

# “Employment in the financial sector of economy: features and trends”

## AUTHORS

Igor Paska  <https://orcid.org/0000-0003-4453-8905>

 <http://www.researcherid.com/rid/Y-9826-2019>

Larysa Satyr  <https://orcid.org/0000-0003-0040-6863>

 <http://www.researcherid.com/rid/D-3032-2019>

Ruslana Zadorozhna  <https://orcid.org/0000-0003-1229-5611>

 <http://www.researcherid.com/rid/E-5364-2016>

Leonid Stadnik  <https://orcid.org/0000-0002-5074-7976>

 <http://www.researcherid.com/rid/C-6094-2019>

Alla Shevchenko  <https://orcid.org/0000-0003-4615-6433>

 <http://www.researcherid.com/rid/E-8282-2019>

## ARTICLE INFO

Igor Paska, Larysa Satyr, Ruslana Zadorozhna, Leonid Stadnik and Alla Shevchenko (2019). Employment in the financial sector of economy: features and trends. *Nowadays and Future Jobs*, 2(1), 4-14. doi:[10.21511/nfj.2.2020.02](https://doi.org/10.21511/nfj.2.2020.02)

### DOI

<http://dx.doi.org/10.21511/nfj.2.2020.02>

### RELEASED ON

Monday, 03 February 2020

### RECEIVED ON

Tuesday, 19 November 2019

### ACCEPTED ON

Friday, 20 December 2019

## LICENSE



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

## JOURNAL

"Nowadays and Future Jobs"

## ISSN PRINT

2544-2287

## ISSN ONLINE

2616-5066

## PUBLISHER

LLC “Consulting Publishing Company “Business Perspectives”

## FOUNDER

Sp. z o.o. Kozmenko Science Publishing



NUMBER OF REFERENCES

19



NUMBER OF FIGURES

3



NUMBER OF TABLES

6

© The author(s) 2024. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"  
Hryhorii Skovoroda lane, 10, Sumy,  
40022, Ukraine

[www.businessperspectives.org](http://www.businessperspectives.org)

**Received on:** 19<sup>th</sup> November, 2019

**Accepted on:** 20<sup>th</sup> December, 2019

© Igor Paska, Larysa Satyr, Ruslana Zadorozhna, Leonid Stadnik, Alla Shevchenko, 2020

Igor Paska, Doctor of Economics, Professor, Dean of the Faculty of Economics, Bila Tserkva National Agrarian University, Ukraine.

Larysa Satyr, Doctor of Economics, Professor, Head of the Department of Entrepreneurship, Trade and Exchange Activity, Bila Tserkva National Agrarian University, Ukraine.

Ruslana Zadorozhna, Ph.D. in Economics, Associate Professor of the Department of Entrepreneurship, Trade and Exchange Activity, Bila Tserkva National Agrarian University, Ukraine.

Leonid Stadnik, Ph.D. in Economics, Associate Professor of the Department of Entrepreneurship, Trade and Exchange Activity, Bila Tserkva National Agrarian University, Ukraine.

Alla Shevchenko, Ph.D. in Economics, Associate Professor of the Department of Entrepreneurship, Trade and Exchange Activity, Bila Tserkva National Agrarian University, Ukraine.



This is an Open Access article, distributed under the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

Igor Paska (Ukraine), Larysa Satyr (Ukraine), Ruslana Zadorozhna (Ukraine), Leonid Stadnik (Ukraine), Alla Shevchenko (Ukraine)

# EMPLOYMENT IN THE FINANCIAL SECTOR OF ECONOMY: FEATURES AND TRENDS

## Abstract

The significant transformation of employment in terms of its quantitative and qualitative characteristics is a hallmark of the current labor market. Some labor market segments differ in the market condition, growth rates, and the mechanisms of adaptation to change. This article aims at analyzing employment trends in the domestic financial sector in the context of global labor market trends. The research is based on methodological approaches to the employment study of the International Labor Organization and the information of the State Statistics Service of Ukraine.

The study found out that in the pre-crisis period, employment in financial activities increased at a faster rate than other types of economic activity. However, after 2008, the trend has reversed. The concentration ratio of employees of the financial and insurance activities in the capital and in economically developed regions is moderate and steadily increasing. A decrease in the intensity of vocational training and advanced training is the negative aspect of the crisis processes in the Ukrainian financial sector.

## Keywords

employment, financial sector, financial and insurance activities, the fourth industrial revolution, lifelong learning, labor costs, human capital, Ukraine

## JEL Classification

G29, J23, J44

## Author

## Contributions

Conceptualization, I.P., L.S. and R.Z.; Data curation, A.S.; Formal analysis, R.Z.; Investigation, R.Z., L.S. and A.S.; Methodology, I.P., L.S. and R.Z.; Project administration, I.P. and L.S.; Supervision, I.P. and L.S.; Validation, I.P., L.S. and R.Z.; Visualization, R.Z. and L.S.; Writing – original draft, R.Z.; Writing – review & editing, R.Z.

## INTRODUCTION

The overall situation in the labor market and its individual segments depends on many factors, including demographic change, economic climate and technological development. The last factor, due to its impact on employment, particularly in the financial sector, has gained particular weight over the last decades.

Rapid technological changes transform all aspects of life of both individuals and economic systems, from macro to global level. The fourth industrial revolution is increasingly penetrating into all spheres of human activity, acquiring specific manifestations, including robotization, Internet, artificial intelligence, nanotechnology and biotechnology, big data processing technologies, machine learning, augmented reality, etc.

The shifts in technology are tectonic due to their transformative influence. Their possibilities are extremely wide, from increasing the efficiency of manufacturing traditional goods and providing services to changing the very way of production, offering innovative products,

and modifying the lifestyle of the general population. According to Kolot and Hnybidenko (2015, p. 24), new technologies are not just another stage in the development of productive forces; they represent a fundamentally new production and economic system. Introducing the latest technologies into the manufacturing process opens up new business opportunities and provides competitive advantages.

Improving the technological basis of the public reproduction process requires adequate staffing. Therefore, the qualification requirements for employees who directly apply technological innovations in business processes are increasing.

The last decades have shown that the financial sector is one of the most innovative sectors of the economy. Thus, labor market demands in terms of the qualifications and competences of employees engaged in this type of activity increase.

## 1. LITERATURE REVIEW

The analysis of the situation on the labor market and employment as one of its main characteristics is a popular research issue for many scientists, from the classics of economic science to our contemporaries.

It is now widely accepted that the financial sector has become a major driver of globalization processes. Deregulation of banking activities in the 1980s; unification of requirements for investment activity (Krysovatiy & Sokhatska, 2018, p. 90), as well as the introduction of international financial reporting standards reinforced by the development of information technology, brought financial activity to the forefront of economic development.

Technological progress has provided opportunities for instantaneous financial information transfer, funds transfer, transactions and investment object monitoring (Kolot & Hnybidenko, 2015, p. 24; Krysovatiy & Sokhatska, 2018, p. 89). All these innovations have certainly helped to better meet the needs of consumers of financial services.

On the other hand, as Eskindarov and Abdikeyeva (2019, p. 234-235) noted, the digital economy poses significant social risks in employment. As technology developments de-activate extensive labor use, many traditional low-skilled occupations and routine office and administrative positions fall into the risk of extinction.

Thus, the implications of technological progress for social progress are not uniquely positive: the use of the “window of opportunity” (World Economic

Forum, 2018, p. vi) allows chance for decent work and improving the quality of life globally, but at the same time there is a risk of widening skill gaps, increased inequality and polarizing society. Therefore, human capital management is of critical importance. According to Krysovatiy and Sokhatska 2018, p. 22), priority should currently be given to the study of human-technology interaction. This requires monitoring the situation on the labor market and its individual segments; in particular, employment in the financial sector, given the latter's strategic nature in the current economic environment and vulnerability to external and internal shocks. Staff competencies should be developed at the strategic level of the personnel policy of financial sector institutions (Kravchenko & Krasovska, 2018).

## 2. METHODS

To achieve this goal, the study used a set of general scientific and special cognition methods, namely: a systematic approach (to consider the financial sector as a component of the country's economic system); structural and logical analysis (to substantiate the logic and structure of the study); historical and theoretical generalization (to identify development patterns of employment relations); comparison (to compare employment characteristics in the financial sector and in the economy as a whole; in Ukraine and in the world; by individual employee groups and by individual regions); statistical methods of grouping, concentration analysis and intensity analysis (to identify the employment peculiarities and trends in the financial economy of Ukraine). Tabular and graphical methods were used to visualize the results.

The survey was conducted based on the Labor Force Selective Survey (until 2019, the sample of population (households) in terms of economic activity) conducted by the State Statistics Service of Ukraine (SSSU) according to the methodological approaches of the International Labor Organization (ILO).

According to ILO recommendations, persons aged 15 and over, who meet the following criteria, are considered to be employed:

- if they worked during the surveyed week for at least one hour hired for remuneration in cash or in kind, individually (independently) by individual citizens or at their own (family) enterprise; worked free of charge at an enterprise, in their own business belonging to any household member, or in a personal farm to sell products produced by them;
- if they were temporarily absent from work, that is, formally had a workplace, their own enterprise (business), but did not work during the survey period for certain reasons.

To explore employment in the financial economy based on the SSSU's sample survey of the workforce, this study used statistical data on the type of economic activity "Financial Activity" according to the Classification of Economic Activities KVED-2005 (for the period 2000–2011) and the type of economic activity "Financial and Insurance Activities" according to KVED-2010, which came into force on January 1, 2012 (for the study period 2012–2018).

### 3. RESULTS

Public employment is one of the prerequisites for maintaining the continuity of the social reproduction process. As an economic category, employment is a set of economic, legal, social and other relations related to providing economically active population with jobs and their activity in social production to generate income (Bazylevych, 2008, p. 687).

The Law of Ukraine "On Employment" provides the following definition: "Employment is the ac-

tivity of persons, which is not forbidden by the law, related to the satisfaction of their personal and public needs for the purpose of receiving income (wages) in monetary or other form, as well as the activity of single family members who carry on business or work for economic entities based on their property, including free of charge" (The Verkhovna Rada of Ukraine, 2013).

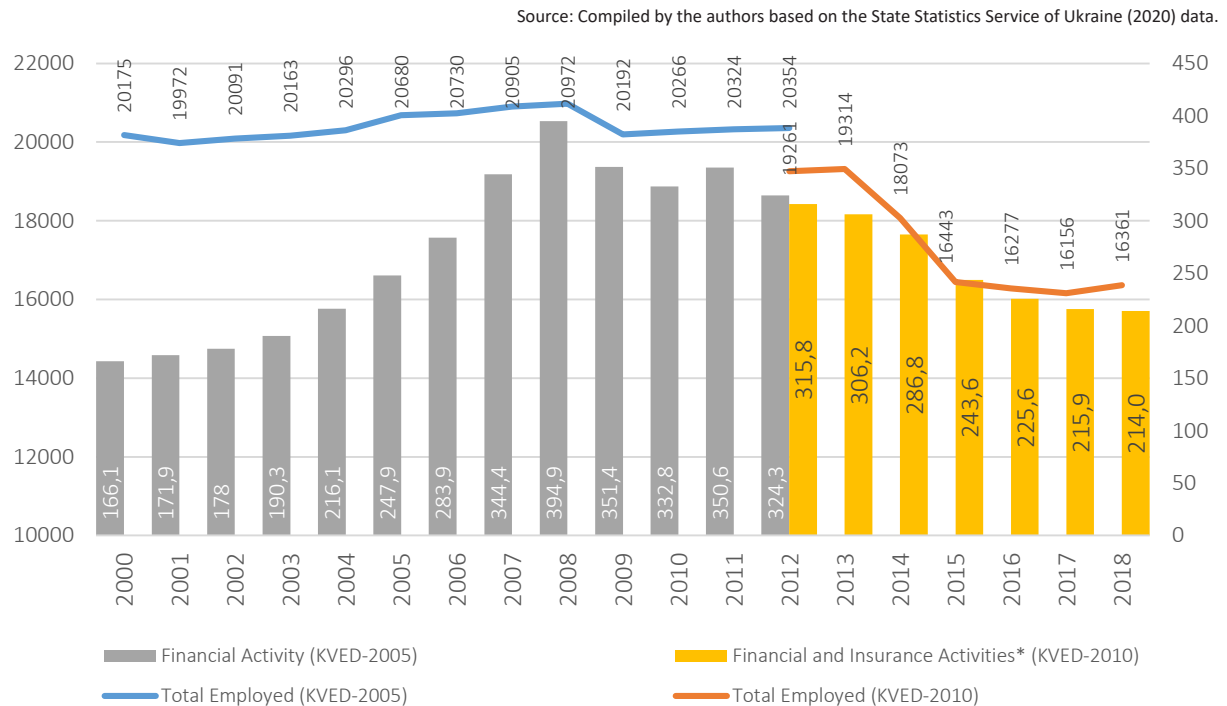
The analysis showed that employment dynamics in the financial sector of the Ukrainian economy is controversial in its nature. The period from 2000 to the global 2008 financial crisis saw a steady increase in the number of employed in financial activities, in particular, from 166.1 thousand in 2000 to 394.9 thousand in 2008 (see Figure 1).

It should be noted that the number of people employed in the financial sector is ahead of the growth rate: in 2000–2008, the number of people employed in the economy increased by 3.6%, then, for Financial Activity, it grew more than twofold, 2.073 times.

For comparative purposes, the number of employed in Trade; Repair of Cars, Household Goods and Personal Items; and Hotels and Restaurants increased by 46.2% over the same period; in Real Estate Transactions, Renting, Engineering and Services to Entrepreneurs, the figure grew by 39.1%.

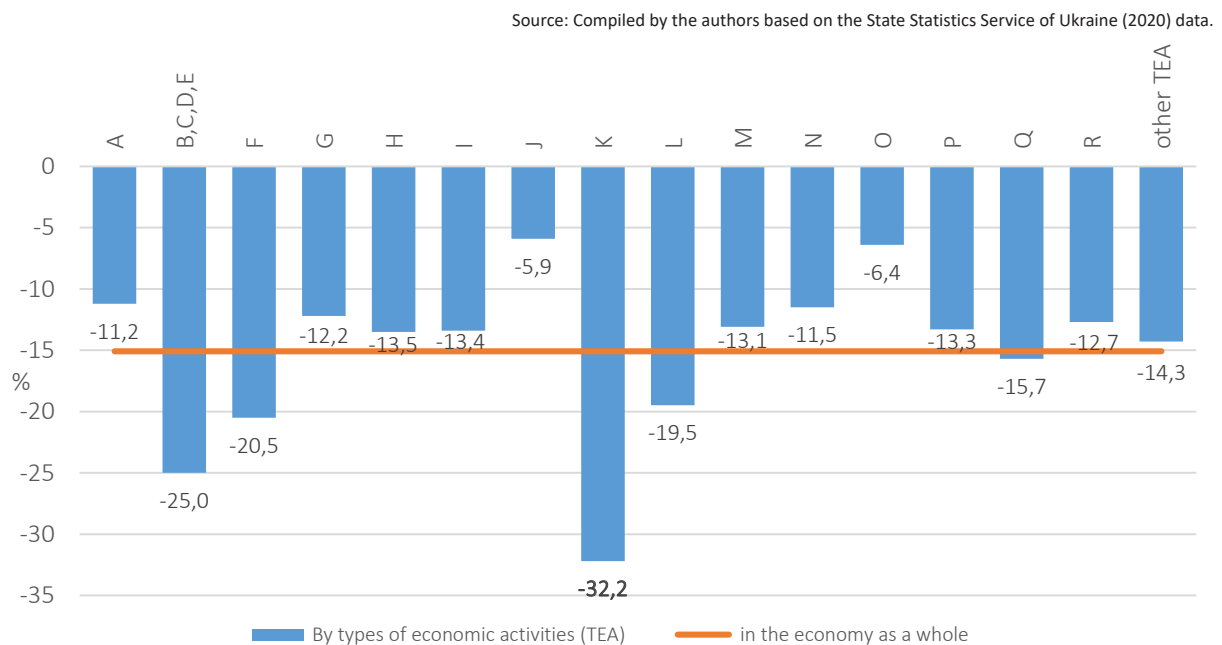
Conversely, employment in Agriculture, Hunting, Forestry, and Fisheries declined by 20.2%; in Industry – by 13.6%; in Public Administration – by 13.5%. Thus, in the pre-crisis period, the financial sector of the Ukrainian economy was leading in terms of the employment growth rate.

However, after the 2008 crisis, the Ukrainian financial sector has not been able to regain its leading position, either in terms of employment or in terms of performance. Although in the post-crisis period, employment declined by all types of economic activity; the financial sphere saw the most intense reduction. As a result, in 2018, almost below one third (32.2%) was employed in the Ukrainian financial when compared to 2012 (see Figure 2). Meanwhile, the number of employed in the economy decreased by 15.1%.



Note: \* KVED-2010 includes Financial and Insurance Activities instead of Financial Activity in KVED-2005. \*\* Data for 2012–2018 are given without taking into account the temporarily occupied territories of the Autonomous Republic of Crimea and Sevastopol; since 2015, without part of the temporarily occupied territories of Donetsk and Luhansk regions.

**Figure 1.** Trends in the number of people employed in the financial sector and economy of Ukraine\*\* in 2010–2018, ths



Note: A – Agriculture, forestry and fisheries; B – Mining and quarrying; C – Manufacturing industry; D – Supply of electricity, gas, steam and artificial atmosphere; E – Water supply; sewerage, waste management; F – Construction; G – Wholesale and retail trade; repair of motor vehicles and motorcycles; H – Transport, warehousing, postal and courier activities; I – Temporary accommodation and catering; J – Information and telecommunications; K – Financial and insurance activities; L – Real estate transactions; M – Professional, scientific and technical activities; N – Activities in the field of administrative and support services; P – Education; Q – Health care and social assistance; R – Arts, sports, entertainment and recreation.

**Figure 2.** Basic rate of decrease in the number of employed by types of economic activity in 2018, %

Consider also other quantitative employment characteristics for Financial and Insurance Activities (see Table 1).

Analyzing the structure of the population engaged in financial and insurance activities, based on employment status, one should note that payroll employees are their vast majority, although their share is gradually decreasing: in 2013, 96.3% worked as employed persons (of all employed), then in 2018, the number was 89.7%, down 6.6 pp. Accordingly, the proportion of non-self-employed workers (employers, self-employed, family members worked for free) increased almost threefold, from 3.7% to 10.3%, and their number increased from 11.2 thousand in 2013 to 22.0 thousand people in 2018.

Of the three employment characteristics provided by official labor statistics (number of employed, number of payroll employees and accounting number of full-time employees), the latter dropped most rapidly; in 2018, it decreased by 36.9%, while the total number of employed – by 30.1%.

In the gender structure of the employed in Financial and Insurance Activities, the proportion of women is predominant and has increased in recent years. During 2013–2018, the share of women grew by 1.2 percentage points, from 70.8% in 2013 to 71.9% in 2018.

The dominant proportion of women in the financial sector is not typical for Ukraine only. For ex-

ample, among Finnish financial sector employees, the women-to-men ratio is almost the same as in Ukraine (Federation of Finnish Financial Services, 2015, p. 4). The women employment in the financial sector of Japan is also high: women account for 62% of employees of insurance companies; in banking institutions the share of women is lower, 52% (Isamu Yamamoto, 2015, July 29, p. 9-10).

The employee turnover in the financial sector is intensive (see Table 2), and during the 2013–2018 period, layoffs prevailed over hiring. In 2014 and 2015, there was the largest difference between the employed and the dismissed, when the reduction in the number of employees was 47 and 49 thousand, respectively, and was related to dramatic events in the banking system of Ukraine (Ukrinform, 2017). In the following years, these processes became more balanced and in 2018 the situation (–4 thousand people) returned to the state of 2013 (–5 thousand people).

It should be noted that the staff turnover index is high in all the years of the study period: its minimum value was in 2013 – 31.8%; the largest, 41.6%, was in 2015. These are rather high values, which exceed the values of the turnover factor in the economy as a whole (26.0% and 25.9%, respectively).

The study of peculiarities of the financial sector employees' distribution across Ukrainian regions is of particular interest. According to the analysis of the regional structure of employees in Financial and Insurance Activities, more than 30% of them

**Table 1.** Quantitative employment characteristics of Financial and Insurance Activities in 2013–2018

Source: Compiled by the authors based on the State Statistics Service of Ukraine (2020) data.

	2013	2014	2015	2016	2017	2018	Base rate of increase/decrease
Number of employed, ths people	306.2	286.8	243.6	225.6	215.9	214.0	0.699
Number of payroll employees, ths people	295.0	276.8	223.2	205.5	195.3	192.0	0.651
Number of self-employed, ths people	11.2	10.0	20.4	20.1	20.6	22.0	1.964
Share of payroll employees in the total number of people employed, %	96.3	96.5	91.6	91.1	90.5	89.7	0.931
Share of self-employed in the total number of people employed, %	3.7	3.5	8.4	8.9	9.5	10.3	2.811
Accounting number of full-time employees at the year-end, ths people	299.1	254.3	203.6	196.2	191.6	188.8	0.631
of these, women make up:							
• thousand people	211.5	179.7	145.5	141.6	138.1	135.8	0.642
• %	70.7	70.7	71.5	72.2	72.1	71.9	1.017
Average number of full-time employees, ths people	272	245	191	174	168	168	0.618



**Table 2.** Employee turnover in Financial and Insurance Activities in 2013–2018 (as of the year-end)

Source: Compiled by the authors based on the State Statistics Service of Ukraine (2020) data.

	2013	2014	2015	2016	2017	2018
Hired, ths people	95	65	59	64	63	62
Dismissed, ths people	100	112	108	78	71	66
including owing to:						
• labor turnover;	87.4	94.0	79.7	60.7	59.0	58.7
• personnel cuts	7.4	13.1	21.6	12.6	7.8	3.4
Recruitment, %	35.8	26.6	30.9	36.9	37.7	37.2
Employee termination, %	36.4	45.8	56.4	44.8	42.3	39.4
Turnover index, %	31.8	38.3	41.6	34.9	35.2	35.0
In % of the average number of registered personnel due to staff cuts	2.7	5.3	11.3	7.2	4.7	2.0

work in the city of Kyiv, with the share of Kyiv increasing from 30.7% in 2013 to 35.7% in 2018 (Table 3).

Throughout the study period, the first five regions invariably included Dnipropetrovsk (second position),

Kyiv and Odessa regions, with the last having improved their position in the ranking since 2015 due to the fact that the ranking left Donetsk region (see Table 4). As one can see, the largest concentration of employees in the financial sector is observed in the capital and most economically developed regions.

**Table 3.** Number and structure of payroll employees in Financial and Insurance Activities (by regions for the period 2013–2017)

Source: Compiled by the authors based on the State Statistics Service of Ukraine (2020) data.

Regions	2013		2014		2015		2016		2017		2018	
	ths people	%	ths people	%	ths people	%	ths people	%	ths people	%	ths people	%
Ukraine	295.0	100.0	276.8	100.0	223.2	100.0	205.5	100.0	195.3	100.0	192.0	100.0
Vinnitsia	7.1	2.4	6.7	2.4	5.6	2.5	5.1	2.5	4.8	2.5	4.5	2.3
Volyn	5.3	1.8	4.4	1.6	3.6	1.6	3.4	1.7	3.2	1.6	3.1	1.6
Dnipropetrovsk	29	9.8	28.9	10.4	24.8	11.1	24.2	11.8	22.7	11.6	21.6	11.3
Donetsk	21.6	7.3	16.1	5.8	5.7	2.6	4.8	2.3	5.1	2.6	4.4	2.3
Zhytomyr	4.8	1.6	4.9	1.8	4.3	1.9	3.9	1.9	3.8	1.9	3.6	1.9
Zakarpattia	3.9	1.3	3.6	1.3	3.1	1.4	2.7	1.3	2.6	1.3	2.2	1.1
Zaporizhzhia	8.7	2.9	8.6	3.1	7.4	3.3	6.8	3.3	7	3.6	6.6	3.4
Ivano-Frankivsk	4.8	1.6	4.5	1.6	4	1.8	3.4	1.7	3.2	1.6	3.3	1.7
Kyiv	17.3	5.9	16.6	6.0	15.3	6.9	12.4	6.0	10.9	5.6	11.5	6.0
Kirovohrad	2.7	0.9	2.6	0.9	2.6	1.2	2.2	1.1	2	1.0	1.9	1.0
Luhansk	7.9	2.7	6.8	2.5	1.5	0.7	1.4	0.7	1.4	0.7	1.3	0.7
Lviv	12.7	4.3	12.3	4.4	10.4	4.7	9.6	4.7	9.6	4.9	9.5	4.9
Mykolaiv	4.5	1.5	4.1	1.5	3.2	1.4	2.6	1.3	2.6	1.3	2.6	1.4
Odessa	15.6	5.3	14.3	5.2	11.6	5.2	10.9	5.3	10.1	5.2	10.7	5.6
Poltava	6.8	2.3	6.4	2.3	5.3	2.4	4.6	2.2	4.3	2.2	4	2.1
Rivne	4.2	1.4	4.2	1.5	3.6	1.6	3.3	1.6	3.2	1.6	3.1	1.6
Sumy	4.9	1.7	4.7	1.7	3.7	1.7	3.3	1.6	3.4	1.7	3.2	1.7
Ternopil	3.3	1.1	3.1	1.1	2.6	1.2	2.3	1.1	2.2	1.1	2.2	1.1
Kharkiv	15.5	5.3	14.3	5.2	11.5	5.2	8.4	4.1	7.8	4.0	7.8	4.1
Kherson	4.1	1.4	4	1.4	3.4	1.5	3.2	1.6	3.1	1.6	3	1.6
Khmelnitskyi	4.7	1.6	4.7	1.7	3.7	1.7	3.2	1.6	3.2	1.6	3.2	1.7
Cherkasy	6.5	2.2	6.2	2.2	5.2	2.3	4.4	2.1	4.2	2.2	3.9	2.0
Chernivtsi	2.4	0.8	2.2	0.8	2.1	0.9	1.9	0.9	1.6	0.8	1.5	0.8
Chernihiv	6.2	2.1	6.1	2.2	5.1	2.3	5	2.4	4.9	2.5	4.8	2.5
The city of Kyiv	90.5	30.7	86.5	31.3	73.9	33.1	72.5	35.3	68.4	35.0	68.5	35.7

**Table 4.** TOP-5 Ukraine's regions by the share of the number of employees in Financial and Insurance Activities for 2013–2017

Source: Compiled by the authors based on the State Statistics Service of Ukraine (2020) data, %

Regions	2013	2014	2015	2016	2017	2018
The city of Kyiv	30.7	31.3	33.1	35.3	35.0	35.7
Dnipropetrovsk	9.8	10.4	11.1	11.8	11.6	11.3
Donetsk	7.3	5.8	x	x	x	x
Kyiv	5.9	6.0	6.9	6.0	5.6	6.0
Odesa	5.3	5.2	5.2	5.3	5.2	5.6
Kharkiv	x	x	5.2	x	x	x
Lviv	x	x	x	4.7	4.9	4.9

The concentration degree, i.e. concentration of the phenomenon in individual groups (Kovtun, 2012, p. 133), is estimated using the indicators given in Table 5. If a particular phenomenon under study is fully concentrated in a single unit or group, then the values of  $CR_3$ ,  $CR_5$  and HH will equal one; with uniform distribution – 0. It is also common to set (Koretska, 2014; Okrepkyi & Myhal, 2016) the following intervals and their corresponding concentration level estimates:

- $CR_3 = 0.45$ ;  $CR_5 = 0.4$ ;  $HH = 0.1$  – low concentration;
- $0.45 \leq CR_3 < 0.70$ ;  $0.4 \leq CR_5 < 0.6$ ;  $0.1 \leq HH < 0.18$  – moderate concentration;
- $CR_3 \geq 0.70$ ;  $CR_5 \geq 0.6$ ;  $HH \geq 0.18$  – high concentration.

The Gini concentration ratios do not have similar intervals of their values; however, as for the other indicators in Table 5, the closer their value is to 1, the higher the concentration of the trait under study.

Therefore, the level of regional concentration of employees in the financial sector is increasing according to all of the indicators analyzed, and the

dynamics of the concentration-5 index suggests that since 2015 the degree of regional concentration should be estimated as high.

In 2013, 47.8% of the Financial and Insurance Activity employees were concentrated in the TOP-3 regions, and the figure was 53.0% in 2018. Similarly, at the beginning of the surveyed period, 59.0% of all employed employees of the Ukrainian financial economy worked in the TOP-5 regions (the city of Kyiv, Dnipropetrovsk, Donetsk, Kyiv and Odesa regions); in 2018, 63.5% of all financial sector employees were employed in the city of Kyiv, as well as in Dnipropetrovsk, Kyiv, Odesa and Lviv regions.

The development trends in the economy as a whole and the financial sector in particular lead to an increase in requirements for the employees' professional level, and, therefore, in the future, the share of highly skilled personnel should be expected in the companies. As already mentioned, the introduction of technological innovations in business processes requires the development of employees' skills, and the continuity of technological progress necessitates lifelong learning.

For current and new worker generations, lifelong learning becomes a requirement and a prerequi-

**Table 5.** Characteristics of employee concentration in Financial and Insurance Activities by region for 2013–2018

Source: Compiled by the authors based on the State Statistics Service of Ukraine (2020) data.

Indicators	2013	2014	2015	2016	2017	2018	Estimation of the concentration degree (in 2013/in 2018)
Concentration index-3, $CR_3$	0.478	0.475	0.511	0.531	0.522	0.530	Moderate/moderate
Concentration index -5, $CR_5$	0.590	0.587	0.615	0.631	0.623	0.635	Moderate/high
Herfindahl-Hirschman Index, HH	0.126	0.129	0.141	0.155	0.153	0.157	Moderate/moderate
Concentration ratio	0.405	0.403	0.421	0.432	0.423	0.435	Growth
Gini coefficient	0.519	0.518	0.536	0.553	0.547	0.557	Growth



site for their competitiveness in the labor market, because the lack of necessary knowledge, skills and competencies can make it difficult to integrate new technologies into business processes and, therefore, cause lost business profit.

The latter will also encourage employers to invest in human capital development in terms of staff retraining, but the answer to the question of business owners' willingness to make such investments is not explicitly positive. The hallmark of today's labor market is that different worker generations are significantly different in terms of getting new technologies.

Therefore, there is currently an alternative for employers to spend on retraining and advanced training of current personnel or hiring new, more technologically literate workers. Besides, part of the business process can be outsourced to third parties.

The study of the advanced training for the employed in the Ukraine's financial economy is currently complicated by the fact that since 2015 the State Statistics Service of Ukraine has not published data on vocational training and skills development. Instead, for 2018, a sample survey of labor costs, including vocational training costs, is available.

An analysis of the available data showed that in the years 2006–2012, the financial sector preferred

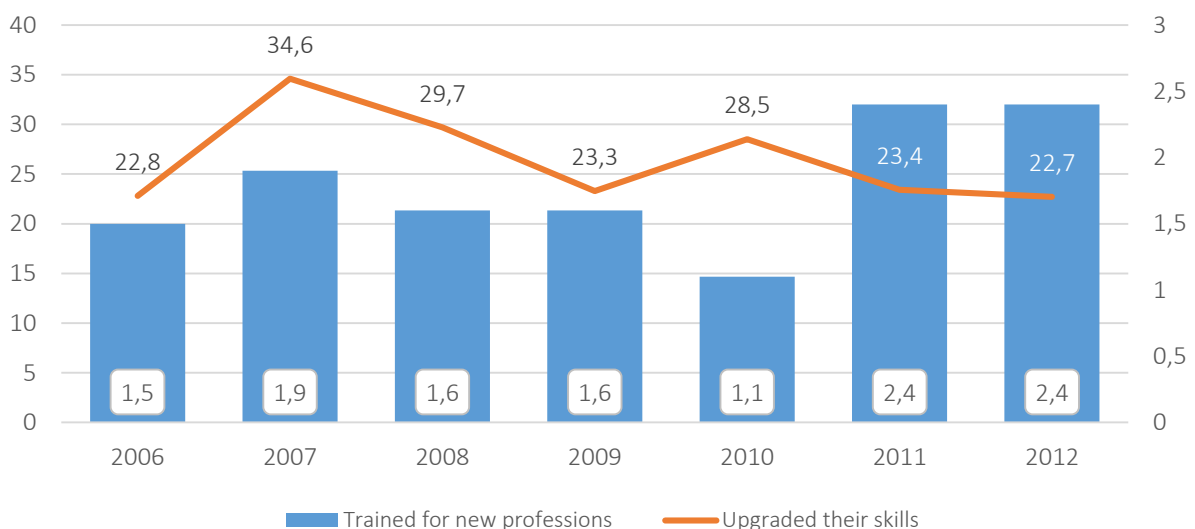
upgrading staff. The highest value of the indicator was in the pre-crisis year 2007, when 34.6 thousand people were enrolled in advanced training; thereafter, there was a marked decrease (see Figure 3). Training for new professions during the analyzed period was less common, but in 2011–2012, the number of trained workers was 2.18 times higher than in 2010.

The corresponding data for 2013–2014 (see Table 6) indicate the maintaining the ratio between the number of financial sector employees who have acquired new professions and upgraded their skills, but a significant reduction was in the last indicator in 2014 to the minimum for the whole study period, namely 16.1 thousand people.

It should be noted that the training and professional development processes in the financial sector were less intensive than in the economy as a whole. Thus, in 2014, the share of those trained in the new professions in economics was 1.8% of the accounting number of full-time employees, while for Financial and Insurance Activities, it was only 0.8%. Similarly, 9.4% of full-time employees were covered by advanced training, compared to 6.6% in the financial sector.

Regarding the 2018 data, out of the total amount of labor costs, UAH 45003.1 million, only 0.1% (State Statistics Service of Ukraine, 2018, p. 28,

Source: Compiled by the authors based on the State Statistics Service of Ukraine (2020) data.



**Figure 3.** Personnel training and upgrading in Financial Activity\* in 2006–2012 according to KVED-2005, thousand people

**Table 6.** Characteristics of vocational and advanced training of employees in Financial and Insurance Activities\* in 2013–2014

Source: Compiled by the authors based on the State Statistics Service of Ukraine (2020) data.

Indicators	2013	2014
<b>Vocational training</b>		
1. Trained for new professions:		
• total, ths people	1.1	2.1
• in % to the accounting number of full-time employees	0.4	0.8
2. The share of employees who have been trained, %:		
2.1. <i>At the place of education:</i>		
• in the workplace	97.4	94.3
• in educational institutions	2.6	5.7
2.2. <i>By type of training:</i>		
• basic training	53.1	81.9
• retraining	46.9	18.1
<b>Advanced training</b>		
3. Total number of people trained:		
• ths people	22.9	16.1
• in % of the accounting number of full-time employees	7.4	6.6
4. The share of employees who have been trained, %:		
4.1. <i>At the place of education:</i>		
• in the workplace	69.1	67.3
• in educational institutions	30.9	32.7

Note: \* according to KVED-2005.

30) accounts for vocational training in the field of Financial and Insurance Activities. On average per month, it amounts to UAH 17 per one full-time employee (in the economy as a whole, it is UAH 14, with a maximum value of UAH 85 in the production of basic pharmaceutical products) (State Statistics Service of Ukraine, 2018, pp. 36-37). Obviously, this level of spending to support the professional growth of financial sector employees cannot be considered sufficient and the human capital investment policy in the Ukrainian financial sector needs to be revised.

## 4. DISCUSSION

Transformation of labor resources is not an aspect of the distant future; changes in the content and nature of work in the field of employment relations appear on the agenda today (World Economic Forum, 2018, p. vi).

Technology innovations have led to labor redistribution between humans on the one hand and machines and algorithms on the other, in favor of the latter. Traditional ways of doing business in the financial sector are increasingly being replaced by the latest methods, increasing the intellectual burden on employees. The requirements for data anal-

ysis are complicated, and there is a need to interact with machine intelligence.

In some situations, employees are simply not able to withstand the competition from new technologies. The rapid development of high-frequency trading and stock exchanges is due to the computing capabilities of trading robots – specialized computer programs that implement a particular trading algorithm. In addition to the speed of analysis of the market situation and specific trading situations as well as the ability to quickly find the best solution that is beyond the reach of human brain, such operations are devoid of subjective factors inherent in the human trader, namely: emotionality or fatigue (Krysovatiy & Sokhatska, 2018, p. 146-147).

The transforming stock trading into a high-tech industry has intensified the demand for programmers, mathematicians and physicists. Up to 30% of the world's leading stock exchanges are currently IT specialists (Krysovatiy & Sokhatska, 2018, p. 139).

Robots are increasingly successful in providing investment consulting services. The robo-advisor's duties include analysis of information received from the client of the investment company, selection of the optimal investment strategy for him,

remote account opening, formation and management of the investment portfolio (Krysovatyi & Sokhatska, 2018, p. 141).

The growing need for professionals in the field of financial activities, whose demand for services has not yet existed, can be considered as a positive moment. These include data analysts,

risk managers, financial engineering and information security specialists, and fundraisers, developers of personal financial and retirement plans. The emergence of qualitatively new job openings in the financial sector will mitigate the negative effect of reduced demand for traditional specialties and occupations, but full replacement is not to be expected.

---

## CONCLUSION

The main employment trends in the Ukraine's financial sector can be the as follows: reduction in the number of employees; predominance of payroll employees; increasing their concentration in the capital and economically developed regions; and reducing the intensity of the vocational and advanced trainings.

The main employment trends in the Ukraine's financial sector can be the as follows:

- Employment reduction – The 2008 global financial crisis triggered a long-lasting trend of declining employment in the Ukrainian financial sector. The decrease in the number of employees of the Financial and Insurance Activities was more intensive than in other types of economic activity: in 2012–2018, the number of employees in the Ukrainian financial sector decreased by 32.2%, while in the economy as a whole it declined by 15.1%;
- Predominance of payroll employees with a gradual decrease in their share in the total number of employed in the Financial and Insurance Activity sector – 96.3% in 2013 and 89.7% in 2018;
- Women's predominance in the financial sector – in 2013, women accounted for 70.8%; in 2018, the number increased to 71.9%.
- Increased employee concentration in the capital and economically developed regions (Dnipropetrovsk, Kyiv and Odesa regions; Donetsk region until 2014). In particular, more than one-third of all financial sector employees are currently employed in the city of Kyiv (35.7% in 2018, which is 5% more than in 2013). All the concentration level indicators analyzed showed the growth; and according to the concentration index-5, since 2015, the degree of regional concentration should be assessed as high;
- Reduced intensity of the vocational and advanced training processes – since 2007, there has been a narrowing of the circle of financial sector employees covered by professional growth programs. In 2012, 22.7 thousand people upgraded their skills, compared to 34.6 thousand in 2007. In 2018, the share of expenditures on vocational training of employees in Financial and Insurance Activity amounted to only 0.1% of the total amount of labor costs. In the context of global trends in improving the skill requirements for the workforce, this threatens to weaken the competitiveness of the Ukrainian financial sector.

Current gaps and unfavorable trends have their objective reasons; however, under global competition and new challenges, finding opportunities and reserves for the human capital development of the financial sector is of paramount importance to ensure the competitiveness of the Ukrainian economy. This has to be addressed at all levels of responsibility simultaneously, from state regulation of the labor market and employment to corporate sector responsibility and personal responsibility of employees for matching their skills to the labor market needs and career development.

## REFERENCES

1. Bazylevych, V. D. (2008). *Ekonomichna teoriia: Politekonomiia [Economic Theory: Political Economy]* (7th ed.) (719 p.). Kyiv: Znannia-Pres. (In Ukrainian).
2. Eskindarov, M. A., & Abdikeyeva, N. M. (Eds.) (2019). *Realnnyy sektor ekonomiki v usloviakh novoy promyshlennoy revoliutsii [The real economy under the new industrial revolution]* (428 p.). Moscow: Kogito-Tsentr. (In Russian).
3. Federation of Finnish Financial Services. (2015). *Work in the financial services sector*. Retrieved from [https://www.finanssiala.fi/en/material/work\\_in\\_financial\\_services\\_sector.pdf](https://www.finanssiala.fi/en/material/work_in_financial_services_sector.pdf)
4. Gall G. (2017). *Employment Relations in Financial Services* (257 p.). London: Palgrave Macmillan.
5. Ian Lee Wei Xiung, & Elysia Lim Fei Ying. (2018, March). *Financial Sector: Employment Conditions and Preparing the Workforce for the Future* (Central Bank of Malaysia: Working Papers No. 20). Retrieved from [http://www.bnm.gov.my/index.php?ch=en\\_publication&pg=en\\_work\\_papers&ac=67&bb=file](http://www.bnm.gov.my/index.php?ch=en_publication&pg=en_work_papers&ac=67&bb=file)
6. Isamu Yamamoto. (2015, July 29). *An assessment of the Japanese financial services sector*. Geneva: International Labor Office. Retrieved from [https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-jakarta/documents/meetingdocument/wcms\\_396167.pdf](https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-jakarta/documents/meetingdocument/wcms_396167.pdf)
7. Kolot, A. M., & Hnybidenko, I. F. (Eds.) (2015). *Sotsialno-trudovi vidnosyny zainiatosti: suchasni tendentsii, vyklyky, shliakhy rozvytku [Social and employment relations of employment: current trends, challenges, development trends]* (295 p.). Kyiv: KNEU. (In Ukrainian).
8. Koretska, N. I. (2014). *Protses kontsentratsii rynku bankivskykh posluh Ukrainy: otsinka ta stratehii pozytsionuvannia [The process of concentration of the Ukrainian banking services market: evaluation and positioning strategies]*. *Ekonomichnyy forum – Economic forum*, 1, 196-204. (In Ukrainian).
9. Kovtun, N. V. (2012). *Teoriia statystyky [Statistics theory]* (399 p.). Kyiv: Znannia.
10. Kravchenko, I. S., & Krasovska, I. D. (2018). *Intehratsiino-adaptatsiina model rozvytku profesiinykh kompetentsii pratsivnykiv finansovo-kredytnoi sfery [Integration-adaptation model of development of professional competencies of employees of financial and credit sphere]*. *Rynok pratsi ta zainiatist naseleennia – Labor market and employment*, 1(54), 21-25. (In Ukrainian)
11. Krysovaty, A. I., & Sokhatska, O. M. (Eds.). (2018). *Chetverta promyslova revoliutsiia: zmina napriamiv mizhnarodnykh investytsiinykh potokiv [Fourth Industrial Revolution: Changing Directions of International Investment Flows]* (478 p.). Ternopil: Osadtsa, Yu. V. (In Ukrainian).
12. Malayev, V. V., Khayrullina, G. R., Mustafina, N. R., & Mukhtasarov, E. A. (2019). *Rynok truda v finansovom sektore Rossii [Labor market in the financial sector of Russia]*. *Azimuth nauchnykh issledovaniy: ekonomika i upravleniye – Azimuth of Scientific Research: Economics and Management*, 8, 1(26), 222-225. (In Russian).
13. Okrepky, R. B., & Myhal, O. F. (2016). *Metodychni aspekty vykorystannia kilkisnykh indykatoriv kontsentratsii tovarnoho rynku ta stupenia yoho monopolizatsii [Methodological aspects of using quantitative indicators of commodity market concentration and its degree of monopolization]*. *Ukrainskyi zhurnal prykladnoi ekonomiky – Ukrainian Journal of Applied Economics*, 1(4), 81-88.
14. Petrova, I. L., & Blyzniuk, V. V. (2018). *Ukrainskyi rynek pratsi: imperatyvy ta mozhlyvosti zmin [The Ukrainian labor market: imperatives and opportunities for change]* (356 h.). Kyiv: NAS of Ukraine; Institute of Economics and Forecasting of NAS of Ukraine. Retrieved from <http://ief.org.ua/docs/mg/306.pdf>
15. State Statistics Service of Ukraine. (2018). *Vytraty na robochu sylu za 2018 rik. Statystychnyi zbirnyk [Labor costs for 2018. Statistical book]* (74 p.). Kyiv.
16. State Statistics Service of Ukraine. (2020). *Rynok pratsi: zainiatist ta bezrobittia [Labor market: employment and unemployment]*. Retrieved from <http://www.ukrstat.gov.ua>
17. The Verkhovna Rada of Ukraine. (2013). *Pro zainiatist naseleennia. Zakon Ukrainy No. 5067-VI [On Public Employment: Law of Ukraine]*. Retrieved from <https://zakon.rada.gov.ua/laws/show/5067-17>
18. Ukrinform. (2017). *U NBU zapevnyly, shcho chystka bankivskoi systemy zavershena [The NBU has assured that the cleaning of the banking system has been complete]*. Retrieved from <https://www.ukrinform.ua/rubric-economy/2174768-u-nbu-zapevnyli-so-cistka-bankivskoi-sistemi-zavershena.html>
19. World Economic Forum. (2018). *The Future of Jobs Report 2018*. Geneva. Retrieved from [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs\\_2018.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf)