

**Deloitte.**

# Business outlook in Azerbaijan

Deloitte CIS Research Center  
H1 2021, Fifth Edition



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# Introduction



**Nuran Kerimov**  
**Managing Partner**  
Deloitte Azerbaijan

We are delighted to present the fifth edition of Business Outlook in Azerbaijan, a macroeconomic journal by the Deloitte Research Centre.

We focus on post-COVID-19 trends and present our key research findings on changes to economic indicators.

In February–March 2021, Deloitte CIS conducted a survey of leading Azerbaijani companies. The opinions provided by respondents have enabled us to identify major concerns, key drivers and development priorities for the Azerbaijani economy, as well as to perform a comparative analysis of existing trends.

This year, we also present our analysis of the cybersecurity environment, for which we assessed Azerbaijani entities from different industries using publically available online tools.

If you have any questions or suggestions regarding this research, please do not hesitate to contact us at [cisresearchteam@deloitte.ru](mailto:cisresearchteam@deloitte.ru)

# Highlights

## Azerbaijan in figures



## Results of the business confidence survey

Industry expected to grow the fastest over the next five years



**Agriculture**

(per 36% of respondents)



**Some growth**

expected by 52% respondents



Revenue expectation for the next 12 months

Expected time to recover from the impacts of COVID-19



**1-2 years**

(per 44% of respondents)

## Results of the Azerbaijan cybersecurity review



**Oil and Gas**

(per 74% of respondents)



Industry with the highest website performance and availability

Industry with the highest GDPR compliance



**Oil and Gas**

(per 75% of respondents)

**Banking** (per 91% of respondents) and **Telecommunication** (per 89% of respondents)



Industries with neutral or good domain reputations



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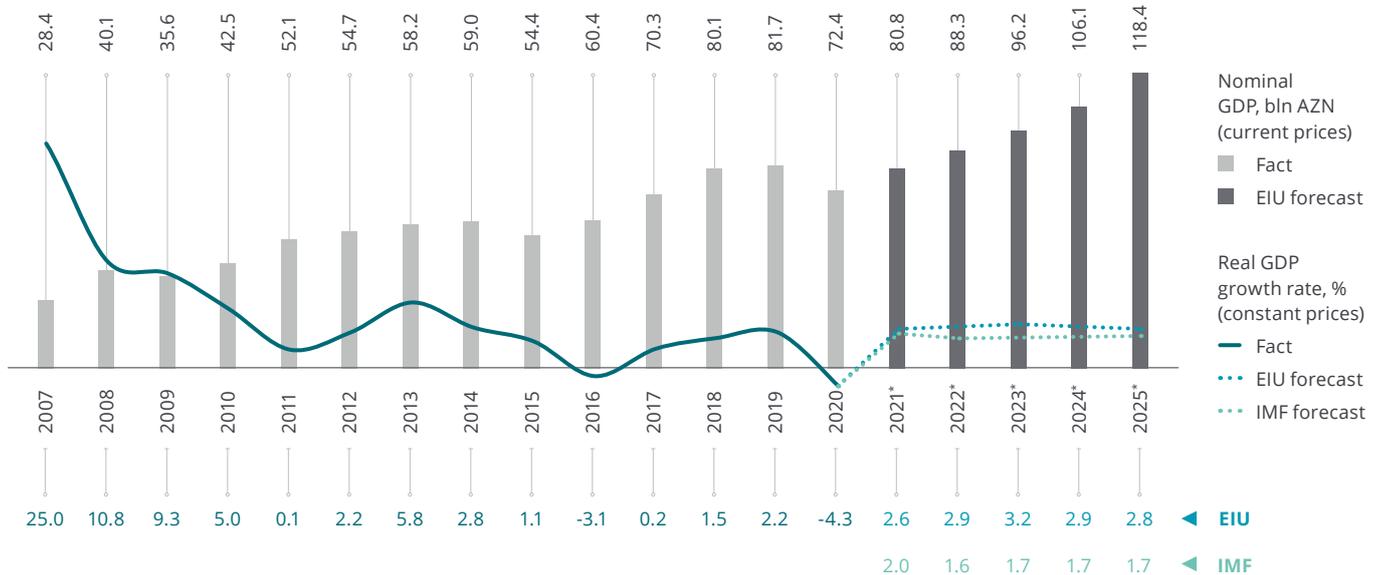
Azerbaijan  
in figures





# Key macroeconomic indicators

## Gross domestic product (GDP)



Source: Historical data — UN statistics, the State Statistical Committee of the Republic of Azerbaijan

\* Forecast — Economist Intelligence Unit (EIU), International Monetary Fund (IMF)

In 2020, Azerbaijan's nominal GDP amounted to AZN 72.4 bln, comprising a slight decrease in real GDP compared to the 2019 figures of AZN 81.7 bln in nominal GDP and 2.2% real GDP growth. The GDP is expected to grow in the upcoming years.

### GDP by sectors of the economy\*

Industry	2018	2019
Manufacturing	44.5%	41.4%
Agriculture	5.2%	5.7%
Construction	7.7%	7.3%
Transport and Communication	7.8%	7.8%
Net taxes	7.7%	8.7%
Other sectors	27.1%	29.1%

Source: the State Statistical Committee of the Republic of Azerbaijan

\*2020 figures were not available at the time of report publication

In 2019, the manufacturing industry enjoyed the largest share of the economy (41.4%), which has shown a 3.1% total decrease. Meanwhile, agriculture grew by 0.5% from 2018 to 2019.



"Our economy contracted by 4.3%. I consider this a good result in comparison with other countries and considering the events we've been through."

**Ilham Aliyev**  
President of the Republic of Azerbaijan



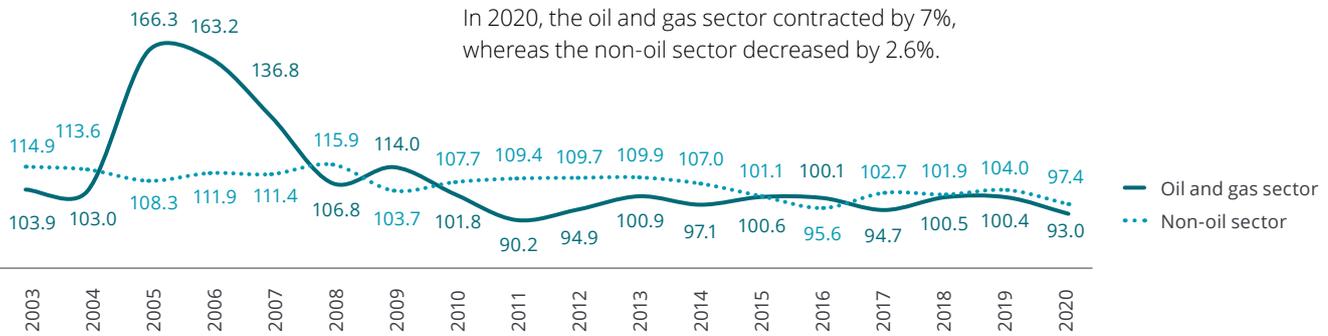
"Since economic prospects will largely rely on rising gas exports, the projected acceleration in growth in the medium term will be temporary."

**World Bank**



## Key macroeconomic indicators

### GDP Growth by sector, %



Source: the State Statistical Committee of the Republic of Azerbaijan

Compared with 2019, real GDP growth in both the oil and gas non-oil sectors shrank.

### Natural gas price forecast, USD/mmbtu

	2019	2020	2021	2022	2023	2024
<b>Henry HUB</b>						
<b>EIU</b>	2.57	-	2.07	3.05	3.19	-
<b>WB</b>	2.5	-	2.7	2.81	2.92	3.04
<b>Europe</b>						
<b>EIU</b>	4.8	3.3	4.63	4.87	-	-
<b>WB</b>	4.5	4.5	4.7	4.92	5.14	5.37

According to the EIU, gas exports are expected to rise in the forecast period as the Shah Deniz II gas field expands production. Completion of the Trans-Adriatic Pipeline (TAP) will increase gas sales to Europe.

The TAP was completed in October and deliveries have started in 2021.

Moreover, gas prices increased from USD 2.50 in 2019 to USD 2.70 in 2020; this increase in the price of gas is expected to continue according to future forecasts.

66 "This projects unite a huge number of countries and create a new cooperation format between countries in Eurasia."

**Ilham Aliyev**  
President of the Republic of Azerbaijan

### Brent oil price forecast, USD/barrel

	2018	2019	2020	2021	2022
<b>EIU</b>	42.2	47.0	53.0	57.5	55.0
<b>IMF</b>	42.77	47.97	49.58	50.85	51.96
<b>ECB</b>	42.8	47.5	49.2	-	-



According to the EIU's Azerbaijan 2020 forecast, falling oil prices will not weigh on Azerbaijan's budget, as forecasted oil prices are higher than the budgeted price of USD 33.

### Azerbaijan's Credit Rating

Agency	Rating	Forecast	Date
<b>Fitch</b>	BB+	Negative	10 Apr 2020
<b>S&amp;P</b>	BB+	Negative	23 Oct 2020
<b>Moody's</b>	BA2	Stable	26 Aug 2020



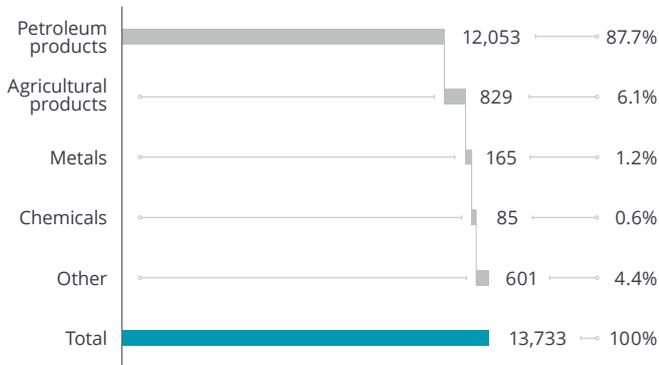
"The credit profile of Azerbaijan reflects the country's "ba3" economic strength, which balances moderate wealth levels against the economy's significant exposure to hydrocarbons."

**Moody's Investors Service**



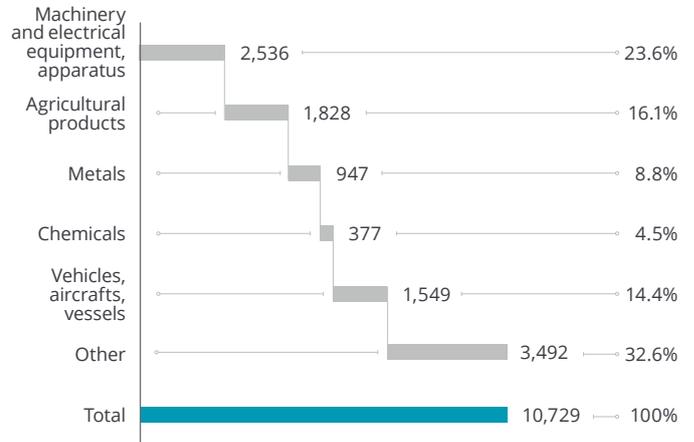
## Key macroeconomic indicators

Structure of goods exported in 2020 (USD mln)



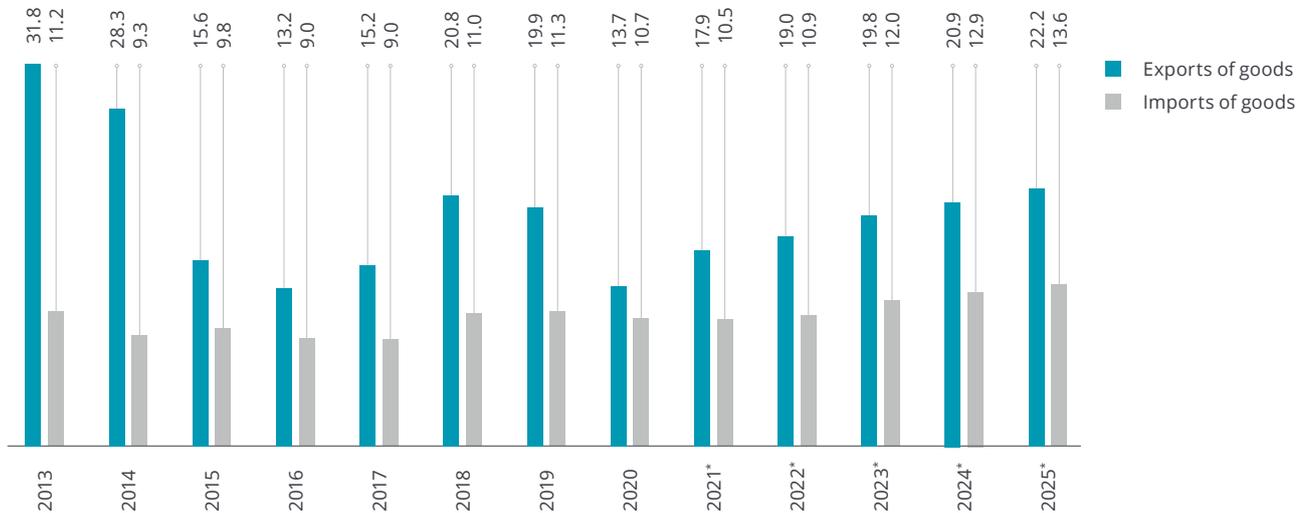
Of total exported goods in 2020, 87.7% consisted of petroleum products, while agricultural products comprised the second largest category of exported goods (6.1%).

Structure of goods imported in 2020 (USD mln)



Machinery and electrical equipment accounted for the largest share of imported goods, comprising 24% total imports.

Foreign Trade, USD bln



Source: the State Customs Committee, EIU

\* EIU forecast



USD **3** bln

Azerbaijan is experiencing its ninth consecutive year with a positive trade balance, at USD 3 bln.

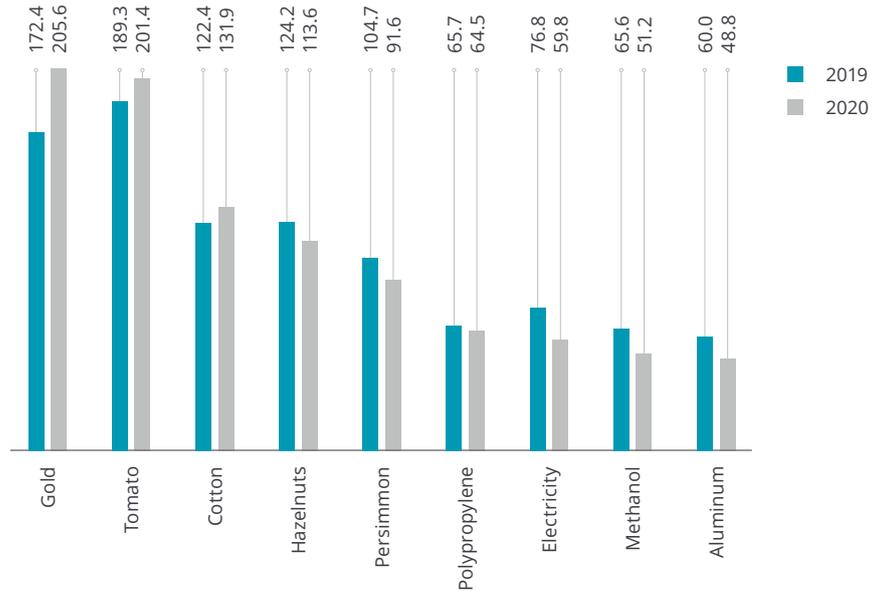


## Key macroeconomic indicators



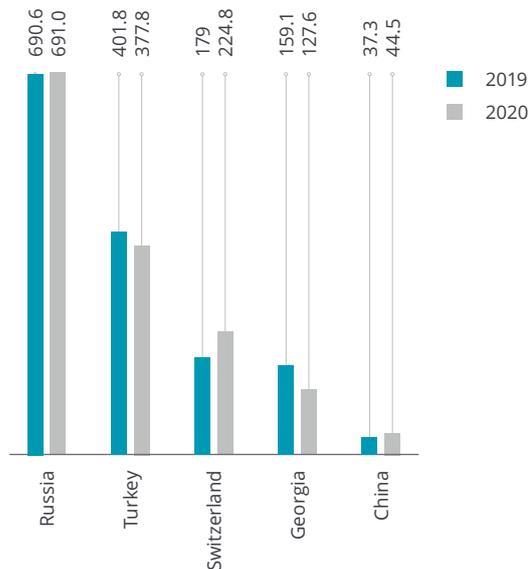
### List of main non-oil goods exported in 2020 (USD mln)

In 2020, gold exports surpassed tomatoes by USD 4.2 mln, becoming Azerbaijan's most significant non-oil export. Exports of all goods except gold, tomatoes and cotton declined.



### Top five export destinations in the non-oil sector in 2020 (USD mln)

At USD 691 mln, Russia retained its position as the most significant export destination for Azerbaijan in 2020. Exports to Switzerland increased by 25.6%, amounting 45.8 mln in total.



Source: Center for Analysis of Economic Reforms and Communication



# Key macroeconomic indicators

## Change in external debt



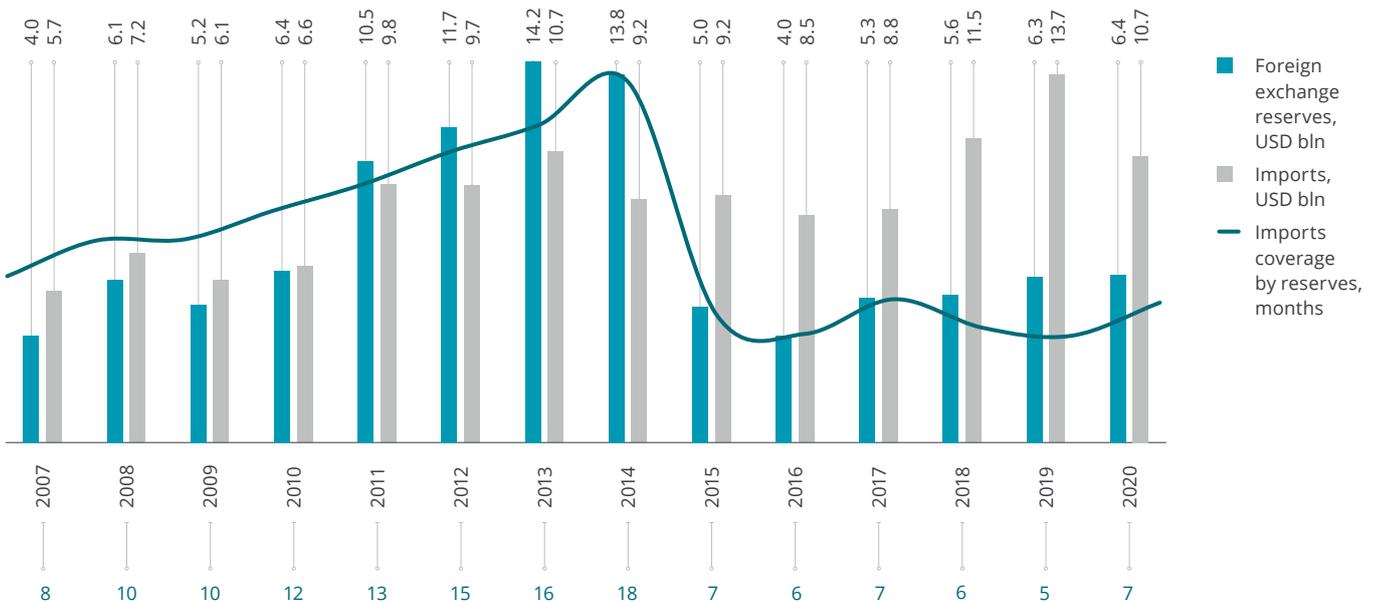
Source: EIU, Central Bank of the Republic of Azerbaijan

\* EIU forecast

\*\* Including USD 8.9 bln of sovereign debt as of 31 December 2018

Azerbaijan's external debt remained constant throughout the 2018–2020 period. External debt as a percentage of GDP increased, reaching 39.1% in 2020. External debt is expected to continue increasing in upcoming years, whereas external debt as a percentage of GDP is forecasted to decrease from 39.1% to 25.9% in 2025.

## Foreign exchange reserves

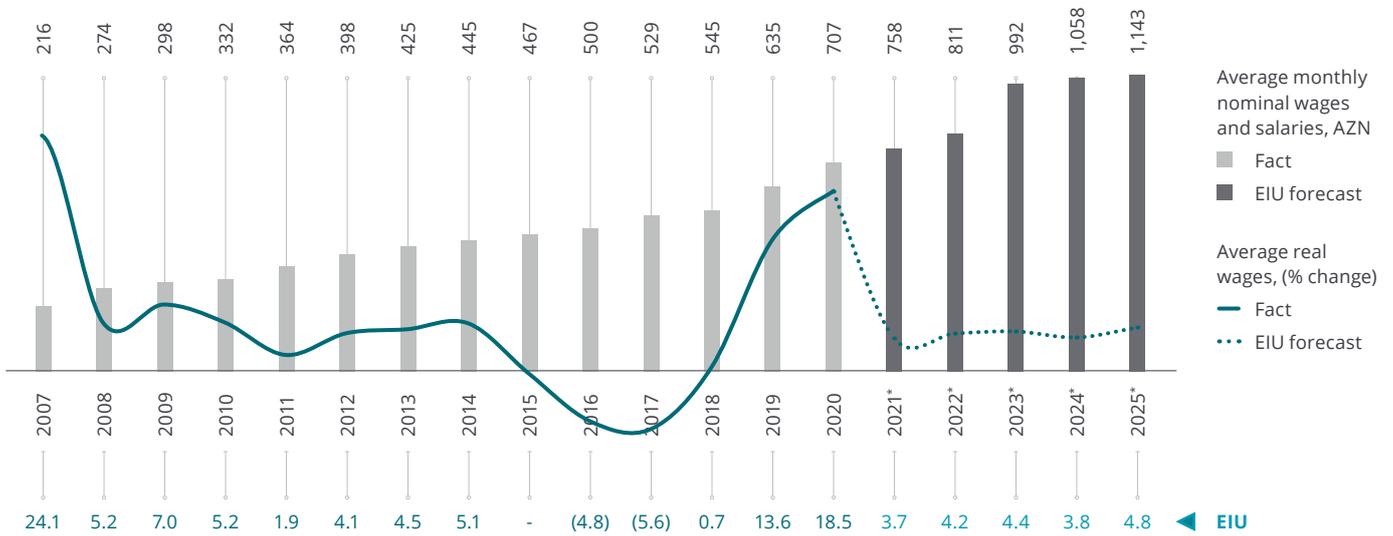


Source: the Central Bank of the Republic of Azerbaijan

Import coverage of reserves grew from five months in 2019 to seven months in 2020 due to an increase in foreign exchange reserves from USD 6.3 bln to USD 6.4 bln, as well as a decrease in the total number of imports from USD 13.7 bln to USD 10.7 bln in 2020.

# Key macroeconomic indicators

## Change in the average monthly salary



Source: Central Bank of Azerbaijan, EIU

\*Forecast — EIU

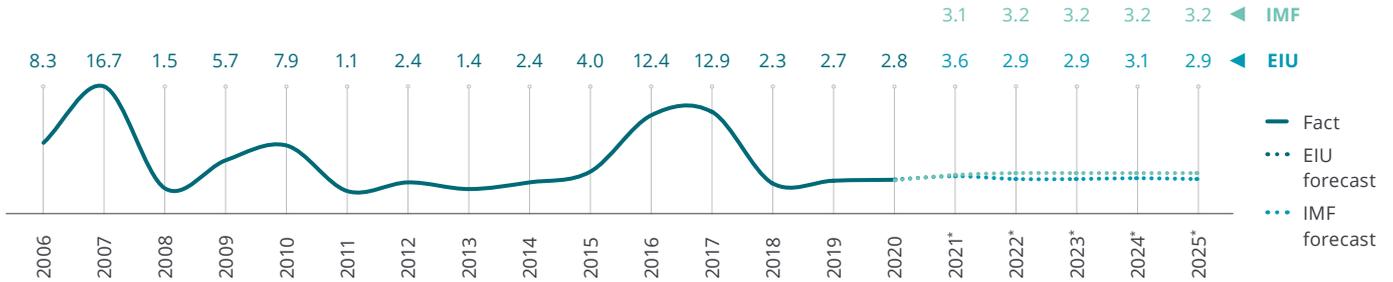
The average monthly salary increased consistently throughout 2007–2020, peaking at AZN 707 in 2020.



"Wages in Azerbaijan have grown robustly since 2019; monthly wages in the first three quarters of 2020 have increased by an average of 24%. We expect wage growth to ease in 2021."

Economist Intelligence Unit

## Consumer price index, average (%)



Source: Historical data — the State Statistical Committee of the Republic of Azerbaijan

\* Forecast — EIU, IMF

## 2020 CPI in Azerbaijan by component

Total	2.8%
Food products, beverages, tobacco	5%
Non-food products	1.3%
Services	1%

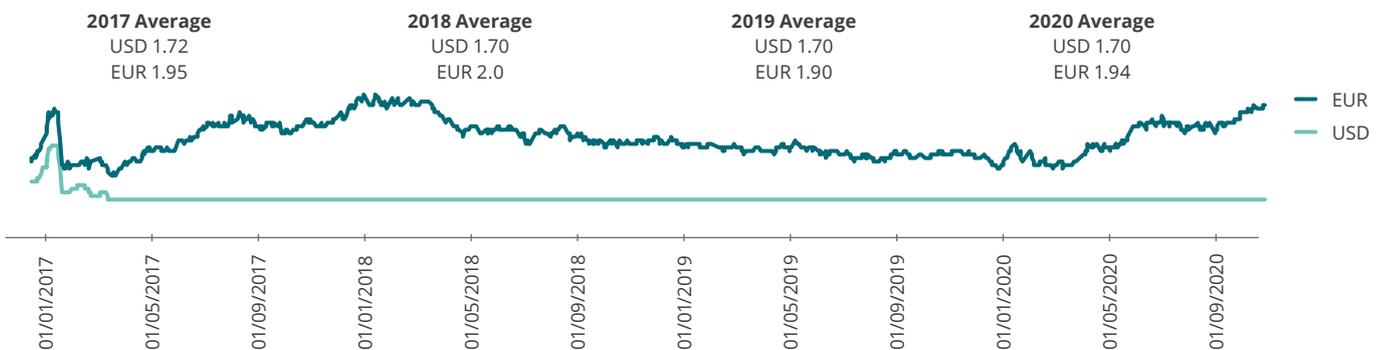
In 2020, the average consumer price index increased by 0.20%: from 2.7% in 2019 to 2.9%.

The EIU expects the average consumer price index to increase by 0.5% in 2021 and subsequently decrease to 2.9% in 2025.

Source: the Central Bank of the Republic of Azerbaijan

# Key monetary indicators

## EUR and USD vs. AZN, July 2017 – March 2020



Source: Historical data — the Central Bank of the Republic of Azerbaijan

\* Forecast — Economist Intelligence Unit (EIU)

### Currency rate — EIU forecast

	2021	2022	2023	2024	2025
USD vs. AZN	1.7	1.7	1.7	1.7	1.7
EUR vs. AZN	1.98	1.95	2.01	2.06	2.09

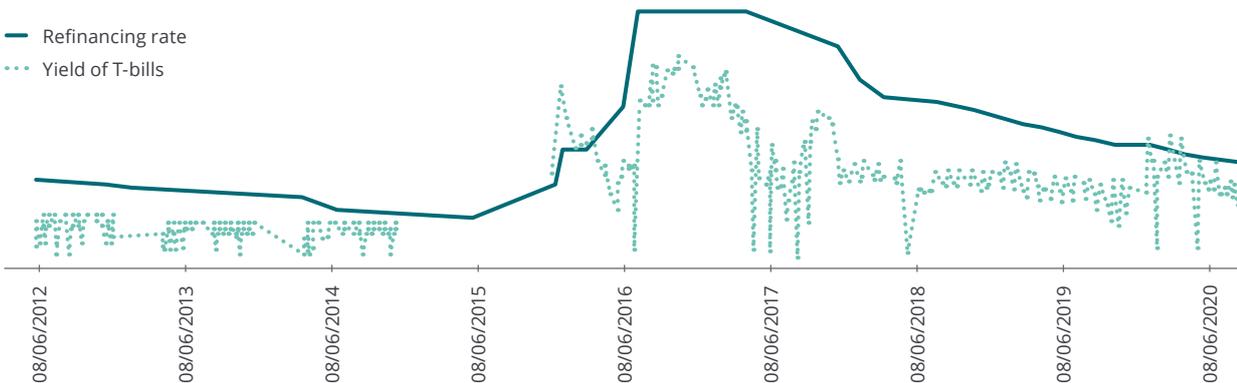
In 2020, the USD/AZN exchange rate remained fixed (at 1.70). In 2020, the EUR/AZN exchange rate fluctuated between 1.9025 in the first month to 2.089 in the last month of 2020. The EIU expects the EUR/AZN exchange rate to increase in the next five years.



"Recently, there have been many rumours regarding currency devaluation. However, these are unfounded, and I urge our citizens not to trust them."

**Elman Rustamov**  
Head of CBAR

## Refinancing rate and yield of T-bills, (%)



Source: the Central Bank of the Republic of Azerbaijan

2019 **7.50%** >>> 2020 **6.25%**

In 2020, CBAR decreased the refinancing rate from 7.50% in 2019 to 6.25%.



# 02 Business confidence survey

Deloitte Azerbaijan would like to thank everyone who participated in the survey, which we conducted in February–March 2021. We appreciate your time and interest in our research.

In 2020, various sectors of the Azerbaijani economy were affected by the pandemic and are still recovering from the economic damage. However, leading companies continue to show growing interest in risk management approaches as well as advanced technologies

The expert opinions collected in this survey have allowed us to conduct an integrated analysis of Azerbaijan's business environment, as well as to study the sentiments and expectations of market participants regarding their companies' development and the market overall.

Our survey covers the views of respondents on their current financial outlook and risks, the market environment in Azerbaijan, and the impact of COVID-19 on business performance.

We are pleased to present you with the key findings of our research, and we hope that you will find this report useful and informative. We would also be grateful for your participation in future surveys.

Please feel free to contact us if you have any questions.

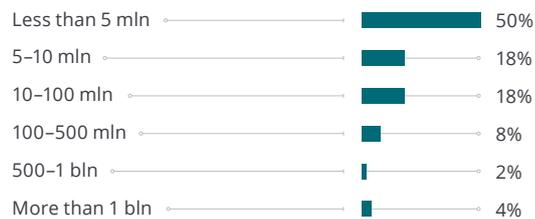


## About the respondents

### Primary sectors of respondents

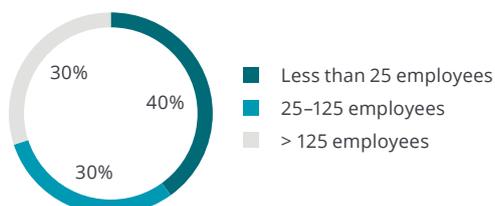


### Annual revenue range of respondents (AZN)



In 2020, half of our respondents (50%) generated less than AZN five million in revenue; 18% generated AZN 5-10 million in revenue, and another 18% generated AZN 10-100 million.

### Company headcount of respondents



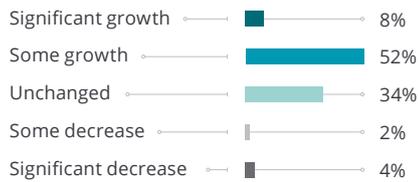
Among respondents, 30% employed more than 125 employees. An equal share of respondents employed 25-125 people, whereas 40% employed less than 25.



## Financial outlook & risks

### What changes do you expect to key financial and operating metrics at your company over the next twelve months?

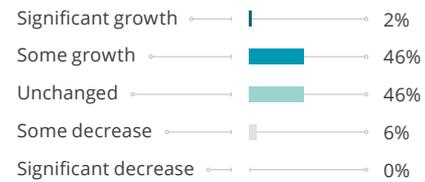
#### Revenue (AZN)



**Trends:** A huge percentage of respondents (52.0% and 34.0% respectively) expected either a moderate increase in their company's revenue or unchanged revenue flows in the upcoming year.

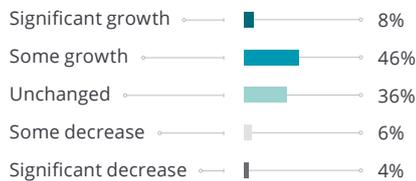
**Highlights:** Of companies with annual revenue of up to 10 million, 68% were optimistic about revenue increasing in 2021; only 10% of companies thought their revenue would decrease next year. The majority of companies (89%) in the non-oil sector expected their revenue to increase next year.

#### Operating expenses (AZN)

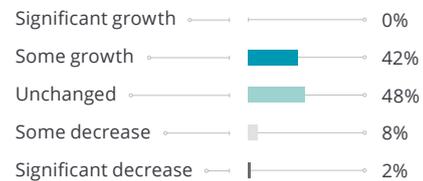


**Trends:** An equal percentage of people (46.0% each) either did not expect any changes to their company's operating expenses or expected operating expenses at their company to increase to some extent over the next year.

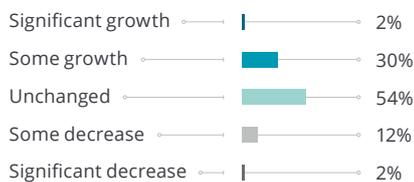
#### Operating profit (AZN)



#### Cost of capital (AZN)



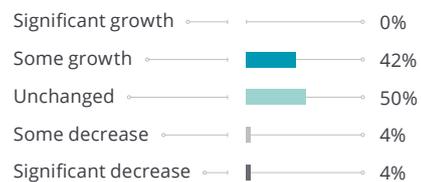
#### Number of staff



**Trends:** More than half (54%) of respondents expected their companies not to undergo any restructuring in the next 12 months. Moreover, 30% of respondents expected their companies to hire more staff.

**Highlights:** Out of the 30% of respondents who expected to see an increase in the number of staff, 41% generate revenue below AZN 10 million.

#### Average wage/salary



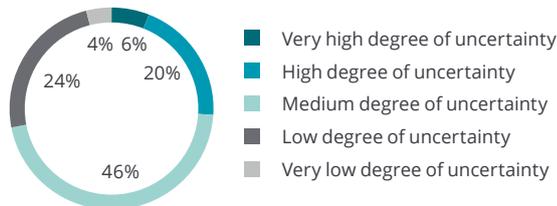
**Trends:** Half of respondents (50%) expected the average salaries at their companies to remain unchanged in the next year; the rest (42%) mostly expected some growth in wages.

**Highlights:** Of companies that planned to increase wages, 31.5% were in the construction industry.



## Financial outlook & risks

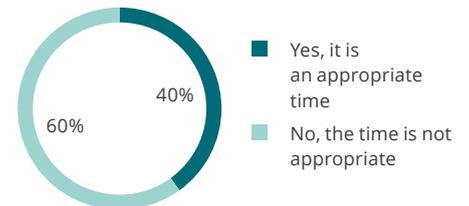
### How do you assess political and economic uncertainty at your company in terms of strategic decision-making?



**Trends:** Political and economic uncertainty was believed to have a medium effect on strategic decision-making at 46% of companies surveyed. Meanwhile, 24% of companies believed it to have little effect.

**Highlights:** Compared to last year's results of 69%, this year only 28% of respondents expected to have a low or very low degree of uncertainty when it comes to strategic decision making.

### Is now an appropriate time to make risky decisions that may affect the balance sheet?

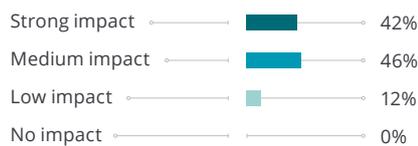


**Trends:** Our survey revealed that 60% of respondents did not believe now to be the right time to make risky decisions at their companies, while the remaining 40% believed the opposite.

**Highlights:** Earlier survey results showed that organizations were more confident with making risky decision in 2019, with 49% responding positively.

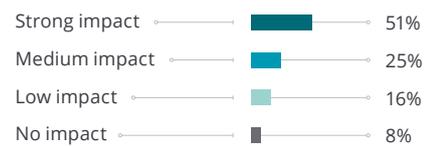
### Please evaluate the impact of the risks listed below on your company over the next twelve months.

#### COVID-19 pandemic



**Trends:** A total of 88% of respondents believed that risks associated with the COVID-19 pandemic would have either strong or medium impact on their companies.

#### Devaluation of the national currency

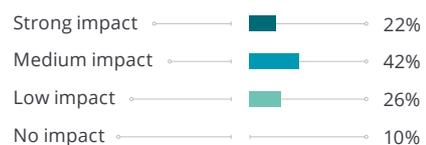


**Trends:** Our survey shows that the majority of respondents (51%) believed that currency devaluation poses a significant risk to their company.

#### Decrease in demand



#### Decrease in cash flow





# Financial outlook & risks

Please evaluate the impact of the risks listed below on your company over the next twelve months.

## Increased state regulation for businesses in Azerbaijan



## Difficulties with financing



**Trends:** Of all Azerbaijani companies surveyed, 38% believed that over the next 12 months, risks of financing difficulties would have a moderate impact on their activities. Meanwhile, 34% of companies surveyed believed that such risks would have a strong impact on them.

**Highlights:** The construction companies that participated in our survey believed that lack of financing would have a strong effect on their business in the upcoming year.

## Geopolitical risks



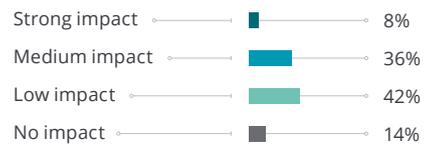
**Trends:** More than half of the Azerbaijani companies we surveyed believed that geopolitical risks would have medium impact on their companies next year.

## Decrease in core business revenue



**Trends:** The survey clearly shows that the majority of businesses (48%) considered a decrease in revenue to be a huge risk, while 32% of respondents believed that decreased revenue would have medium effect on their companies.

## Cyber threats



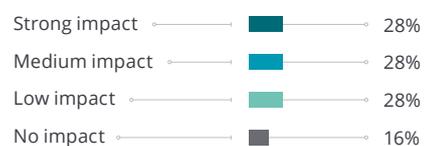
**Trends:** Of all companies surveyed, 42% thought that cyber risks would have a low impact in the coming year, while 36% believed that they would have a medium impact.

**Highlights:** Out of the respondents who believed that cyber security risks would have a strong or moderate impact on their business, 32% were from construction and 18% were in the banking industry.

## Shortage of suppliers



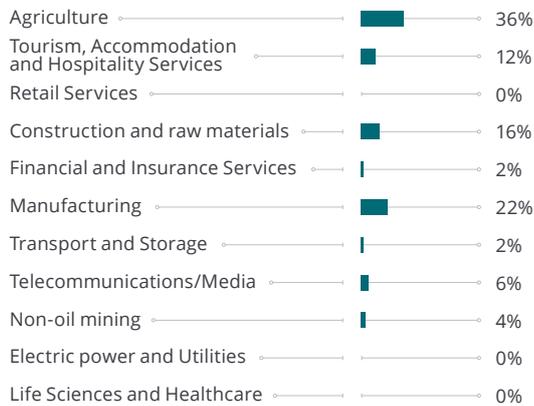
## Increase in production costs





## Market environment

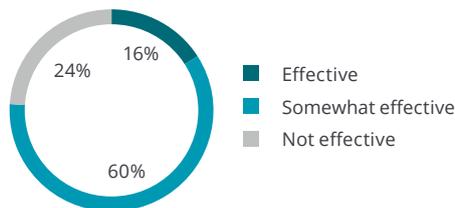
Please select the key industry of Azerbaijan's non-oil sector that you believe will experience the fastest growth over the next five years



**Trends:** Based on our survey, companies in Azerbaijan believed agriculture (36% of respondents) and manufacturing (22% of respondents) to be the two most promising non-oil industries in the next five years.

**Highlights:** This was the second consecutive year in which our respondents believed agriculture to be the industry with the highest potential.

Please assess the effectiveness of the government's efforts to support and develop the Azerbaijani non-oil sector



**Trends:** A total of 60% of respondents believed that government programs designed to help develop the non-oil sector have been moderately effective.

Please evaluate issues that could hinder the growth of Azerbaijan's economy

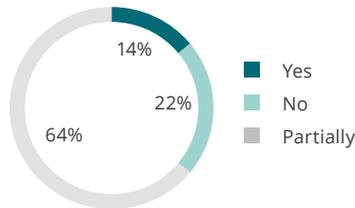


**Highlights:** Almost 60% of respondents consider a challenging regulatory environment to be the main barrier for the development of Azerbaijan's economy. Moreover, 32% of respondents consider current market competitiveness as a factor that could stifle further economic development in Azerbaijan.



## Impact of COVID-19

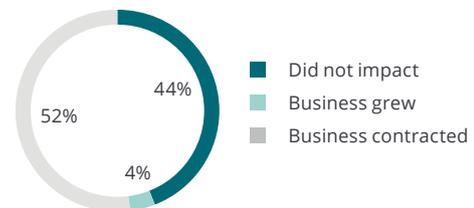
### Did your company change its strategy due to COVID-19?



**Trends:** Only 14% of respondents completely changed their company's strategy during the COVID-19 pandemic, while 64% introduced slight modifications.

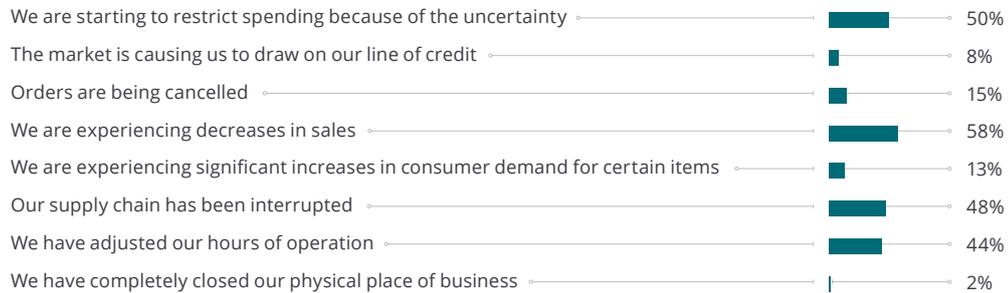
**Highlights:** Of companies that did not change their strategy because of COVID-19, 30% were in the agriculture sector.

### How has COVID-19 impacted your business in 2020?



**Trends:** Based on our survey, the business of 52% of companies contracted, while 4% experienced growth during the COVID-19 pandemic.

### How have your business's operations been impacted by COVID-19?

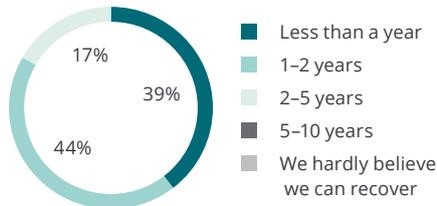


**Trends:** An almost equal share of respondents claimed that because of COVID-19, they had either experienced a decrease in sales (58.3%), cut spending because of uncertainty (50.0%), or their supply chain had been interrupted (47.9%). Also, 43.8% of respondents said that they had adjusted their hours of operation as a response to COVID-19.



## Impact of COVID-19

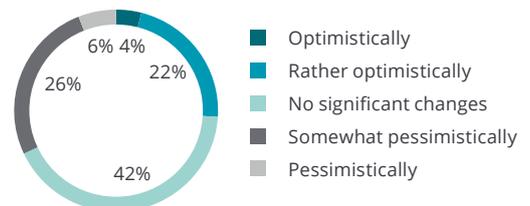
### How long will it take your company to recover from the impacts of the COVID-19 crisis and get back to its pre-pandemic state?



**Trends:** Out of all respondents, 43.8% and 39.6% respectively expected their companies to recover from the COVID-19 crisis and return to pre-COVID levels in either 1-2 years or less than one year.

**Highlights:** Of respondents who expected their companies to recover in less than a year, 72% generate up to AZN 10 million in revenue.

### How do you assess the financial metrics of your company today compared with before COVID-19?

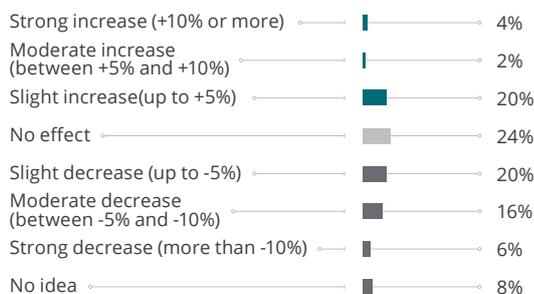


**Trends:** Despite the COVID-19 crisis, 42% of companies surveyed did not experience significant changes to their balance sheets. Nevertheless, 26% of surveyed companies were somewhat pessimistic about changes to their balance sheets.

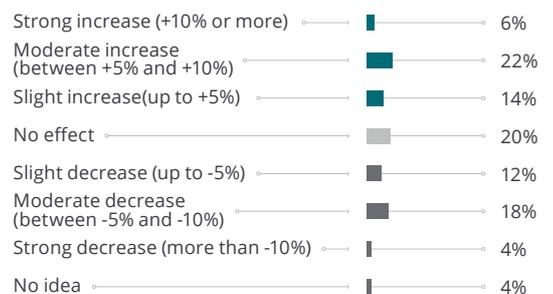
**Highlights:** Of respondents who experienced a decrease in the size of their business, 70% have revenues of up to AZN 10 million.

### Based on the information you have so far and compared to previous forecasts, how do you expect the pandemic to affect the revenues of your company in the short term?

#### Next six months



#### Next 12 to 18 months



**Trends:** Respectively, 16% and 24% of respondents expected their company's revenue in the next six months to either decrease slightly or not to be affected by COVID-19. Meanwhile, 20% of respondents believed that because of COVID-19, their revenue would increase by 5%; another 20% believed that their revenue would decrease by 5%. On the other hand, 22% of respondents expected their revenues to decrease from 5% to 10% in the next 12 months because of the pandemic.



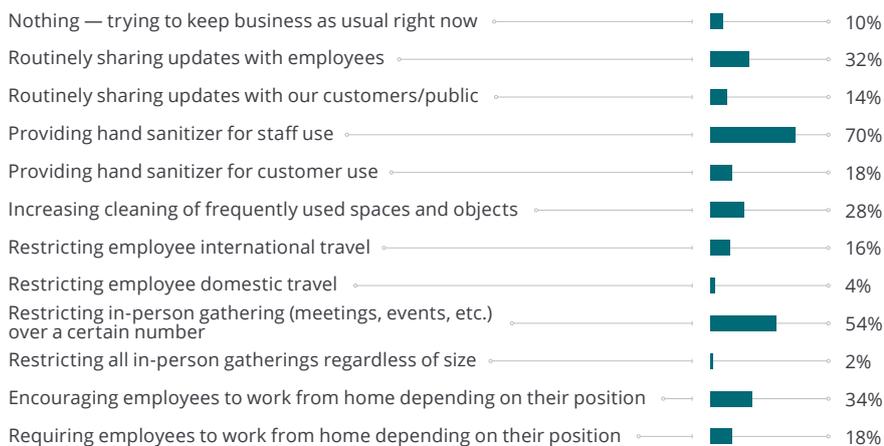
## Impact of COVID-19

**In terms of your business’s recovery from the negative effects of COVID-19 over the next 12 months, please rank the following strategies/actions by priority.**



**Trends:** Over the next 12 months, 56.3% of respondents plan to prioritize their cost reduction strategy to recover from the effects of the COVID-19 pandemic.

### What is your business doing to address employee and customer concerns and mitigate risk during the COVID-19 pandemic?

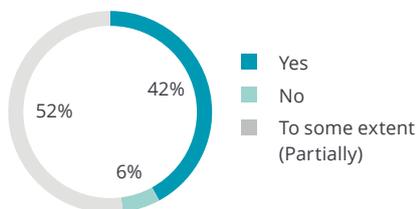


**Trends:** The majority of respondents (70%) provided their workers with hand sanitizer to reassure them. Another 54% of respondents restricted in-person meetings to some extent to reduce the risk of their employees and customers catching COVID-19.



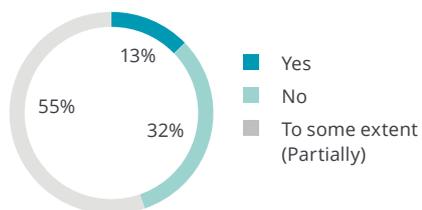
## Impact of COVID-19

**Did you switch to remote work during the pandemic?**



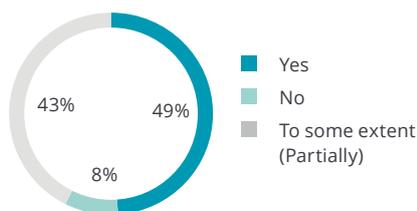
**Trends:** Only a slight majority (52%) of companies we surveyed in Azerbaijan had partially transitioned to remote work.

**Did greater responsibilities at home due to the COVID-19 crisis cause your employees to experience difficulties carrying out their work duties?**



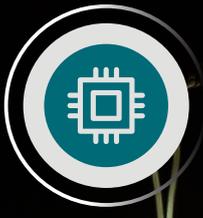
**Trends:** Only 12.8% of respondents said that their employees had trouble carrying out their work because of growing responsibilities at home, while the majority (55.3%) said that their employees had experienced this problem to some extent.

**Does your enterprise have adequate infrastructure and digital resources to deal with remote working?**



**Trends:** Of all respondents, 48.9% stated that their current level of digitalization was sufficient to work remotely, while only 8.5% said that it was not at the required level.





# 03 Azerbaijan cybersecurity review

## Definitions

## Industries

-  Oil and Gas
-  Transportation
-  Banks
-  Telecommunication
-  Energy

The dependence of business functions and processes on information systems continues to grow. As such, cybersecurity and data protection is increasingly becoming a key priority for most organizations in Azerbaijan, especially taking into account the challenges that companies are currently facing.

The COVID-19 pandemic has led to an unprecedented level of cyber threat. This can be attributed on the one hand to teleworking challenges, and on the other hand to increased hacktivist activities against organizations following recent events.

Against this backdrop, Deloitte has performed a Cyber Security Review in Azerbaijan: it analyzed the public web resources of 40 organizations from the Banking, Energy, Oil and Gas, Telecommunication, and Transportation industries. Our report provides a snapshot of how cyber and information security management is structured, performed, and prioritized within target industries. For many organizations, this has proved to be an Achilles' heel.

In conducting this survey, we used publically available online tools such as Google Pagespeed, TrustedSource by McAfee, Haveibeenpwned, and others.



## Website performance

While there are numerous ways of assessing website performance, in this study we checked the time that elapses between when a user first interacts with a page (i.e. when they click a link or button) and when the browser is actually able to begin processing, as well as the time it takes for the first website elements to start painting within the browser in response to user action.

**Trends:** More than 50% of companies with good performance results were in the Oil and Gas industry. This can be attributed to the fact that websites in this sector tend to have simpler features and are mostly used as landing sites. Only banks were close behind: the nature of the Banking industry mean that most organizations in the sector use their websites to provide online banking services, making a better user experience important.

### Website performance and availability



In our tests, we used Google's PageSpeed web resource, and timing values were interpreted using the ranges stipulated by Google's official performance scoring method: Good, Needs Improvement, or Poor.

# Domain reputation

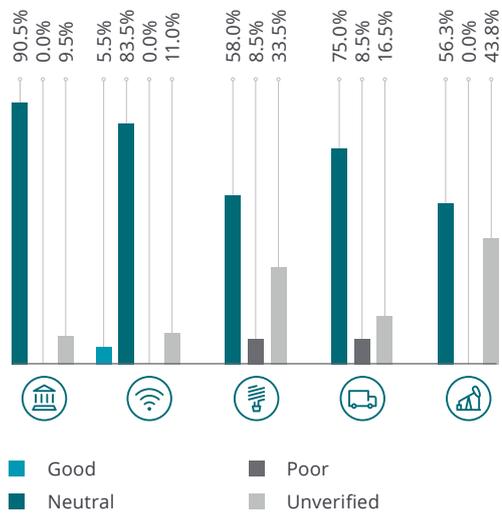


Email providers and search engines commonly rely on information from domain reputation providers, which means that domain reputation is more important now than ever. Emails sent from the domains of companies that have been assigned low reputation scores, or that have been blacklisted by web reputation providers, may be indexed as spam by email providers such as Outlook. Moreover, their web resources could fail to appear at the top of search engine results.

**Trends:** Some domains of companies in the Energy and Transportation industries in Azerbaijan have been indexed as risky or deemed to have a poor reputation. This indicates that these domains have been used to send spam, or that the website behind them has hosted malicious content.

Only one company in the Telecommunication industry had a good domain reputation, with substantial positive evidence of web activity. This is not the case for most local websites.

## Domain reputation



In our review, we used Talosintelligence, TrustedSource, and Barracuda Reputation. Each company's domain name was assigned one of the following categories: Good, Neutral, Poor, or Unverified.



# Web security

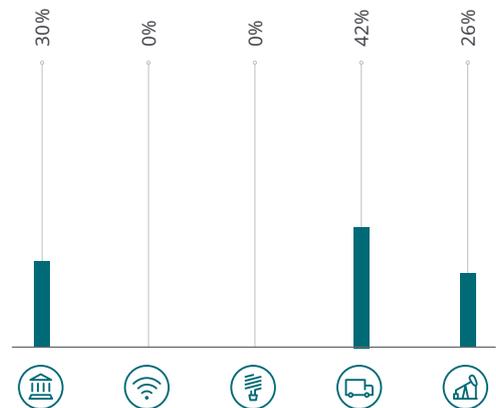
## HTTP Security settings

Almost everything visible in a browser has been transmitted to the computer via Hypertext Transfer Protocol (HTTP). HTTP headers are the core part of HTTP requests and responses: they indicate how to transfer information on clients visiting a website and then transfer information from the website back to the user's computer. However, not all information obtained from users is safe for company websites. HTTP security headers provide an additional layer of security by restricting the behavior of web browsers.

**Trends:** Even though adding security headers is a quick and easy way to improve the security of a website without making major changes to the website itself, only a small percentage (less than 45%) of Telecommunication, Oil and Gas, and Banking websites use HTTP header security settings.

**Highlights:** Our assessment found that all websites in the Energy and Transportation industries failed to use protective HTTP headers of any kind.

## Percentage of websites using HTTP security headers in each industry



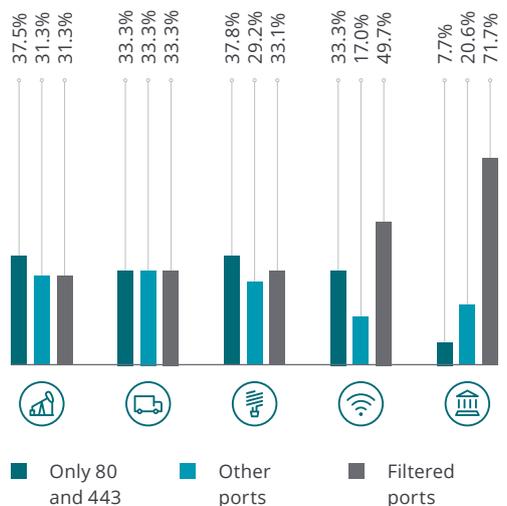
In our assessment, we tested the websites of companies from target industries for use of five HTTP security headers: X-Frame-Options, Content-Security-Policy, Strict Transport Security, X-Content-Type-Options, and X-XSS-Protection.

## Open ports

Network ports are used to identify applications or services running on web servers. For websites to function normally, only ports 80 and 443 are necessary; any other open ports could grant hackers increased potential attack vectors. Filtering ports with the help of a firewall on the web-server side is considered good practice, as this only allows users with valid permissions to transmit data to specific ports.

**Trends:** Our assessment revealed that websites in all industries tend to close or filter access to ports. The best results were in the Banking industry, where companies were most likely to protect their web server and the data of their clients. However, obsolete, unused ports were left open on websites in some cases. This could compromise the website's security if the application or service behind the port is misconfigured, unpatched, vulnerable, or has wrong security settings. These scenarios are quite common and must be addressed.

## Percentage of companies per port types in web security





# Web security

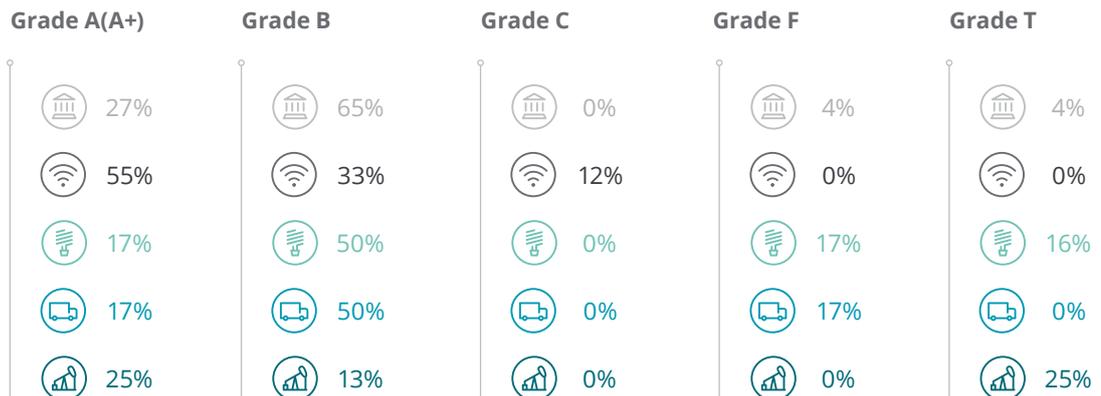
## SSL&TLS

SSL/TLS is used to create a secure and private channel between a website and the client's browser. Messages transmitted through such channels are unreadable without the encryption keys, which only the website and its legitimate clients possess.

**Trends:** The largest number of websites with securely configured SSL/TLS were in the Telecommunication industry; these boasted the best possible scores and were the only ones to receive an A+ grade. Meanwhile, the most vulnerable websites belonged to the Oil & Gas, Transportation, and Banking industries, whose improperly configured security protocols exposed site visitors to the risk of hackers intercepting their information for espionage or financial gain, or even just to be disruptive.

**Highlights:** We found that 37% of websites in the Oil & Gas sector do not provide secure communication support. Such websites may be deemed unsafe for clients to visit, which could in turn affect the overall reputation of the company.

### Percentage of industries by web security grade\*



- Oil & Gas
- Transportation
- Energy
- Telecommunication
- Banks

In our assessment, we tested for SSL&TLS deficiencies on each site using a tool provided by Qualys SSLlabs. Websites were scored from A+ (the highest possible grade) to F (the lowest possible grade). There is also a separate T grade for improper configuration of security protocols or lack of secure website-user communication support.

\* The remaining percentages, which are not mentioned in the above chart, are for test objects that have either no SSL/TLS support or unverified protocol support.



## Privacy protection



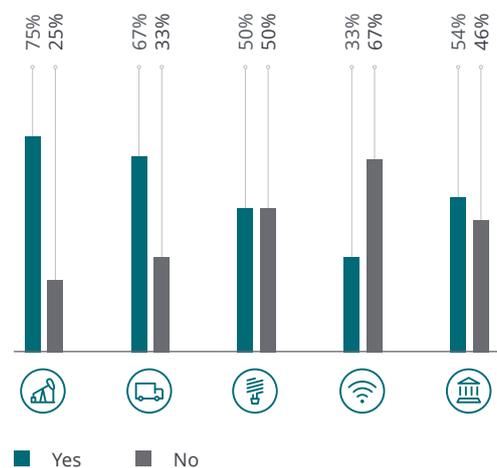
GDPR, or the General Data Protection Regulation, is an EU regulation on privacy and data protection. Companies established outside the EU are subject to GDPR requirements if they offer goods or services to real persons (data subjects) living in the EU, or if they monitor the behavior of such persons, irrespective of whether a payment is made by the data subject.

**Trends:** The websites of Telecommunication companies were the most likely to violate GDPR requirements, with only 33% in compliance. Meanwhile, at least 50% of websites in the remaining sectors were aligned with GDPR requirements, with the Oil and Gas sector being the most compliant, followed by Transportation.

According to our observations, the compliance of such websites cannot be attributed to careful privacy considerations. Conversely, neither cookies nor user data were stored or transferred by such sites. Meanwhile, all tested websites that collect and store user data failed to comply with GDPR requirements, including websites engaged in international provision of online services.

**Highlights:** None of the websites in target industries request users' consent before collecting statistics or storing unnecessary cookies.

### GDPR Compliance



According to the European Commission, personal data includes any information about a person, whether or not it is related to his or her private, professional, or public life, such as names, home addresses, photos, email addresses, banking information, social media posts, medical information, or IP addresses. Websites should not collect statistics and personal information or store unnecessary cookies for sites' technical operations without user consent.

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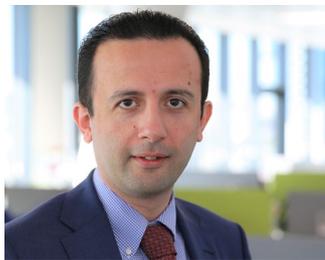
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