected to fall down to 12 by 2027. In this case, we can imagine that most of the companies on the S&P 500 list today will disappear in the next 10 years.

The Covid 19 pandemic was one of the latest shocks that deeply affected the economy and society. Both in short and long run, we will be talking about the capacity of organizations to withstand such shocks (climate, cyber, health and geopolitical) that arise with frequency and severity, perhaps never seen before in history. This downturn pushes organizations to be more flexible, adapting, resilient and innovative to survive and thrive.

Resilience allows organizations to act quickly and develop alternatives to assess the potential benefits as well as the risks that may arise from this challenging environment. As a result, building resilience has become important for both business world and for the society as a whole in a broader sense. Many studies show that companies which systematically invest in building resilience outperform their peers. In a future which is defined with many different risks, it is impossible to make a precise prediction; however, it is obvious that high prediction and adaptation capacity, as opposed to giving simple responses, will create a competitive advantage.

Resilience journeys of many organizations either are just beginning now or have not yet begun. Traditionally, there are several reasons why businesses and governments do not invest enough in resilience. First, flexibility is usually associated with cost and considered to contradict with short term performance. Second, establishing a flexible organization requires making more challenging choices than today to be prepared for the shocks that may possibly arise tomorrow or that will certainly occur in the years to come.

How to Address Organizational Resilience

Resilience is generally defined as the resistance capacity of organizations against disruption and their capacity to quickly recover from disruption. From this perspective, we can see resilience as the ability of an organization to overcome external shocks and to seize new opportunities after such shocks (Yazıcı, S. (2013). İş Sürekliliği Yönetimi: Stratejik Bir Yaklaşım. Türkmen Yayınları).

For companies, resilience is not a result of a single action or single characteristic. We can address resilience from five different aspects: operational, strategic, financial, social and organizational resilience. Organizational resilience is accepted as a prerequisite to lay the foundation for the other four.

1. Operational resilience is about a company's ability to continue business in case of a shock. Operational resilience applies to all components of the operation, including technology.
2. Strategic resilience is the ability of a company to respond to changes in the economic, social and political environment in which it operates.
3. Financial resilience defines financial health of an organization in relation to their ability to overcome a crisis.
4. Social resilience acknowledges that a company's resilience depends on and is linked to the social and political resilience of the communities in which it operates. Here, the sanction power of communities and NGO's comes into play.
5. Organizational resilience refers to the ability of a company's workforce, culture, and structure to cope with sudden interruptions effectively. Within the scope of our subject, the organizational resilience is crucial for survival of a company; nevertheless, it is quite difficult to define, measure and improve organizational resilience.

In a world which faces disruptions one after another, organizations have to build resilience and be able to manage it to secure a sustainable, inclusive future for everyone. Advantages of developing resilience as a fundamental ability are too many. United Nations, World Economic Forum, McKinsey Global Institute, International Monetary Fund and other organizations suggest that the impact of resilience (or lack of it) on annual GDP growth is 1% to 5% (WEF. (2022). Resilience for Sustainable, Inclusive Growth. World Economic Forum). In terms of public and private sectors, success depends on how leaders respond to various challenges, including climate change, energy problems, supply chain disruptions, healthcare services disruptions, and income, gender and racial inequalities.

Yet today, even though the meaning and importance of resilience is well understood, most businesses and governments are in the very early stages of building resilience or investing in resilience as a pillar for future long-term value creation.

When compared to the concept of sustainability or environmental, social and governance concerns, the concept of corporate resilience is less comprehensible and in many cases, it is deemed as a less prioritized subject to address. What is often lacking in terms of resilience is a new way of thinking built on a common language and principles that can be translated into pragmatic and actionable steps. This requires a paradigm shift.

Relationship between Innovation and Corporate Resilience

Organizational resilience is defined as an organization's ability and capacity to withstand unexpected changes, disruptions, and environmental risks. Innovation, on the other hand, contributes to achieving resilience as it enables organizations to renew themselves over time.

The innovation literature provides more than just discussions on how organizations respond to unexpected disruptive changes and threats from the external environment that require them to have the ability to adapt in order to survive in times of crisis. One of the important roles in this change is played by innovation. In the future, one of the greatest risks will be to be able to adapt to the ever-changing circumstances. The reason for including a section on innovation to the Turkey Risk Report this year is because of the relationship between innovation and corporate resilience. In this study, 39% of respondents indicated that the risk of innovation and meeting customer needs will continue in the next five years. If we look at it from a different perspective, companies will have to respond to increasing customer expectations through innovation in the next five years.

The defining characteristic of a resilient company is the widely shared belief that innovation is both "good" and "expected." Resilient companies see innovation as a means to gain competitive advantage, place it at the heart of their growth strategy and integrate it into their organizational culture. The first steps for this are to develop structures that perceive change as a potential opportunity, to allocate resources (human resources and capital) accordingly, and to monitor the results. While searching for new opportunities in the horizon, such companies become ambidextrous organizations which can better manage their business(O'Reilly, C. A., III, & Tushman, M. L. (2004). The Ambidextrous Organization. Harvard Business Review, 82(4), 74-81).

While resilience and innovation may seem like different ways to steer uncertain environments, they are actually concepts that provide complementary insights. Organizational resilience provides a platform for proactive innovation within an organization that facilitates knowledge creation and knowledge exchange through learning. When disruptive events occur, organizational resilience generates tools to tackle stressful issues that require solutions. This is because resilience enables organizations to have capabilities such as agility, robustness, and integrity, allowing their members to quickly generate solutions or create new products and/or processes. These new products/ processes, in other words, these innovations will respond to challenging situations and help sustain overall organizational performance.



2022 Insurance Industry Risks and 2023 Expectations

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The insurance industry continued to grow within 2021 and 2022 despite the pandemic. However, for the upcoming period, there are many risk points that may impact the industry. Inflation, increasing currency rates, expectations that the economic crisis will continue, insurance frauds, liability insurance, catastrophic risks, management of digital risks and receivable risk insurance can be seen as some of the risk and opportunity points.

Inflation and Currency Rate

The high inflation experienced both globally and nationally has created significant risks for the insurance industry. These risks have manifested themselves in the form of increased insurance premium amounts and increased burning costs. With the rise of the foreign exchange rate, burning costs have also risen significantly in the insurance industry. Increase in the spare part prices or medical material and pharmaceutical prices and many other factors like these have naturally had a great impact on the insurance costs. They raised the insurance premiums, which had various reflections in the society. First of all, individuals and insurance companies are giving up on insurance.

In 2022, we have witnessed that large number of companies and individuals avoided taking out insurance. With the increase in premiums in Own Damage Car insurance and Traffic insurance, there was a decrease in insurance rates. Furthermore, in terms of insurance companies, profitability decreased and even losses occurred in traffic insurance and own damage car insurance due to insufficient prices and cost increases. This took away the insurance appetite of the companies. The fact that the product portfolio is concentrated in certain companies can create a risk potential within the industry.

Another tendency is that insurers opt to narrow their insurance coverage so as to reduce their insurance premiums. At this point, it is expected that individuals and companies will be unprotected or less protected against many risks to occur in 2023.

Under-insurance is the case where the insurance costs of the insured assets are not shown at market values under a policy. If the replacement value of the insured asset increases in time, the claim payments will still be made based on the insurance price set while preparing the policy. In this period, the insurance costs should be updated by issuing an addendum. For many individuals and corporates, there is a risk of loss of assets in case of damage due to outdated values.

As of 2022, there are 23.4 million vehicles. 23 million of these had traffic insurance.

The insured are expected to be paid faster in case of damage because of the inflation. In 2023, these expectations and demands are likely to increasingly continue. This is a subject that companies and regulatory authorities should follow carefully.

Remarkable portion (58%) of the insurance companies in our country have foreign partners. Besides, insurance processes are subject to reinsurance due to their nature. This affects the balance of payments and financial structure of companies in our country. The impacts of changes in exchange rates should be monitored more carefully in the coming year.

Expectations that the Economic Crisis will Continue in Upcoming Years

According to the 2023 risk survey, significant amount of participants believe that the economic crisis will continue during the next 5-year period. Moreover, the expectations are high that restrictions in international economic relations will continue in the form of embargoes and sanctions, the supply chains will fail to satisfy the needs, the production may be disrupted, access to financing will become more difficult, collection problems will emerge and bankruptcies will increase. Bankruptcy risks of companies will naturally affect all the industries. This is especially critical for the insurance industry. In times of bankruptcy and financial difficulties, insurance sales tend to decrease and claim payments increase. In this period, use of insurance products such as disaster insurance or credit risk insurance need to build up.

Receivables Risk Insurance

Another product used for the management of financial risks in the insurance industry is the Receivable risk insurance. The State Supported Trade Receivables Insurance guarantees the risk of non-payment of receivables arising from forward sales of companies which are not collateralized. The default of the buyer due to bankruptcy, arrangement of bankruptcy, liquidation, etc. is covered by this insurance. Real or legal person commercial enterprises which have a history of at least 2 years, do not have any tax or SSI debts, and whose turnover does not exceed the maximum limit set can benefit from the “State Supported Trade Receivables Insurance”. With the increase of bankruptcies and financial difficulties in 2023, this insurance may be expected to have a higher burden on the insurance industry.

Digital Risks and Their Management

In recent years, the cyber security risks have become an important problem. All the companies face this risk. Especially SMEs are the target of the cyber attacks. It is foreseen that this will continue in 2023. In these cyber attacks, company data are stolen and e-commerce platforms and websites are hacked. In 2022, we have seen so many cases where the corporate and customer data

of numerous companies were stolen. As a result, the companies may face material financial liabilities, and they may even face problems which eventually may lead to bankruptcy. In this period when it is very difficult to allocate sufficient resources for cyber attacks, the need for cyber insurance practices is increasing.

Digital Risks and Their Management

Another important recent development in digital life is the e-commerce applications. Associated risks faced by enterprises are gradually increasing in this sense. Regular business of the enterprises is interrupted due to digital attacks, malicious software, etc. To prevent this, companies should purchase insurance products such as liability insurance or commercial equipment insurance (separately or as a bundle).

Insurance Frauds

Increasing insurance costs also cause insurance frauds. Both the insured and the insurers bear a risk factor which should be followed carefully next year. The industry and the regulatory institutions have to pay greater effort in 2023 to identify and prevent this problem. Insurance frauds are going to increase the damage burden of insurers, decrease their profitability and increase the insurance premiums.

Climate Crisis and Rising Risks

Several studies put that the climate crisis continues to increase. Climate crisis risks will be on the agenda also in the upcoming years. Catastrophic damages (earthquake, flood, melting of glaciers, storms, etc.), in particular, are expected to increase. This will have adverse consequences for both companies and individuals. The risk protection offered by the insurance companies will decrease, the premiums will increase, and bankruptcy and liquidation risks of the companies will increase due to these damages. What needs to be done in this sense is to increase the amount of resources accumulated in the insurance pool by increasing the insurance rate. It is seen that enterprises are not ready for catastrophic damages.

Analysis Of Turkey's Energy Risk

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In this part of the report, the risks faced by Turkey in the field of energy will be discussed. On the other hand, possible measures that can be taken against these risks will also be mentioned. These issues will be discussed under the following subheadings.

1. Risks Arising from Energy Supply-Demand Imbalance

Many sectors have been adversely affected during the COVID-19 pandemic. Energy is one of these sectors. During the pandemic process, many countries have tried to prevent the increase of the epidemic by implementing the closure measure. However, this situation has caused many sectors to be adversely affected. In this process, a significant part of the companies lost. In addition, many companies had to go bankrupt. Therefore, the demand for energy has decreased during the pandemic process. In parallel with this, energy companies also suffered a significant loss. As a result of this, with the effect of decreasing energy demand, there has been a decrease in energy production.

Especially recently, with the effect of the vaccine, it is seen that the effect of the pandemic has decreased worldwide. In parallel, lockdowns have ended in many countries. Countries experienced very serious economic problems during the high pandemic period. In these periods, when the pandemic is estimated to have come to an end, countries have started to take some actions to experience economic growth again. In this context, companies aim to increase their production. To achieve this goal, the demands of companies for energy have also increased. The main reason for this is that energy is an important raw material in industrial production.

As mentioned before, the pandemic has caused an imbalance of supply and demand in the energy sector. During the periods when the effect of the pandemic was high, there were serious decreases in energy production due to the decrease in energy demand. However, commercial activities started to increase in the periods when the effect of the pandemic decreased with the effect of the vaccine, and this increased the demand for energy. In addition to the points mentioned, another factor contributing to this problem is that the summer of 2021 is much hotter than expected. This has increased energy consumption much more than

anticipated. On the other hand, electricity production from hydroelectric power plants decreased because of high temperature and drought.

The above-mentioned issues have caused the energy demand to be much higher than the energy supply. This has led to a radical rise in energy prices. For example, a significant part of the energy need in China is provided by coal. These developments have greatly increased the coal demand in China. Decreasing coal production and rising energy demand have also led to an increase in coal prices. This problem experienced in China has also been effective in other countries such as India. These countries have also started to turn to natural gas. This increasing demand has led to a significant increase in natural gas prices. Increases in both coal and natural gas prices caused countries to turn to oil. This situation has also led to an increase in oil prices.

In summary, the problems caused by the pandemic and drought have led to an imbalance of supply and demand in the energy sector. Increasing energy demand has been much more than energy supply. This situation has increased coal prices. With the expectation that coal production will not be sufficient, countries have turned to natural gas, and this has led to increases in natural gas prices. After this, countries turned to oil and oil prices increased. These situations have led to an energy crisis around the world.

Turkey is a country that supplies a very important part of its energy need from abroad. In this context, our country is seriously affected by external factors in terms of energy. As stated before, energy is a need that must be met. Otherwise, both the dissatisfaction of the citizens will increase, and the enterprises will not be able to increase their production. Therefore, if the impact of the energy crisis increases, it is likely that Turkey will experience some economic problems. As a result of the energy purchased more expensive, the current account balance of the country will be adversely affected. As a result of a global problem in energy, which is the most important item of the current account deficit in the country, this problem will increase even more.

On the other hand, the energy crisis will create some problems on the global economy. These problems are also likely to affect Turkey. For example, because of rising energy prices, the cost of industrial production will also increase. Since this situation will be reflected in the product prices, there is a global inflation problem. This will negatively affect the purchasing power of the people. In addition to the mentioned point, considering that high inflation also increases the uncertainty in the country, there is a risk that this problem will reduce investments in the country.

2. Risks Arising from Problems Caused by the Russia-Ukraine War

With the invasion of Ukraine by Russia on February 24, 2022, war broke out between these two countries. This war has caused some problems both socially and economically. This situation also negatively affected the energy sector. Russia is a very important energy exporting country. On the other hand, embargo was imposed on Russia by many countries due to this war. As a result, there has been a decrease in energy supply. On the other hand, Russia stated that it could cut off the energy flow to many countries in Russia in response to this embargo. This situation has also led to the deepening of the related problem. As a result of these negativities, radical increases have occurred in energy prices.

Turkey meets a large part of its energy needs from abroad. Therefore, one of the biggest risks faced by Turkey in this process is the increase in energy prices. Since Turkey imports most of its energy needs from other countries, this increasing price directly affects our country. Since energy is the basic need of both individuals and companies, this need must be met even if the price increases. Therefore, because of this increase in energy prices, a higher amount of pay-

ment will be made for energy imports. This situation has a negative impact on Turkey's current account balance. Increasing current account deficit also makes our country's economy more fragile.

The increase in energy prices due to the Russia-Ukraine war deepens the high inflation problem of Turkey in the field. Turkey has been struggling with the problem of high inflation, especially in recent years. There is a risk that this increase in energy prices will further deepen this problem in the coming periods. It is considered as a very important raw material of energy industrial production. In this context, the increase in energy prices will lead to an increase in the costs in the production process. This situation will lead to an increase in cost inflation. In summary, for Turkey, which is struggling with the problem of high inflation, the possible increase in energy prices poses the risk of further deepening of this problem.

3. Arising from Turkey's Energy Dependency Problem

Energy dependence is a vital problem for Turkey. To eliminate this problem, Turkey needs to take actions that can produce its own energy. In this framework, first, Turkey can carry out studies to obtain fossil resources such as natural gas and oil within the borders of the country. Secondly, Turkey can increase its renewable energy investments. Finally, Turkey can produce its own energy through nuclear energy projects. Under this heading, the risks faced by Turkey regarding these alternatives will be expressed.

Failure to Obtain Sufficient Fossil Fuel in Explorations in the Eastern Mediterranean Region

It is estimated that there are very high energy reserves in the Eastern Mediterranean Region. Based on this, countries bordering the region and other big states are trying to play an active role here. Considering the serious continuation of exploration activities in the relevant regions and the continuous operation of the navies of the mentioned countries in this region, the possibility of very high energy reserves in the Eastern Mediterranean increases. In this framework, countries are also trying to protect their rights in this region.

Turkey is also trying to play an active role in the Eastern Mediterranean region. In this context, Turkey first provided its own drilling and seismic research vessels. After that, Turkey expressed its determination in the region in different ways. In addition to these, Turkey also expressed its readiness to make an agreement with all the countries in the region. These points give the impression that Turkey is extremely determined in its energy policies in the Eastern Mediterranean region.

On the other hand, Turkey has problems with some other countries in the Eastern Mediterranean policies. For example, there is a continental shelf problem with Greece, which hinders energy exploration activities. In summary, the most fundamental problem Turkey faces in Eastern Mediterranean energy policies is political risks. Possible political risks to be experienced with other countries may create a barrier to Turkey's exploration activities in the region. This situation increases the risk of not being able to obtain enough fossil fuel in the mentioned region. To effectively manage this risk, it would be appropriate for Turkey to maintain its resolve in the region and to maintain its policy of open agreement with all countries.

Insufficient Renewable Energy Investments

Turkey supplies a significant portion of its energy needs from abroad. This situation also increases Turkey's dependence on foreign energy. This issue causes problems both socially and economically. This situation can firstly make Turkey politically dependent on other countries. In other words, possible political problems with the countries from which Turkey imports energy may cause Turkey to have problems about energy as well.

On the other hand, there is a risk that the country will experience some economic problems because of the continuous import of energy. This situation will adversely affect the current account balance of the country. Currently, the most important item in Turkey's current account deficit is energy imports. Therefore, due to the continuous import of energy, there is a risk that this problem will become chronic. The current account deficit problem, which has become chronic, will also make our country's economy even more upset. This situation will further deepen the exchange rate risk.

Turkey has started to take some measures for the problem of energy dependency. In this context, significant incentives are given to renewable energy projects. It is aimed to increase these investments with tax reductions and low interest loans. On the other hand, it is seen that these investments are not sufficient to ensure energy independence at present. In this context, it is understood that new strategies should be determined to increase renewable energy projects.

Being Late in Nuclear Energy Investments

Another way to eliminate energy dependence is to increase nuclear energy investments. Thanks to nuclear energy, it will be possible for Turkey to produce its own energy. In this context, it is seen that Turkey has taken some steps.

Owing to the Akkuyu Nuclear Power Plant, which is planned to be operational in 2023, it will be possible to meet approximately 10% of Turkey's energy needs. Therefore, it would be appropriate for Turkey to take measures to increase its nuclear energy investments.

On the other hand, it is obvious that Turkey is too late in nuclear energy investments. If these projects had been started much earlier, it would have been possible for Turkey not to be dependent on foreign sources for energy today. This situation also caused Turkey to lag behind in nuclear energy technologies. Currently, Turkey does not have the technical equipment to establish a nuclear power plant. In this context, support is received from Russian companies in the establishment of Akkuyu Nuclear Power Plant. This may lead to an increase in dependence on this country in the long run.

Another risk regarding nuclear energy investments is public reaction to these projects. Nuclear reactor accidents that have been experienced before also lead to an increase in these reactions. Many people lost their lives, especially because of accidents at the Chernobyl and Fukushima nuclear reactors. This situation causes some people to increase their reaction to nuclear reactors. Therefore, this opposition to nuclear energy constitutes a very important obstacle to the increase of these projects.

Financial Sanctions

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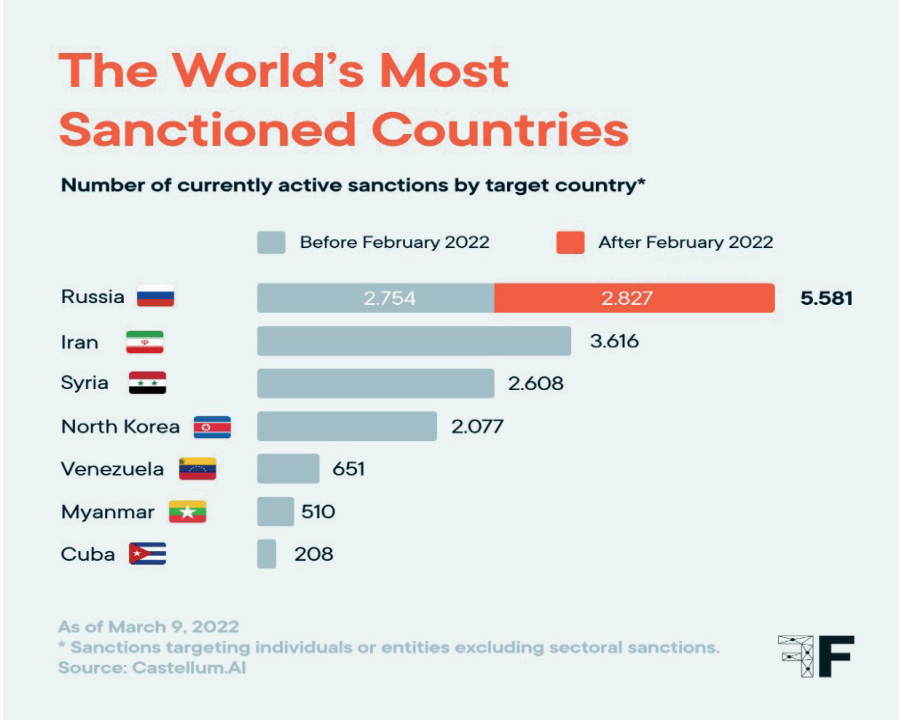
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Today, economic sanctions imposed on a country and restricted access to the international financial system are seen as an alternative to a conventional war.

USA's imposing financial sanctions on Russia due to Russia-Ukraine War similar to those financial sanctions it imposed on Iran, Libya and North Korea in the past has reminded the world countries that they had better consider the risks and sanctions against access to international financial system.

In the sanctions against Russia, first they cut off the access of Russia's biggest banks (Sberbank, VTB Bank, AlfaBank, Gazprombank) to transactions in US Dollars and froze their assets. Afterwards, these banks were removed from the SWIFT system, which is used in most international payments. At the same time, they seized the assets of numerous Russian oligarchs and their family members and interrupted their access to their financial assets.

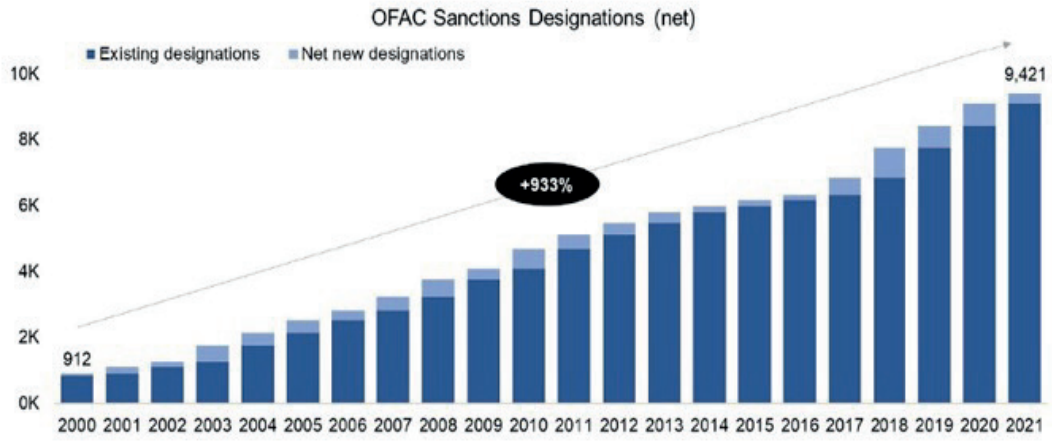
These developments show that the USA uses the reputation it gained because of US Dollar's being the primary payment instrument in the international arena as a "financial weapon". This reality poses a great risk for other countries against integration in the international financial system in case of a political or military crisis which may break out with USA or other countries.

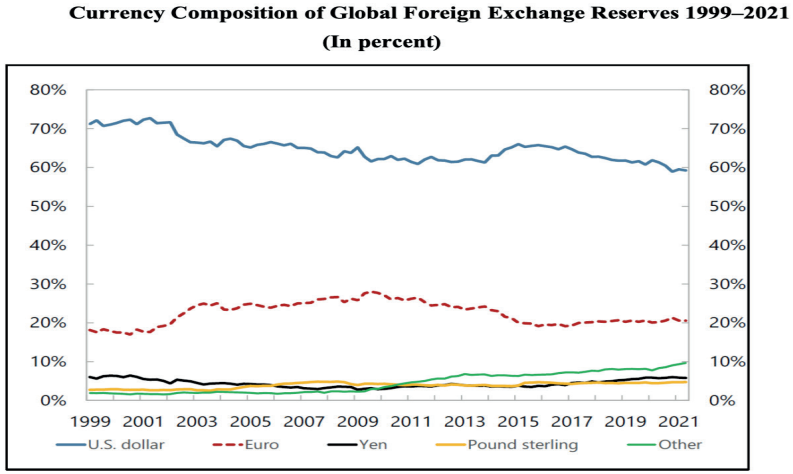


The fact that the number of people enlisted under the OFAC (Office of Foreign Assets Control) sanction list has increased by 9 times since 2002 proves that USA uses financial sanctions as a weapon.

This sanction power of USA comes from dollar's being the primary reserve currency in the international payments system. Dollar does not have a strong alternative today.

USA's using dollar as a weapon makes the other countries, especially the developing countries, worry and they take this as a risk. As a matter of fact, as can be seen in the following table, the weight of US Dollars in currency composition of global foreign exchange reserves has gone down from 70% to 60% in the last 20 years.





Therefore, financial sanctions will accelerate the diversification of the international monetary system. The following graph shows that according to a report published by the Central Bank of Russia, the share of US Dollar assets in Russia's foreign currency reserves was 43.4% in June 2014, which fell down to 16.4% in June 2021.

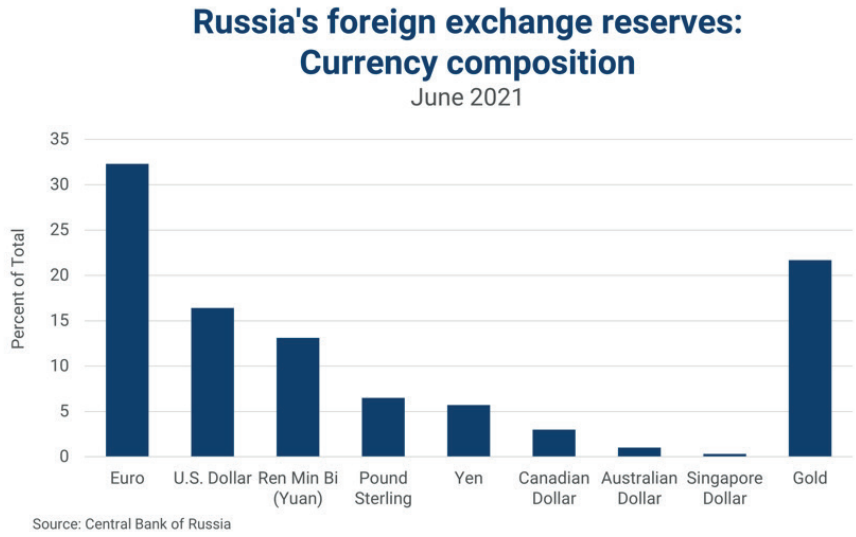
The extensive sanctions imposed by the USA against Russia made Russia speed up its policy to stop using dollar currency. For instance, the president of Russia, V. Putin, demanded that foreign buyers pay for Russian gas in Rubles instead of Euro or Dollar.

Sanction threats and risks urge countries to revise their reserve policies. The treasury assets of the Central Bank of Turkey in US dollars decreased from 29.58 billion dollars in June 2018 to 3.23 billion dollars in June 2021. In 2022, Turkey's demand for gold was the highest in the international arena.

According to the World Gold Council, with the impact of the Ukraine crisis and increasing inflation, the global gold demand increased by 34% on annual basis in 2022 Q1 and reached its highest level since 2018 Q4.

USA's dominant dollar regime in the international finance system and its using this as a weapon will drive countries to make the payments in their own currencies first and then to seek for a regional monetary regime. Russia's reserves' being frozen by the USA and Europe prompted many other countries to rethink about the role of their foreign currency reserves. Financial sanctions will discourage countries to keep their reserves in foreign currency and reduce their appetite to hold the dollar as the reserve currency.

SWIFT is an international payment method functions via messaging. These SWIFT messages are used to initiate and execute payment transactions with SWIFT codes and bank definitions. SWIFT system belongs to the members.







Another threat used within the scope of Financial Sanctions is the removal of a country from the SWIFT system.

Neither the United States nor the European Union directly controls the SWIFT system.

They can only exert influence over the governing body, which is subject to the Belgian laws. Within the SWIFT network, 11,000 member banks communicate with each other via SWIFT messaging, which is the standard language. SWIFT system processes approximately 10 billion messages per year. The vast majority of any individual or corporate international transactions of banks are carried out through the SWIFT messaging system.

A bank's being banned from the SWIFT system will make that bank incapable of transacting with the rest of the world. Removal of a country from the SWIFT system is deemed as a "financial nuclear weapon" has been used against that country. Technically, it prevents the excluded bank and its customers from carrying out financial transactions with foreigners, fulfilling its obligations, receiving payment for exports or providing loans for imports. This can paralyze all fragments of a national economy related to international trade and finance.

This weapon has been used against Russia. With the removal of the Russian banks from the SWIFT system, the cards within the scope of the international credit card networks (Visa, Mastercard ,Amex etc.) have become functionless as they would not be able to run their daily settlements. In fear that they would not be able to use their credit cards in their daily purchases, the Russian citizens rushed to the ATMs for withdrawing rubles and dollars. They withdrew close to 1 trillion Rubles (representing 6.5% of the monetary base) from the banks. The last time Russia faced such a big financial bottleneck was back in 1998 when it was unable to pay back its foreign debt.



Crises in accessing the international financial system force countries, as indicated above, to build a more predictable financial infrastructure. Looking at the examples given below, it is understood that there is a search for an alternative payment network to SWIFT.

In 2020, BRICS nations established the BRICS Payments Task Force in order to promote cross-border payments in BRICS currencies.

Russia has developed its own SWIFT-like payment and clearing message system. Following the crisis in Crimea in 2014, the Central Bank of Russia established the financial messaging system, SPFS, in order to provide financial information transfer services to domestic financial institutions in response to the risk of a possible disconnection from the SWIFT system. Afterwards, Russia promoted the international use of this system. More than 400 Russian and international institutions joined the SPFS system.

China launched the RMB Cross-Border Interbank Payment System (CIPS) in 2015 to facilitate cross-border use of the RMB. By the end of 2021, more than 3,600 banks from 178 economies became part of the CIPS system worldwide.

Lastly, SWIFT sanctions encourage the development of decentralized technologies (such as blockchain) and the use of digital currencies. More alternatives to international financial infrastructure will likely emerge in the future for international payments and the transmission of financial information. Diversification of the international financial infrastructure offers countries more options and reduces the risk of sanctions, thus providing greater financial security.

Psychosocial Risks and Psychological Health

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Based on the view that the conditions of societies, their effects on people's psychological and physical health and general quality of life are issues that need to be addressed in risk analysis, the Turkey Risk Analysis 2022 included social and psychosocial risks. These risk factors are addressed again within the scope of Turkey Risk Analysis 2023.

Psychological and Social Risks

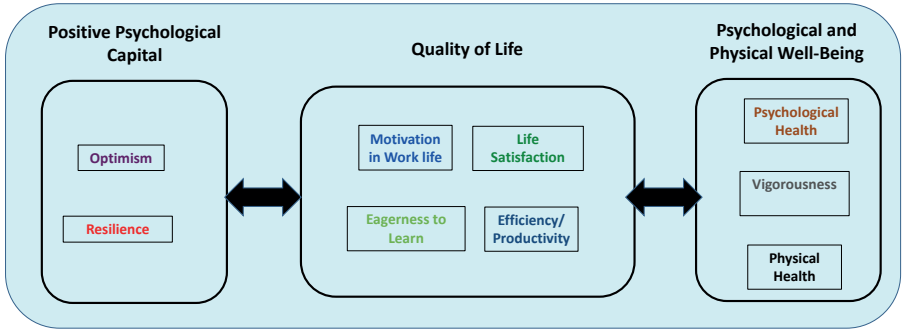
Last year, we noticed that the World Economic Forum's (WEF) Global Risk Reports started to emphasize mental health and psychological well-being and welfare issues across the globe (WEF, 2019, 2020 and 2021a). In the WEF Global Risk Report 2022, it is stated that in the last two years, societal risks including "social cohesion erosion", "livelihood crisis" and "deterioration of psychological health" have been perceived as those that have worsened the most since the pandemic began. According to this report, only about 16% of the respondents are optimistic about the future of the world, and only 10.7% believe that the global recovery will accelerate in the next three years. Moreover, social and environmental risks are perceived to be the most critical risks in the next five years. The study, led by the COVID-19 Mental Disorders Collaborators (2021), reports that the pandemic has led to an additional 53 million cases of major depression worldwide.

In accordance with the WEF Global Risk Report 2022, "mental health deterioration" was one of the top five risks that have worsened the most during COVID-19.

In addition, 26.1% of the respondents identified deterioration in psychological health among the factors that will become a critical problem for the world in zero to two years. The fact that this concern about psychological health is not among the threats between 2-5 years and 5-10 years shows that this issue is perceived as a problem of the period we live in. It shows that the policies to be developed by the states require the development of approaches that guarantee the quality of life of people, although they are expressed with different concepts such as welfare, well-being and good health.

Narayan et al. (January 2022) explain that in the short term, the pandemic affects the jobs and incomes of low-income people directly and disproportionately compared to better-income groups, while also having long-term effects with different losses in learning and human capital and unemployment possibilities. Lack of development opportunities for people, losses in social, psychological and intellectual capital, and unemployment are the most critical threats to psychological health. Therefore, it is very meaningful to consider the deterioration in psychological health due to the effect of the pandemic in the global risk assessment.

For this reason, it is significant that in WEF reporting, especially starting from 2020, "severe mental health deterioration" has taken its place among new 12 risks. Focus should be placed on the individual aspects of global risks and the progressive adverse effects of mental illnesses classified as critical non-communicable diseases on the well-being of individuals and communities should be monitored. Based on these requirements, which were also emphasized by WEF, 2022 well-being and welfare expectations in Turkey were also evaluated for the first time under the title of social and psychosocial risks within the scope of the Turkey Risk Report 2022. These subjects are also covered under the Turkey Risk Report 2023.



Within this scope, we continued to work on the parameters already researched last year.

One of them is psychological capital. Psychological capital is a concept used for an individual's positive psychological state of development and is characterized by hope, self-efficacy, resilience and optimism (Luthans et al., 2007). Two traits have been analyzed within the scope of psychological capital under the Turkey Risk Report 2023. First one is resilience, which is the capacity to sustain and bounce back and even beyond to attain success when beset by problems and adversity (Luthans & Youssef-Morgan, 2017). The other one is optimism, which is a state of hopeful thinking and feeling and reflects the belief that one can find paths to desired goals and be motivated to use those paths (Du, Bernardo and Yeung, 2015). The expectation of achieving desired goals is a cognitive process that motivates goal-directed determination and planning ways to achieve goals. It is also defined as a positive attribution about being successful now and in the future.

There are many personal attributes that the optimism and resilience dimensions of psychological capital can reinforce. The risks covered under the Turkey Risk Analysis 2023 within this context are related to individuals' interests in education, learning and personal development, their desire and motivation in work life, and their efficiency and productivity.

These risks are categorized as psychosocial risks in current academic literature and sectoral practices. Within this framework, one of the critical developments is the publication of the ISO 45003 guide with the title "Occupational health and safety management – Psychological health and safety at work – Guidelines for managing psychosocial risks" by the International Standards Organization (ISO, 2022). The Turkish version of this standard was published by the Turkish Standards Institute in November 2022 (TSE, 2022).

So, these emotional states, which can affect people's quality of life, may lead to psychological and physical health problems (WHO, 1998). How energetic and vigorous an individual feels may vary depending on these feelings. These feelings can result in communities of people who are dissatisfied with their lives overall. Because of this chain effect, life satisfaction, vigorousness, psychological and physical health were also included in risk assessment under Turkey Risk Analysis 2022.

Tuzovic and Kabadayı (2020) define well-being as a phenomenon that can be examined in physical, psychological, social and financial layers. Individual's being able to function physically in a healthy way, having physical strength and vigorousness, regular physical activity and sleep, a healthy body weight are

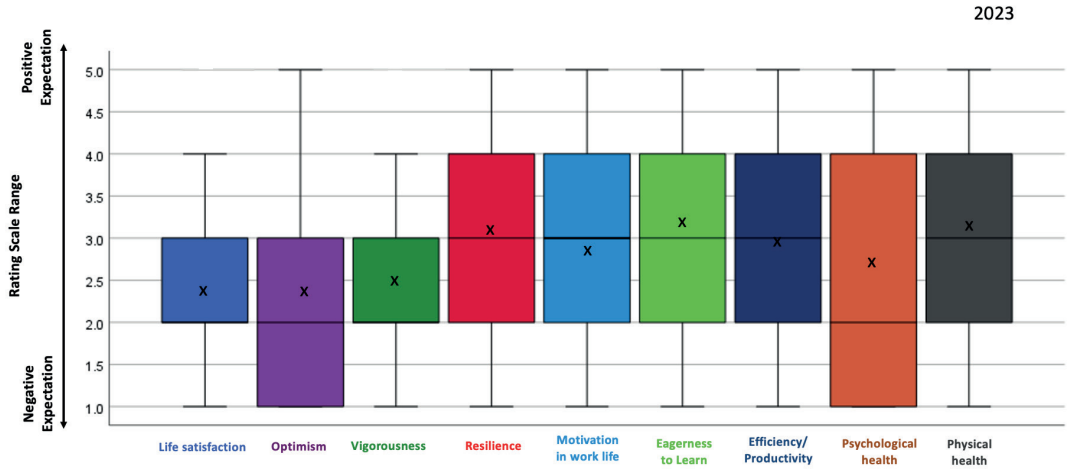
the signs of physical well-being. Social well-being is about communicating and developing meaningful relationships with people who can provide social support. Existing and expected living standards and economic conditions and their sustainability, economic freedom are considered within the scope of financial well-being. Psychological well-being is about individual's being aware of his/her competencies, ability to cope with stress, eagerness to learn, develop and work and to contribute to the social structures that s/he belongs to. Psychological well-being is interconnected with the physical, social and financial well-being, and it affects both the quality of work life and the overall quality of life of the individual. According to the World Health Organization (WHO, 202), an individual with a good psychology feels cheerful, pleasant, calm, relaxed, active and vigorous, wakes up fresh and rested in the morning and thinks that s/he can fill his/her daily life with activities that interest him/her. So, "mental health deterioration", which is a global risk, can be considered as deterioration in these parameters of psychological well-being.

Bulgular

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	MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
Life satisfaction	2.47	1.15	1	5
Optimism	2.4	1.18	1	5
Vigorousness	2.5	1.16	1	5
Resilience	3.01	1.29	1	5
Motivation in work life	2.7	1.25	1	5
Eagerness to Learn	3.07	1.36	1	5
Efficiency/Productivity	2.96	1.29	1	5
Psychological health	2.62	1.37	1	4
Physical health	3.02	1.22	1	4

Display of expectation scores with Box Plot Graph



* *The "x" in the box chart shows the average score for the expectation.

** The "dark horizontal line" within the boxes indicates the median value.

*** Vertical "T" lines connected to the boxes show the maximum value reached by the points if it is above the box, and the minimum value reached if it is below the box.

As can be seen in the box plot graph, heterogeneous results are observed between 1 point and 5 points on indicators other than life satisfaction and energy this year. Meaning the respondents expressed mixed views, ranging from very negative to very positive, regarding psychosocial conditions that could affect their quality of life in 2023. However, descriptive statistics allow us to realize this clustering in perception.

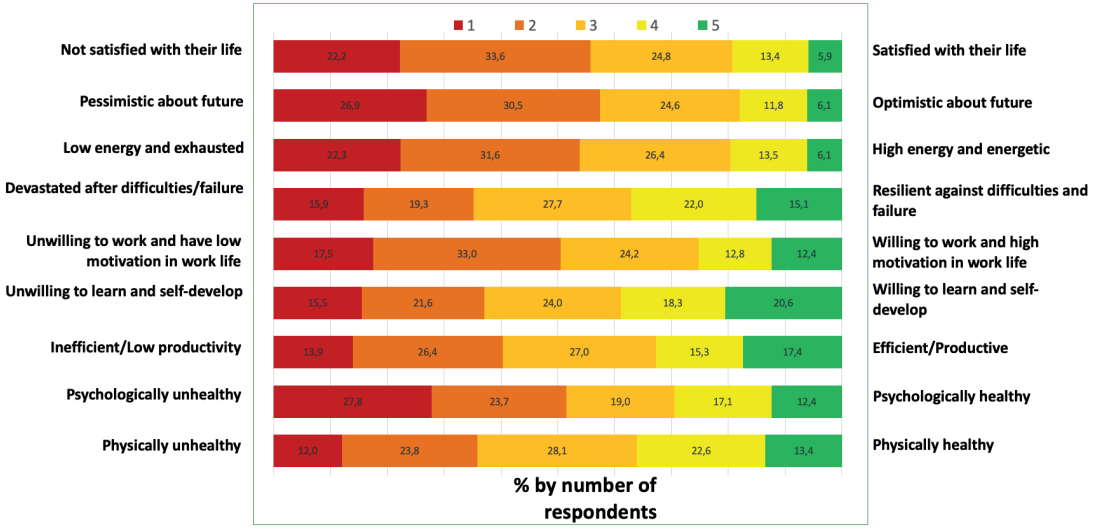
As in last year, clustering in life satisfaction, optimism, and vigorousness was low this year, where 75% of the respondents rated these parameters by 3 points or lower.

Although psychological health has a wider spread this year compared to last year, it is still among the indicators that are expected to be low for 2023, with an average of 2.62.

Resilience (Mean = 3.01) and physical health (Mean =3.02) appear with similar distributions and averages. This year, this couple is accompanied by the eagerness for education/learning/self-development (Mean=3.07).

Willingness and motivation to work in business life (Mean=2.7) and efficiency/productivity (Mean=2.96) form a cluster in terms of both average and distribution. In both indicators, 50% of the respondents make an assessment between 1 and 3 points and 25% between 3 and 4 points.

We can analyze the findings in a little more detailed way by examining the percentage distributions of the respondents according to their opinion scores on psychosocial risks.



* Scores are on a scale between "1=Negative perception" and "5=Positive perception", each score is shown with different colors.

** The figures in the graph are the % values that show how many people have a share in each point out of the total number of 252 respondents.

When we make a comparison by taking the sum of the percentages of respondents who scored "1" and "2" points, which are indicators of negative expectations, we can analyze the psychosocial risk factors, where more than 50% of the respondents fall on the negative end. Accordingly, respondents predict that in 2023, people will be pessimistic about future (57.4%), have low life satisfaction (55.8%), be unwilling to work and have low motivation in work life (50.5%), have low energy level (53.9%) and be psychologically unhealthy (51.5%) in Turkey.

When we look at the parameters with relatively high scoring (3, 4 or 5), it is predicted that in 2023, people in Turkey will be resilient against difficulties and failures (64.8%), be willing to learn and self-develop (62.9%), be efficient/productive (59.7%) and feel healthy physically (64.1%).

Conclusion

We can evaluate the parameters included in the Turkey Risk Report 2023 analysis and the results obtained in terms of their relationship to each other as follows.

Positive Psychological Capital

Psychological well-being of people is a phenomenon that has been researched for many years in the psychology literature and has been discussed a lot in recent years, both in daily life and in working life. This subject is also addressed in international risk analyses, for example, in the World Economic Forum's Global Risks Report.

In the psychology literature, optimism and resilience are two of a group of personal traits considered within the scope of positive psychological capital. According to the answers given by the 491 participants of the Turkey Risk Analysis 2023 study to the questions about psychosocial risks, it is predicted that people in Turkey will feel low in optimism and relatively high in resilience in terms of their psychological capital.

Under the 2020-2021 Global Risk Evaluation Report of the WEF, the rate of respondents who gave an "optimistic" answer to the question "How do you feel about the outlook for the world?" was reported as 3.7%. The fact that the rate of those who gave the most optimistic answer in the Turkey Risk Report 2023 was 6.1% is consistent with this global finding.

Quality of Life

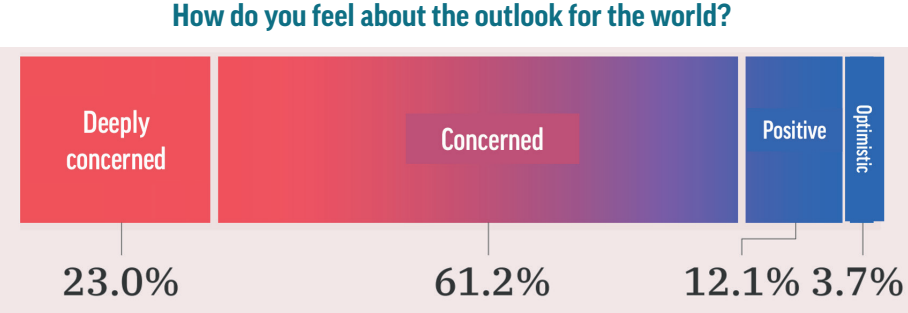
Quality of life also includes elements that fall under the scope of psychology, economy and sociology and are also related to social welfare. The general level of satisfaction with life and the resources that provide it constitute the quality of life.

The opinions of the participants of the Turkey Risk Analysis 2023 study are that people in Turkey will not be satisfied with their lives in general, and their level of willingness to work and their motivation in work life will decrease. On the other hand, efficiency and productivity, and education/learning and personal development aspirations are predicted to be relatively positive.

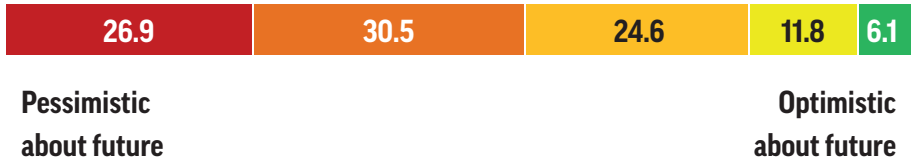
Psychological and Physical Well-Being

Within the scope of Turkey Risk Analysis 2023, it is estimated that in 2023 people in Turkey will feel psychologically unhealthy, their energy will be low and they will feel exhausted. On the other hand, they are expected to be physically healthy. These expectations, which seem quite inconsistent, show a similar trend as in 2022. Despite all these difficulties, the expectation that people in Turkey will be resilient and feel healthy physically may be a sign of hope that we will be able to come out of the "struggle for survival" stronger and to cope with the risk, named as "livelihood risk" by the WEF, through our efforts to achieve the basic conditions for survival.

"Optimism" according to the WEF 2021-2022 Global Risks Report



"Optimism" according to the Turkey Risk Report 2023



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ANNEX



Annex A: Risks and Classification

	Risk	
ECONOMIC RISKS	Exchange rate risk	Risk of adverse developments in the markets (such as interest rate)
	Brain drain risk and associated qualified personnel problems risk	Expectation for Bankruptcies in Real Sector of Increasing (5-year projection)
	Access to foreign currency (currency shortage) risk (5-year projection)	Risk of Extension of Sanctions Against Russia to include Turkey (5-year projection)
	Continuation of the Economic Crisis in the Next 5-Year Period (5-year projection)	Risk of disruption in the supply chain and goods/products shortages (5-year projection)
	Risk of pressure from energy crises on operating costs (5-year projection)	Continuation of the high inflation in Turkey in the Next 5-Year Period (5-year projection)
	Risk of loss of reputation and brand value on a global scale	Economic Conflicts/Embargoes/Sanctions Between Countries (5-year projection)
	Loan repayment problems risk	Balloon effect risk in asset prices
	Liquidity risk	

	Risk
GEOPOLITICAL RISKS	Risk of regional conflicts and potential problems with neighbors
	Expectation for the continued risk of large-scale forced migration (continuation of refugee migration) (5-year projection)
	Geopolitical instability risk (5-year projection)

Annex A: Risks and Classification

	Risk	
SOCİETAL RİSKS	Deep or widespread poverty risk	Risk of violation of human rights
	Risk of erosion of the constitution and civil society	Risk of qualitative deficiencies of the workforce
	Risk of deepening inequality	Unemployment risk
	Risk of interference with freedom of opinion	Media echo chambers and risk of “fake news”

	Risk
TECHNOLOGİCAL RİSKS	Risk of collapse of information technology infrastructures
	Lack of R&D and/or Innovation unit (5-year projection)
	Risk of big data fraud / theft or misuse of private / official data
	Risk of falling behind in digital transformation
	Risk of failure to meet innovation and customer needs (5-year projection)

	Risk
ENVİRONMENTAL RİSKS	Natural disaster risk
	Risk of environmental disasters and biodiversity collapse
	Risks of adverse effects of climate change on Turkey's economy
	Water crises risk

ANNEX B: Methodology

Target mass of the research is selected broadly to include professionals who are experienced in the field of risk management, mainly risk management and finance professionals.

National Risk Inventory study is constituted of 40 risks, total of 120 questions and the following risk classifications;

1. Economic
2. Geopolitical
3. Societal
4. Technological
5. Environmental



Annex C: About Research

Turkey Risk Report is based on a web-based questionnaire.

501 people participated in the questionnaire, who take active role in risk management process, having critical seats in enterprises, particularly in finance departments. Questionnaire responses of 491 people are included in the assessment, and responses of 10 people are excluded from the study. Enterprises/organizations where questionnaire participants work can be classified as medium and large scale organizations. The primary objective of the survey study is to assess the risks that are likely to occur in 2023 on the national scale.

Of the 491 participants, 407 are male, 84 are female.

In line with the target mass, the questionnaire was distributed to finance and risk management professionals. Within this scope, occupational distribution for 52% of the participants is presented below:

Sector	%
Audit Director / Manager / Specialist / Assistant Specialist	24
Finance Director / Manager / Associate / Specialist / Assistant Specialist	20
Risk Management Director / Manager / Specialist / Assistant Specialist	17
Chairman / Member of the Board of Directors and Chairman / Member of the Audit Committee	12
Operations Manager / Specialist / Assistant Specialist	8
Other	19

Annex C: About Research

The types of enterprises where participants work as well as their turnovers are important in terms of interpreting maturity levels of risk management practices and industry-specific assessments. To this end, distribution of participants by industry is presented below.

Sector	%
Banking and capital markets	25
Holding / Group Company	18
Technology	9
Industrial production	8
Public services	8
Retail and consumer products	6
Health and Pharmaceuticals	4
Other	23

The classification as per the turnover of the organizations where the survey participants work is given below.

Turnover	%
Turnover over 1 billion TL	48
Turnover between 500 million - 1 billion TL	14
Turnover between 250 million - 500 million TL	8
Turnover between 100 million - 250 million TL	9
Turnover below 100 billion TL	21

RISK REPORT SERIES VOL. 4



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TURKEY RISK REPORT 2023

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