EUROPEAN JOURNAL OF LIFE SAFETY AND STABILITY (EJLSS)
ISSN2660-9630
www.ejlss.indexedresearch.org Volume 23, November-2022 ||

Reserves for Economic Growth Due to Reduced Damage from Data Leakages

Turdiev Odilzhan Akramovich
Tashkent State Transport University

Abstract: *The article analyzes the reserves of economic growth as a result of reducing the damage from data leaks, an attempt is made to generalize the main problems in the field of financial security in foreign countries, at the same time, a number of world-class problems are noted in terms of preventing information threats to ensure the financial security of enterprises.*

Keywords: *financial security, economic growth reserves, data leaks, average cost, blockchain, average cost indicator analysis.*

Date of Submission: 16-10-2022 ***Date of Acceptance: 28-11-2022***

To calculate the effect of reducing the damage from information leaks, it is necessary to provide analytical data on the average cost of one leak for the affected company.

According to reports from the FBI and the Internet Crime Complaint Center, the total amount of damages in monetary terms due to information leaks from 2016 to 2021 is more than $43 billion. In total, more than 240,000 fraud incidents occurred [1].

According to a study in the field of corporate information leaks conducted by the Ponemon Institute and IBM Security, the average cost of a data breach in 2020 is $3.86 million [2]. There is a trend towards an increase in the average cost of a data breach for companies. According to an IBM Security study, the average cost of a single data breach for a company in 2022 was $4.35 million. The indicator increased by 2.6% compared to the data of 2021, and increased by 12.7% compared to the data of 2020 [3].

The total number of leak incidents based on the results of 2020, according to a study by the Identity Theft Resource Center, is 1,108 incidents [4]. Currently, there are no data from such studies in open sources based on the results of the reporting years 2021 and 2022.

Based on the available data, the total amount of damage caused (in the world) due to information leaks can be calculated:

1,108 incidents * $3.86 million = $4,276.88 million or $4.27688 billion.

Taking into account the data reflecting the sectoral structure of financial security violations, we calculate the amount of damage for each industry, based on the total amount of 4.27688 billion dollars.

The amount of damage to government institutions is 16% of the total, that is, approximately $0.684 billion.

Further, by similar calculations, the amount of damage for each industry was calculated:

- for the IT sector, the amount of damage is 4%, that is, approximately 0.171 billion dollars;
- for the media sector, the amount of damage is 5%, that is, approximately 0.214 billion dollars;
- for the service sector, the amount of damage is 4%, that is, approximately 0.171 billion dollars;
- for science and education, the amount of damage is 5%, that is, approximately 0.214 billion dollars;
- for medicine, the amount of damage is 11%, that is, approximately 0.470 billion dollars
- for the industry, the amount of damage is 8%, that is, approximately 0.342 billion dollars;
- the cumulative figure for other industries is 24%, that is, 1.026 billion dollars.

At the same time, about $0.984 billion (23% of the total) is caused by damage not caused by industry specialization.

The use of blockchain technology to ensure the security of personal data would significantly reduce the damage caused by information leaks. At the same time, it is still impossible to talk about 100% prevention of data theft incidents, since the very fact of the "success" of committing illegal influences of the fraud format depends not only on the security technologies used by the company, but also on the actions of personnel and a number of other factors.

However, due to the fact that the cost of data leakage differs significantly depending on the scale of the consequences of the deliberate impact of intruders on the company's resources, on the industry in which the company operates, as well as on many other factors, it is advisable to consider for analysis the average cost of one lost in account data leak.

The Ponemon Institute and IBM Security study also evaluated the change in value of a single account lost as a result of a data breach. These studies are presented in Table 1, and also reflected graphically in Figure 1 [2].

Table 1. Average cost of one record in case of information leakage

Year	Cost in USD	Change in value compared to the previous period
2017	141	-
2018	148	7
2019	150	2
2020	146	- 4

Consider a graphical representation of the data:

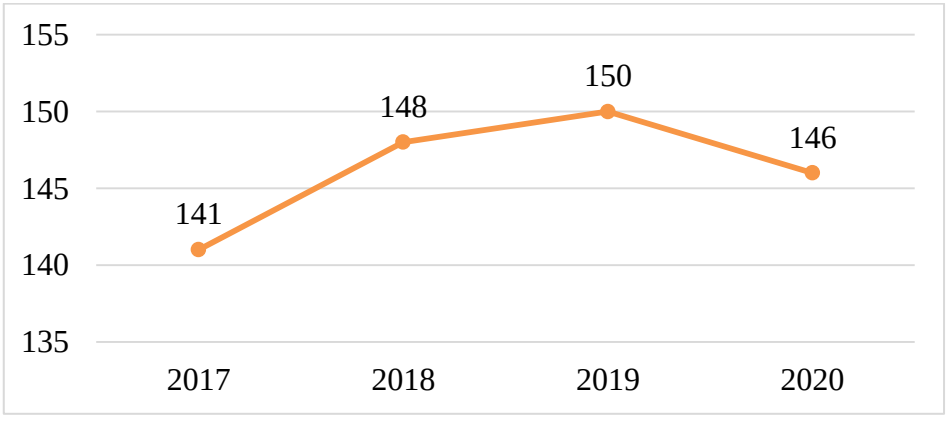

Figure 1 - Average cost of one record in case of information leakage (in US dollars)

Research data in this area based on the results of the reporting periods of 2021 and 2022 are not publicly available, respectively, data from 2020 will be used for further calculations: the average amount of damage that is caused to a company in case of data leakage as a result of the loss of one account is $146. This is a limitation of the study, as it reduces the representativeness of the result.

In accordance with the data in Table 1 and Figure 1, we note a significant reduction in the cost of one record per message for the reporting period: by 4 US dollars. At the same time, for the entire period under review, there is an increase in the cost of one lost record in case of data leakage by $5.

Due to the fact that there are no publicly available statistical data on the number of information leaks in Uzbekistan in recent years, data from the last high-profile incident related to the leakage of personal information of citizens of the Republic will be used for the calculation.

According to the Cybersecurity Center of the Republic of Uzbekistan, about 50,000 citizen accounts were made public in 2020 [5]. The disseminated information contained, among other things, the data of personal telephone numbers. Such information is popular on the black market, as it can be used to make calls to commit fraud. Or such a set of data can be sold to a company to form a base for finding customers and making so-called SPAM calls.

Literatures.

1. Losses from data leaks [Electronic resource] / Tadviser - Access mode: https://inlnk.ru/KeYljz, free. – Screen caption. - Yaz. Russian
2. Confidentiality for business - how much information leakage can cost [Electronic resource] / Digital economy; Ed.: Ivanova N. - Access mode: https://www.comnews.ru/digital-economy/content/216285/2021-09-06/2021-w36/konfidencialnost-dlya-biznesa-skolko-mozhet-stoit- utechka-informacii?ysclid=l6o1tfo0wy594455919 , free. – Screen caption. - Yaz. Russian
3. How much does a data breach cost in 2022? [Electronic resource] / SecurityLab - Access mode: https://www.securitylab.ru/news/532987.php?ysclid=l6o2jyo02b838960182, free. – Screen caption. - Yaz. Russian
4. Number of Data Breaches in 2021 Surpasses All of 2020 [Electronic resource] / Identity Theft - Access mode: https://www.idtheftcenter.org/post/identity-theft-resource-center-to-share-latest-data -breach-analysis-with-u-s-senate-commerce-committee-number-of-data-breaches-in-2021-surpasses-all-of-2020/ , loose. – Screen caption. - Yaz. English
5. Personal data of 50 thousand Uzbeks ended up on the Internet [Electronic resource] / SPUTNIK - Access mode: https://uz.sputniknews.ru/20200706/Personalnye-dannye-50-tysyach-uzbekistantsev-okazalis-v-Internete-14479422. html?ysclid=l6l9yvczjs268342442 , free. – Screen caption. - Yaz. Russian, Uzbek
6. Turdiev O.A., Smagin V.A., Kustov V.N. / Investigation of the Computational Complexity of the Formation of Checksums for the Cyclic Redundancy Code Algorithm Depending on the Width of the Generating Polynomial. // В сборнике: CEUR Workshop Proceedings. Proceedings of Models and Methods of Information Systems Research Workshop 2020. St. Petersburg, 2020. С. 129-135.
7. Turdiev O.A. Model for the formation of a probable number code based on stochastic calculations // Intelligent Technologies in Transport. PGUPS. No. 4. 2021.
8. R.Kh Karlibaeva., G.Kh Karlibaeva. / Aktsiyadorlik zhamiyatlarida molyaviy management tizimi rivozhlantirish. // Archive of scientific researches 4 (1).