

‘Banking in 2030 – How will the current global trends, especially AI, shape the post-COVID19 pandemic future of the European banking industry and its employees?’

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1. Background

In the last 10 years banks have been exposed to various fundamental changes triggered by the global financial crisis, regulatory reforms, new working methods, new competitors, a global pandemic, ongoing digitisation and especially by the revolution of Artificial Intelligence (AI). This shook the pillars of the industry and has led to extensive transformations. Especially Artificial Intelligence is considered one of the technologies that will fundamentally change industries. Banking is no exception.

The aim of this report is to answer how these ongoing changes and especially the impact of AI, COVID19 and agile working impacted the banking industry and its employees and how it will affect the sector in the upcoming decade. What options and strategies can banks pursue to stay fit for the future while at the same time preserving good and satisfying jobs for their employees? How can regulation help to mitigate these effects and what can be the role of the European Social Partners to influence this development in a positive way?

2. Executive summary

COVID19 and other crises as an accelerator of change

The outbreak of COVID19 in 2020, the Ukraine war and the increase of inflation which started in 2022 have affected various industries and regions in Europe. Strict lockdowns influenced economic activities and the population including banking employees severely.

Some developments, such as the decline in the number of employees in the banking sector, the increase in remote work, the digital transformation, and the development of new working methods such as agile working, began several years before the outbreak of the pandemic. However, the pace of the development was greatly accelerated by the events.

The traditional financial services sector showed a significant decrease in total employment by 9.6 percentage points from 2008 to 2021 in contrast to other service sectors, which mainly accounted for an increase.

The banking sector in the EU lost around 580,000 employees (-21%) between 2007 and 2022. This trend continued during the pandemic, with a reduction of more than 125,000 employees between 2019 and 2022.

Asked about the impact of other crises besides COVID19, inflation / cost-of-living crisis was mentioned first and foremost, followed by the Ukraine war. In most of the countries, banking employees' salaries and living standards were affected by inflation. Only in few countries such as Germany, the situation remained relatively stable in private banking.

To mitigate the impact on employees, banks and Social Partners have renegotiated pay deals (salary agreements) and granted inflation allowances to cushion the effects of inflation. In other countries, salaries were adjusted, and employees were encouraged to save privately for the long term.

Other megatrends cited as having an impact on the financial services sector are demographic change, sustainability, hybrid work and well-being of employees. The lack of qualified employees and the need to attract talents became a major issue for the sector.

Remote work

Following the lockdown and social distancing restrictions, banks limited their activities in branches and offices. At the same time, the number of customers using internet and mobile banking increased. This strongly fostered remote working as an alternative form of work.

Jobs in the financial sector were disproportionately affected compared to other sectors by the trend towards remote work, due to highly 'teleworkable jobs', as 95% of the workforce in the EU are using digital devices in their work.

Nevertheless, remote working during COVID19, was not equally divided in financial services across Europe. According to the European Labour Force survey, in the Benelux and Nordic countries, more than 74% of banking employees reported remote work in 2021, whereas in Eastern and Southern Europe less than 36% worked remotely.

The prolonged lockdowns and the need for many employees to work from home increased the risk of social isolation in many sectors including financial services. COVID19 pandemic triggered 25% increase in prevalence of anxiety and depression worldwide, a WHO survey said, even more in financial services with 30%. In addition, 30% of respondents reported at least one health problem caused or made worse by work. More than 47% financial services workers reported severe time pressure or work overload according to an EU-OSHA's workers' survey.

Banks initiated various programs during and after COVID19 to protect employees from the consequences of social isolation and associated psychological problems.

Measures focused on hybrid work models, which proved to be rather effective, whereas also online meetings, social events, wellness initiatives including buddy systems for new employees showed creative solutions according to our survey.

In addition to remote working, COVID19 also had other effects on banking employees. It accelerated digital collaboration as well as an increased focus on well-being and work efficiency. As employees hesitated to return to the office after the pandemic, work patterns changed, and social relations weakened to a certain extent.

Agile working

The use of agile working methods in the banking sector started several years ago. The adoption and development of the usage varies by country and organization but generally reflects a growing interest in agility and adaptability in work practices in the banking sector.

Agile working methods have been adopted in various areas beside IT and software development, with a strong emphasis on project and service development, Human Resources and change and optimization projects.

Agile working methods usage increased in banking according to a survey conducted in Germany in 2022. 48% of employees in the private banking sector use it at least sometimes (38% in 2020) and 23% regularly (21% in 2020).

Positive effects for employees mentioned in the qualitative survey conducted for this report, are increased autonomy, productivity, and employee well-being. But agile working also presents challenges such as a longer learning curve, role ambiguity, and potential psychological stress.

Perceptions of agile methods are mixed throughout the interviews, with positive aspects mentioned such as a better alignment of goals, increased communication within teams, and more growth opportunities. On the other hand, banking representatives stated concerns about an increased workload, challenges to adapt to changing priorities, and unrealistic goals.

Our findings show that agile methods are expected to persist and grow within the banking sector, driven by technology with a focus on departmental not company-wide adoption but it might be also displaced by other solutions or methodologies in the long run.

There was a consensus within the interviewees that no further regulation on agile work is needed, but collective agreements including concepts, guidelines and training programs can help companies to organize agile work in a healthy manner.

Digitalization

The use of advanced digital technologies is increasing rapidly among all companies (of all sizes) in the EU according to a WEF study. In 2023 47% of companies relied on cloud computing, 35% worked with big data and 20% used AI. By 2030. This proportion is expected to increase to at least 75% in all three areas. With the launch of ChatGPT, the interest in AI is exploding among companies. Some companies are reprioritizing AI before others.

In larger companies and especially financial services, the adoption rate of AI is already remarkably higher. According to a McKinsey report, while only 20% of companies were using AI for at least one business application back in 2017, this number has now grown to 50%. Over half of Europe's financial services CEOs told EY in July 2023, they have already integrated AI into their capital allocation, with 43% planning to do so within the next year.

Due to digitalization, the occupational composition of employment within retail banking has dramatically changed in the last decade, according to Eurofound. Between 2011 and 2021, the number of IT employees in the sector increased by 55%. The largest increase happened in the category "software and application developers and analysts", which has almost doubled (from 66,000 to 112,000 employees). The largest decrease showed the group of tellers, money collectors, and related clerks, from 776,000 to 480,000.

Fintechs are succeeding in the digital payments and especially neobanking area and challenging incumbent banks worldwide and in Europe. For neobanking forecasts predict a tremendous increase of transaction value to USD 2,396 billion in 2023 (+52%). Furthermore, from 2023 to 2028 the amount shall double according to Statista.

Artificial Intelligence (AI) - Global competitive landscape

AI is the ability of a machine to display human-like capabilities such as reasoning, learning, planning and creativity according to the definition by the European Parliament as cited in the Annex.

“Predictive” or “traditional” AI refers to systems designed to respond to a particular set of inputs. These systems make decisions or predictions based on that data according to a pre-defined strategy. In financial services this type of AI is used since several years for credit scoring, fraud detection and risk management.

Generative AI (e.g. ChatGPT) is the next generation of artificial intelligence. Generative AI is used for creative and expressive tasks, for producing content, generating ideas and for answering questions.

Main challenge for all AI applications is the possible built-in bias from using historical data.

To determine a nation's AI competitiveness, the main criteria defined by the BCG Henderson Institute are the capacity to develop and the capacity to deploy AI. The United States are currently (2023) the leader in the development of AI and China is the leader in the use or deployment of AI. Europe leads in regulation and ethical aspects of AI. According to EPRS the US is leading private investment in AI (EUR 44 billion) in 2022, followed by China (EUR 12 billion). The EU lags behind with only EUR 6.12 billion worth of private investment in 2022, about 7% of global investments.

Key challenges for Europe to compete in the AI race are a fragmentation of the digital market, difficulties in attracting AI talents as well as a lack of venture capital. Europe also has less supercomputers, microchips and data availability. The strengths of the EU are higher ethical standards and the first horizontal AI Act approved in March 2024, according to BCG and other sources.

Impact of AI on the global banking sector

According to the WEF, Future of Jobs Report, 2023, there is widespread increase in prioritizing AI strategies across all sectors. Financial services have a leading position in AI. 83% of financial services firms are expected to have adopted AI technologies in the next five years, ranking it among the industries that are affected the most.

In an OECD survey conducted in 2023, both employers and employees in the finance and insurance sector in Europe who use AI, were asked about the impact on satisfaction. 39% of employers reported a positive impact on employee satisfaction. In the survey of employees, 25% of AI users said that AI had improved their enjoyment of work a lot, 37% a little, so that overall, 62% reported an improvement in satisfaction. In Germany too, AI users in financial services are significantly more satisfied than non-users, especially when it comes to career planning and promotion prospects, according to an AGV survey of employees at private banks from 2022.

A survey by NVIDIA among 500 financial services professionals around the world in 2022 stated that the main AI use cases, companies in financial services are investing in are fraud detection, conversational AI and algorithmic trading.

According to various institutes such as WEF and Goldman Sachs, AI will eliminate jobs in financial services globally in the upcoming years, but also create new ones, especially in the IT area.

Positive impacts of AI/automation mentioned in our study are increased efficiency and speed, higher quality and reduced workload, negative aspects are change in job profiles, errors of AI and over-reliance with loss of critical thinking. For the upcoming five years, the supporting role of AI, the creation of new roles and possible job enhancement are viewed positively, while uncertainty, potential job losses, and the need for adaptation are seen as challenges.

The majority of respondents stated that there have been no collective agreements on AI in their work environments. From the point of view of the interviewees, AI discussions are better suited for cooperation committees and local dialogues.

Regulation activities in AI

To assess the need for regulation in the AI area, banks must carefully consider the ethical, regulatory, and security implications and risks of AI. With the global AI race heating up, regulators around the globe have been busy finalizing specific AI laws, amending them with GenAI provisions, and updating data privacy, liability, and copyright laws for the new technology.

The EU Artificial Intelligence Act ("AI Act") was agreed by European Parliament and Council in December 2023 and formally adopted by the Parliament on March 13, 2024.

The EU AI Act classifies Predictive AI and GenAI applications into four risk categories. Applications that fall into the "unacceptable risk" category will be banned from the European market, while applications that fall into the "high-risk" category will be subject to pre- and post-deployment barriers and obligations. GenAI applications will fall into the "transparency or limited risk" category and must be labelled as AI. No obligations apply to the "minimal risk" category.

In other regions, the US Executive order on AI was issued in October 2023 and a new national law on AI was published by China in July 2023.

The interviewees of our study were asked if further regulation on AI is needed and if so, how it could help to mitigate any negative effects on employees. Please mind, that this survey took place before the final decision about the European AI-Act. At this point, the majority supported the need for further regulation on AI. In general, regulation and transparency are key factors in shaping the impact of AI in a positive direction. The European AI Act will provide guidelines and regulations on AI liability to prevent discrimination and avoid risks in AI systems.

Options for banks and the Social Partners:

As a general outlook, the interviewees recommended the following aspects for banking institutions and Social Partners until 2030.

- Banks need to balance their focus on profitability and customer satisfaction with employee well-being and skill development to stay fit for the future and create satisfying jobs for their employees.
- Banks need to take care of further investment in AI, the use of the Universal banking system, communication and education on the important role of banks in the economy in contrast to Fintechs, the offering of new services, improvement of business models and profitability, monitoring and adaption of trends and fostering of innovation.

- Measures mentioned to preserve good jobs for employees were an attractive workplace with good working conditions, flexibility and remote working, to offer trainings and competence development and coaching, to foster diversity, inclusion and value creating teams.
- The European Social Partner's role comprises a collaborative social dialogue, collective agreements and co-determination, a development of guiding principles and frameworks, the promotion of learning and skill development and an advocacy for ethical AI. Legislative regulation should focus on transparency. In general, it is recommended to foster industry attractiveness by innovation and learning.

3. Project description

3.1 Aims and objectives

The project has the following objectives:

(1) to perform a qualitative analysis on how the development of Artificial Intelligence and digitalisation, will affect the banking industry and its employees in the upcoming decade and what will be the effects of the COVID19 pandemic and banking regulation in this scenario.

(2) to exchange experiences and examples on the impact of AI/digitalisation and the COVID19 pandemic on the banking sector in Europe and the effects on the employees; and

(3) based on these findings, to develop and present to relevant stakeholders a joint European Social Partner approach and to provide recommendation on how to mitigate the impact of Artificial Intelligence and COVID19 through legislation and how Social Partners can positively support these changes.

3.2 The project partners

The European Social Partners for the banking sector are made up of the following associations:

European Banking Federation:

The European Banking Federation is the voice of the European banking sector, bringing together national banking associations from across Europe. The federation is committed to a thriving European economy that is underpinned by a stable, secure, and inclusive financial ecosystem, and to a flourishing society where financing is available to fund the dreams of citizens, businesses and innovators everywhere.

European Savings and Retail Banking Group:

ESBG represents the locally focused European banking sector, helping savings and retail banks in 20 European countries strengthen their unique approach that focuses on providing service to local communities and boosting SMEs. Advocating for a proportionate approach to banking rules, ESBG unites at EU level some 873 banks, which together employ 610,000 people driven to innovate at 41,000 outlets. ESBG members have total assets of EUR 6.38 trillion, provide EUR 313 billion in loans to SMEs, and serve 163 million Europeans seeking retail banking services. ESBG members commit to further unleash the promise of sustainable, responsible 21st century banking.

European Association of Co-Operative Banks:

The European Association of Co-operative Banks (EACB) is the voice of cooperative banks in Europe. It represents, promotes, and defends the common interests of its 27 member institutions in banking as well as cooperative legislation. With 2,500 banks and 36,500 branches, cooperative banks are widely established across the European Union and play a vital role in its financial and economic system. They have a longstanding tradition serving their 225 million customers, mainly consumers, retailers, and

communities. An important task of the EACB is to raise awareness on the unique characteristics of the cooperative business model: democracy, transparency, and proximity. In Europe, cooperative banks represent 89 million members, providing employment to 712,000 individuals and maintaining an average market share of approximately 20%.

UNI Europa Finance:

UNI Europa Finance is the European trade union federation and recognised EU social partner representing 1.5 million finance sector workers in 100 trade unions across Europe. It is part of UNI Europa, the European Trade Union Federation for 7 million services workers from over 270 unions in 50 countries Europe-wide and is the European regional office of the international trade union federation UNI Global Union.

3.3 Methodology

To answer the Social Partners' questions on the impact of COVID19, digitalisation and especially AI on the European banking sector and its employees, ARIX conducted a combined approach of secondary research and a qualitative survey in 10 countries. The results were presented, discussed, and refined at three workshops in Paris, Stockholm and Zagreb.

3.3.1 Definitions

Telework: Telework is 'a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work that could be performed at the employer's premises is carried out away from those premises on a regular basis'.

Remote work: Remote work, is a work arrangement in which an employee resides and works at a location outside the local commuting area for his or her employer's worksite. A remote worker can be self-employed or dependent on an employer. Remote work is a comprehensive concept and does not require visits to the main workplace or the use of electronic personal devices, thus allowing many types of and locations for work, and it can involve mobile work.

Differences: Differences between teleworking and remote work include:

- Employees who telework have to log on during regular business hours for their employer's time zone.
- Remote work communication may be asynchronous, while telework is usually synchronous.
- Remote workers may be located anywhere in the globe.
- Teleworkers may sometimes be asked to attend in-person meetings or social events, or report to the office.

Hybrid work: Hybrid work accounts for a broader picture by representing the intersection of various work situations, including telework or remote work and work performed at the employer's premises.

For further definitions see chapter: 5.1 Definitions and abbreviations.

3.3.2 Approach 1: Secondary research:

In this first step, the consultancy ARIX researched and analysed available information and surveys on general trends and the impact of AI, digitalisation, COVID19 and agile working on the banking industry and its employees in the EU including current regulations. Also, implications for the future development were included. This step provided background information and a sound base for the report. The results were also presented during the workshops. Please note that not all secondary sources refer to Europe. Due to the limited availability of data, sources from the USA, global and Germany have also been taken into account. It is therefore possible that some figures do not 100% reflect the situation in Europe, but countries and regions of reference are always provided in the reporting.

3.3.3 Approach 2: Qualitative survey

A subsequent qualitative survey in 10 countries provided comprehensive and in-depth insights about the relevant topics. The survey comprised 20 expert interviews in total, with 50% of the interviewees provided by the employers' associations and 50% provided by the Trade Unions.

The selected interviewees were experts in the banking industry with experience or knowledge of the impact of digitalization/ artificial intelligence, COVID19 and agile working on the workforce.

The interviews were conducted via conferencing software (Zoom or Teams). This made the interview more personal and interactive and gave the possibility to record the interview and to extract a short snippet with a statement to produce a short film out of selected statements.

Table 1: Factsheet qualitative interviews:

Research method	Qualitative in-depth interviews via conferencing software (MS Teams, Zoom etc.)
Target	Experts of the banking industry with knowledge of the impact of AI/digitalization and/or COVID19 50% each representative of the employer's and employee's side
Sample size	n=20, (2 interviews per country)
Markets	10 European countries: France, Germany, Italy, the Netherlands, Spain, Sweden, Ireland, Denmark, Croatia, Romania
Interview length	45-60 minutes
Interview guideline	Set up in English, translated into local languages and tailored to country specific circumstances.
Interviews	Conducted in local language by native or fluently speaking interviewers and then translated into English language in form of summaries. Interviews were recorded.
Timeframe	Interviews were scheduled in the week 17.-28. April 2023.
Recruiting of interviewees	Interviewees were contacted and recruited by the European Social partners.
Reporting	Summaries of the interviews were provided in PPT and included in the interim and final report

Questionnaire:

The qualitative questionnaire contained 26 questions and is displayed in the Appendix.

Video:

During the webcam interviews a short video sequence with a general statement of 5 to 30 seconds was recorded. These video snippets were compiled to a short film that reflects original statements from the survey.

Interviewees got their snippets to agree before it was published. Not all interviewees were reflected in the video. Subtitles were provided for snippets in other languages than English.

3.3.4 Approach 3: Workshops and meetings

Three workshops and several steering group meetings were held during the project. They enhanced the sharing of thoughts, experiences, and best practices. In addition, they allowed the different perspectives of the European Social Partners as well as the local perspective to be included into the report through presentations and discussions. ARIX Research prepared a presentation for each workshop.

Table 2: Workshop schedule:

WS	Location	time	Topics of the presentations
WS I	France (Paris)	17. Feb 2023	The impact of COVID19, agile working, AI / digitalisation and other megatrends on the banking workplace in Europe: Results from Secondary research.
WS II	Sweden (Stockholm)	13. Jun 2023	The impact of AI on the banking workplace in Europe and beyond: Results from desk research and first results from interviews
WS III	Croatia (Zagreb)	13. Oct 2023	The impact of COVID19, agile working, and AI on the banking workplace in Europe and beyond: Results from Qualitative Interviews in 10 countries
Final Conference	Belgium (Brussels)	14. May 2024	Final presentation of the results with joint conclusions of the European Social Partners

The information gained from this workshop exchange was collected, analysed and included in the project’s final report and in the Appendix.

The European Social Partners members participated in the workshops – to shape the project findings and adding to its transnational dimension, contributing to the development of the joint European Social Partner approach.

3.5 Joint approach of the European Social Partners

Based on the pan-European research and the analysis collected throughout the course of the project, the European Social Partners developed a joint approach, which was presented in addition to the final project report at the final conference, and subsequently shared widely amongst the European Social Partners’ networks at all levels and to all relevant stakeholders.

4. Results

In the following, the results of the project, derived from both the secondary research and the qualitative interviews conducted in 10 European countries, are displayed. These results were presented at the three workshops in Paris, Stockholm and Zagreb and are summarized and displayed below.

NOTE: This report has been prepared on behalf of the European Social partners. However, it reflects partly the views of the interviewees / workshop participants and speakers which may not necessarily be the same as those of the European Social Partners or the author.

4.1 COVID19 and other crises as an accelerator of change

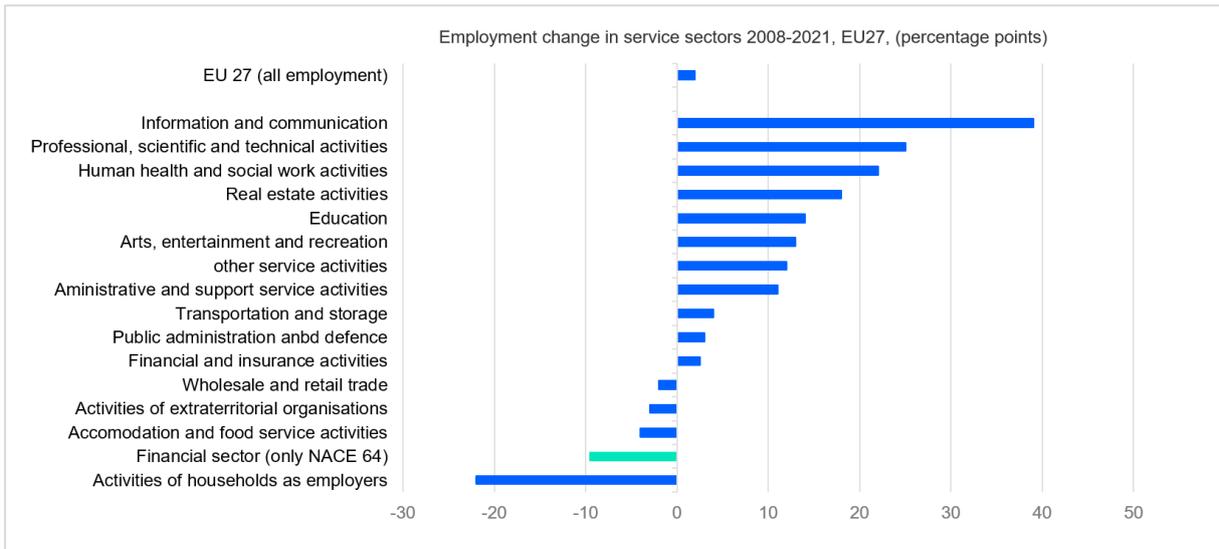
The outbreak of COVID19 in Europe in spring 2020 has led to strict lockdowns that have severely impacted economic activities and employees, including financial services. Other crises, such as the start of the war in Ukraine in February 2022 and the inflation and cost of living crisis, also affected financial services employees in Europe.

Some developments, such as the decline in the number of employees in the banking sector, the increase in remote working, digital transformation and the development of new working methods such as agile working, began several years before the outbreak of the pandemic. However, the pace of development was greatly accelerated by the event.

4.1.1 Development of employment figures in Europe in the banking industry

The traditional financial sector shows a significant decrease in total employment of 9.6 percentage points between 2008 and 2021, in contrast to other service sectors, which mainly show an increase, such as information and communication or real estate.

Figure 1: Employment change in service sectors 2008-2021, EU27

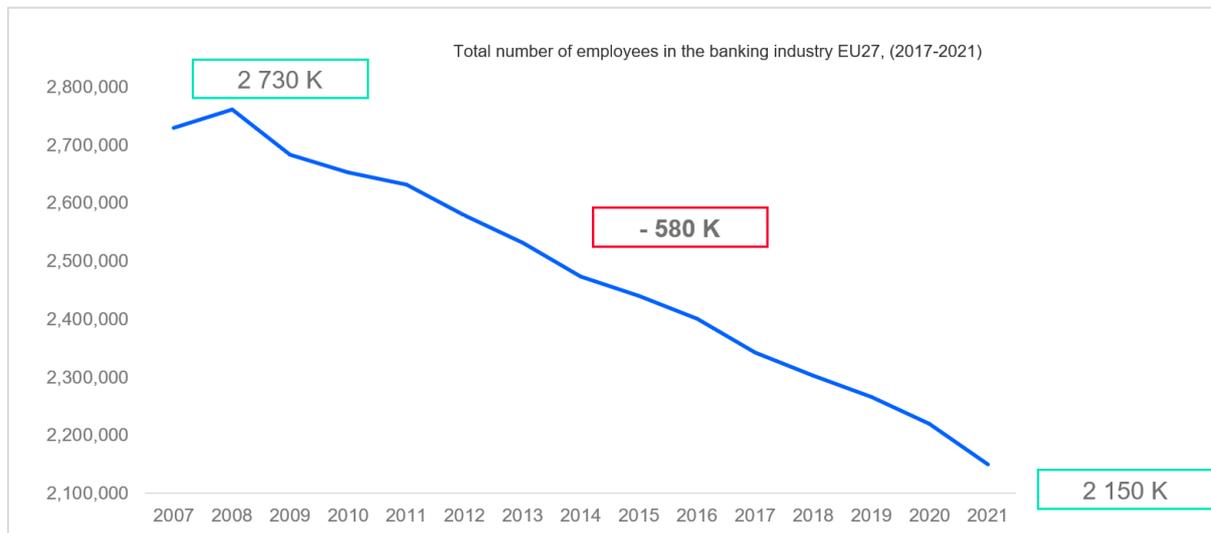


While most service sectors have experienced job growth over the last decade, employment in retail banking has declined - first due to the financial crisis, followed by digitalisation and the movement to online retail banking. In parallel, retail banking's physical infrastructure has reduced, with only around 20 bank branches per 100,000 inhabitants in the EU, compared to around 30 in 2004.

Source: Eurofound (2022), [Going digital: Restructuring trends in retail banking](#), Publications Office of the European Union, Luxembourg, p. 11; Sep 26, 2022; Note: financial and insurance sector includes NACE 64,65,66. The financial services sector, which covers most retail banking activity includes only NACE 64, Analysis based on EU-LFS (Labor Force Survey). ARIX own calculations, March 2024.

The banking sector in Europe (EU27) lost around 580,000 employees (-21%) between 2007 and 2022. This trend continued during the pandemic, with a job loss of more than 125,000 between 2019 and 2022.

Figure 2: The loss of employees in the banking sector in the EU27 (2007-2022)



Source: ECB statistics, (European Central Bank), [Banking structural financial indicators](#). ARIX own calculations (figures exclude the UK), Aug 2023.

4.1.2 Impact of other crises on the banking employees and measures taken by banks

When asked about the impacts of other crises besides COVID19, inflation/ costs of living crisis were mentioned first and foremost, followed by Ukraine war. In most of the countries, banking employees' salaries and living standards were affected by inflation, depending on their income. In private banking in some countries such as Germany, the situation remained relatively stable, according to our German interview partners.

Positive or no impact on employees

- **Job satisfaction** and job security remained high despite various crises.
- **Resilience and employee support programs** contributed to this stability.
- **Salary levels** in the banking sector are **relatively high** in some countries, which helped mitigate the impact of inflation, e.g. in Germany.

Negative impact on employees

- Employees were affected by global crises such as Ukraine war, inflation and rising costs of living, e.g., high energy prices.
- This impacted:
 - **Employees' salaries.**
 - **Purchasing power (mainly impacted by inflation).**
 - The rising cost of living affects bank employees' **living standards.**
 - Certain professions in banking and various service providers were affected by **high energy prices.**
 - Increased pressure and stress for bank employees as more **bank customers** were concerned over **personal finances, mortgages** etc.

“
Situation in Romania: ...We are talking about the daily use items, such as milk, bread, fruits, and vegetables. Everything from the daily consumer basket reached unimaginable costs compared to a few years ago. We are also talking about electricity bill price that has increased in an accelerated way and out of control. And it's obvious, the double-digit inflation is a historical one. ... (RO)
”

General impact on the banking Industry

Fear of war and inflation impacted banking customers and employees as well, also the stock market, raw material prices and interest rates, which had different effects.

- Fear of war and inflation led to a **temporary increase in savings withdrawal and deposits** in banks.
- **Stock market** has impacted banks negatively.
- **Increase in raw material prices**, leading to supply inflation and reduced real wages for banking employees.
- The global crises place higher demands on **analysing and advising customers** and supporting employees.
- **Increased interest rates** in banking due to inflation was **positive for the sector**.

Measures taken by selected banks and Social Partners

To mitigate the impact on employees, banks and Social Partners have renegotiated pay deals (salary agreements) and granted inflation allowances to cushion the effects of inflation among other measures.

- **Collective agreements:** Banks have renegotiated **pay deals**.
- **One-time cost-of-living allowances** to mitigate the impact of inflation on employees.
- **Adjustment of salaries** based on country-specific inflation rates, to make the loss as small as possible, but that differed by country.
- **Promotion of private long-term savings** for employees to cushion for a rainy day.
- Introduction of a **hardship** fund for employees, who were hit especially hard, e.g. in Ireland.

“
*...In relation to the employees, there has clearly been a loss of wages, which everyone else has also experienced in relation to goods and inflation. I believe that 7.7% of the goods have increased in price. In any case, it has been **part of our collective agreement** that we could reach a level where the loss was as small as possible..... (DK)*
”

Source: ARIX Qual Interviews, n=20, 04/2023; Q06. Do you see any impact of the current global crises such as the Russian war in Ukraine, rising inflation, increasing energy cost and cost of living especially on the banking industry and its employees? If yes, please elaborate.

4.1.3 Other megatrends affecting employment in banking

Other megatrends cited as having an impact on the financial services sector are demographic change, sustainability, hybrid work and well-being of employees. The lack of qualified employees and the need to attract talents became a major issue.

- **Demographic changes:** The ageing population and migration from rural to urban areas and to other professions pose challenges, such as an ageing and declining workforce and adapting to different customer bases in different regions, e.g. older, non-digitalised customers.
- **Sustainability:** A trend that is as well, customer, society and employee driven. Sustainability encompasses the impact of financial activities on the environment, changes in business models and the need for employees to promote sustainable practices. It goes hand in hand with employees' search for meaning.
- **Well-being and work life balance:** Well-being has become crucial and a factor that influences job choices. Companies need to address well-being and work-life balance to attract and retain talent.
- **Flexibility and agility:** Companies have to be agile and must change and evolve quickly to adapt to new environments, competitors and demand of employees and customers.
- **Digitalized customer behaviour:** Banks must adapt to meet changed customer behaviour and expectations. Inequality in financial and digital literacy is increasing and there will be a higher diversity in the needs from customers.
- **Education and skill development:** Employees need continuous learning and skill development to remain relevant in their careers Banks must support them in adapting to changing requirements.
- **Globalization:** Trend toward offshoring and nearshoring, potentially impacting job distribution and the types of activities outsourced.
- **Hyper-personalization:** Personalized solutions and services for employees and customers are gaining importance, the supply of solutions, tools, and advice so that an employee can grow professionally and personally, and customers can be better served.
- **Regulatory initiatives:** Regulation will continue to influence the sector, currently the Retail Investment Strategy, FiDA, DORA, etc.

Source: ARIX Qual Interviews, n=20, 04/2023;

Q19. Are there any other megatrends that are currently affecting employment and the workplace in the banking sector or will impact it during the upcoming five years (e.g., demographic changes, sustainability etc.)?

4.1.4 Impact of COVID19

4.1.4.1. Increase of remote work in banking and remote working divide in Europe

COVID19 was not the trigger but the accelerator of many economic and social changes. Following the lockdown and social distancing restrictions, banks reduced their activities in branches. At the same time, the number of customers using internet and mobile banking increased.

This accelerated the digital transformation in banks and the associated adoption of working from home or remotely as an alternative form of work.

Jobs in the financial sector have been disproportionately affected by the trend towards remote work compared to other sectors, as they are highly 'teleworkable', with the majority - 95% of the workforce - using digital devices in their work.

During the pandemic, remote working in retail banking increased by 48%, compared to 24% in other sectors. (Figure 3).

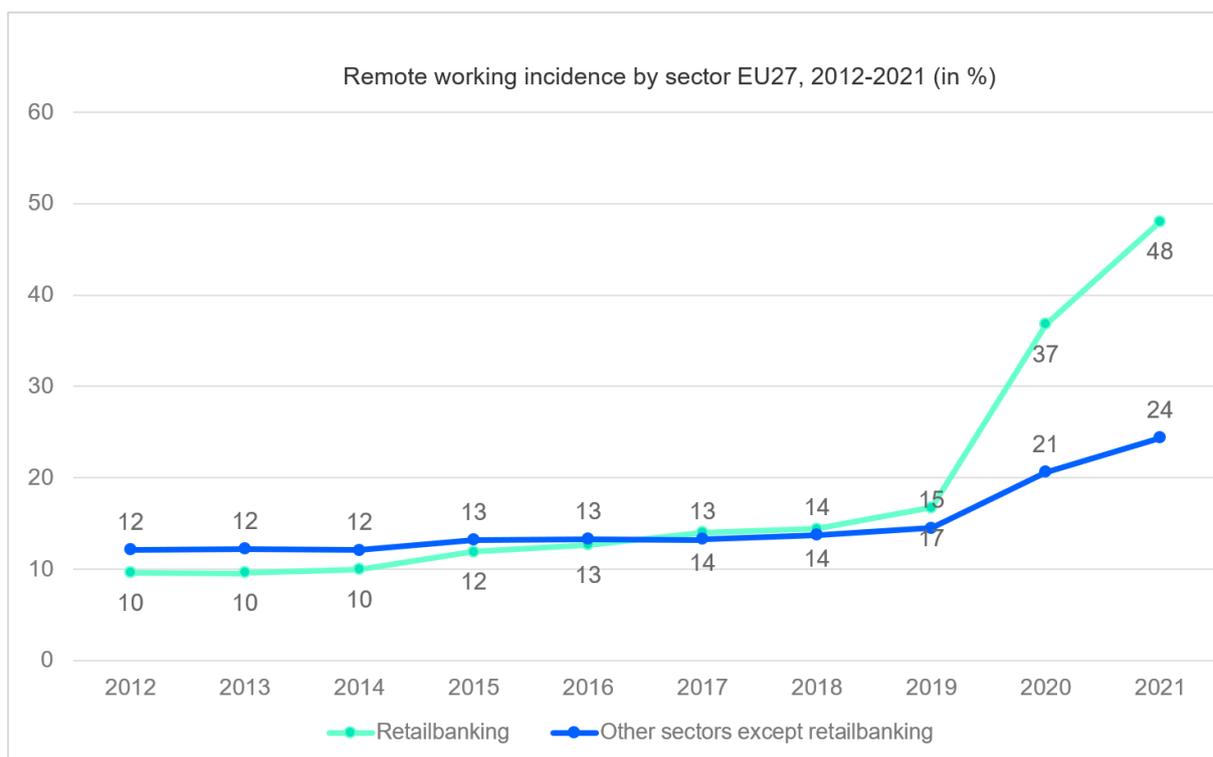
The majority of tasks in this sector are information processing tasks (highly teleworkable) and social interaction tasks (less teleworkable but can nonetheless be carried out remotely).

Most of the social interaction tasks in retail banking, such as in-branch consultations, have been transferred online (for example, the use of text chatbots for customer service).

Nevertheless, many customers still needed physical banking, e.g. due to a lack of digital and/or financial literacy, and financial staff were also on the front line during the crisis.

Branch banking will therefore not disappear. In fact, it's making a comeback after COVID19. Generation Z's preference for in-branch banking may be driving this growth.

Figure 3: Remote working in retail banking compared to other sectors



Source: Eurostat, EU-LFS: European Labour Force Survey, ARIX own calculation, January 2023; based on Eurofound (2022). [Going digital: Restructuring trends in retail banking](#), Publications Office of the European Union, Luxembourg, p. 19, Sep 26, 2022;

Remote working divide in Europe

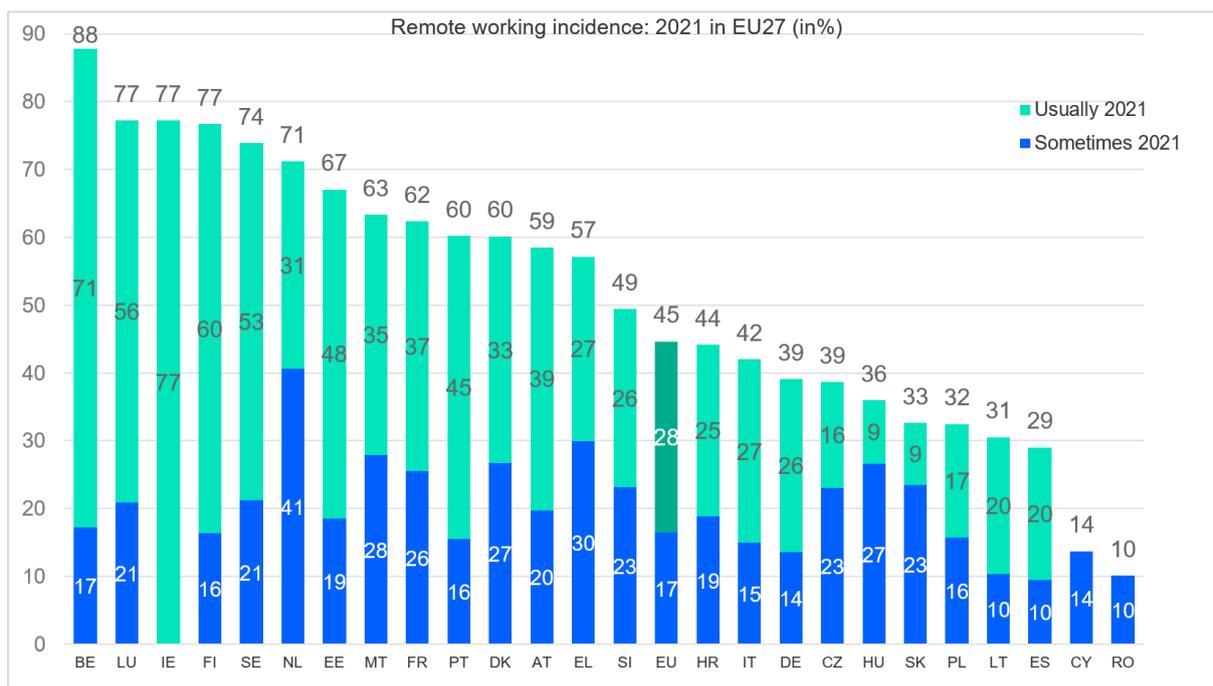
Remote working in financial services was not evenly distributed across Europe during COVID19.

Depending on the technical equipment of bank branches and the labour force in different European countries, the proportion of remote workers varied (Figure 4).

According to the 2021 European Labour Force Survey, in the Benelux and Nordic countries, more than 75% of banking employees (NACE 64) reported working remotely, while in Eastern Europe, such as Romania, only around 10% worked remotely.

Another result of the pandemic is that with the spread of remote working in most countries, it is more common to 'usually' than 'sometimes' work from home.

Figure 4: Remote working differences within Europe in financial services



Source: Eurostat, EU-LFS: European Labour Force Survey, ARIX own calculation, January 2023; based on Eurofound (2022), [Going digital: Restructuring trends in retail banking](#), Publications Office of the European Union, Luxembourg , p. 19, Sep 26, 2022

4.1.4.2. Measures taken by banks for remote work and employees on-site

To protect employees from infection, banks across Europe implemented measures for working on-site, such as the provision of protective equipment such as masks, gloves, and sanitizers, social distancing measures and the installation of protective barriers. Banks in Ireland introduced incentive payments to motivate employees to come into the office.

The employees required to work remotely were supplied with essential technical equipment.

Measures for remote work:

- Provision with **necessary equipment** for remote work, such as **laptops** and official **mobile phones**, **VPNs**, adequate **bandwidth**.
- **Virtual meeting tools** and **digital collaboration platforms** to facilitate remote work.

- **Cybersecurity training:** With the sudden conversion to remote working, the bank began to work with protocols that were not up to standard with new risks that were not trained.

Measures for employees on-site

- **Protective equipment** (masks, gloves, sanitizers)
- Installing **protective plexiglass panels**.
- **Physical distancing**, e.g., by separated booths and distance between staff desks.
- **Hygiene recommendations**, such as hand washing and the use of disinfectants, were promoted.
- Increased **cleaning and sanitization**.
- **COVID19 tests, vaccination campaigns** and **psychological assistance** was offered.
- **Flexible working hours** for **front-office staff**, limited number of employees on-site.
- **Restricted service hours** for customers: **Longer waiting times** due to increased customer demand and **limited resources**.
- **Inducement payments** were introduced to incentivize essential employees to come to work.

...people weren't coming to work because they were frightened. And so, they introduced inducement payments for people to come to work and this was so successful that they were able to run services... (IR)

Source: ARIX Qual Interviews, n=20, 04/2023; Q01 What percentage of bank employees in your banking environment were able to work remotely during the pandemic? What measures were taken by banks and what was the impact for the "essential" employees who could not work remotely?

4.1.4.3. Benefits and problems of increased work from home during COVID19

Apart from the health-related problems, COVID19 caused various positive but also negative effects due to the immediate and prolonged lockdowns and the associated work from home. Some of the interviewees answered the question not only regarding the current situation during COVID19, but also in view of the longer-term effects after the lockdowns. Due to the positive but also negative effects of working from home as well as office work, hybrid work, i.e. the combination of both forms of work, is likely to be the preferred working model of the future.

Benefits

- **Increased flexibility and self-organization:** Working from home allows for adjusting work schedules and adopting an employee-centred approach.
- **Improved work-life balance:** Employees could have more freedom in managing work and personal responsibilities, such as taking care of children, cooking and shopping etc.
- **Reduced commuting time and costs:** Working from home eliminates the need to commute, resulting in time and cost savings.
- **Looser dress code:** Employees can work in more comfortable clothes eliminating the need for formal office attire.
- **Possibility of working from anywhere:** Remote work provides the opportunity to work from different locations, increasing flexibility and accommodating personal circumstances.

- **Higher productivity and efficiency:** Many employees reported being more productive and efficient when working remotely, because it's quieter with less disturbances.

Problems

- **Reduction in social contact and collaboration:** Lack of face-to-face interaction can hinder the personal exchange, collaboration, and creativity, leading to decreased productivity and difficulties in project coordination.
- **Isolation and decreased social cohesion:** Remote work can result in feelings of isolation, loneliness, the feeling of managers not being present and a lack of social connection.
- **Challenges in onboarding and integrating new employees:** Remote work makes it more challenging to onboard new employees and foster social relationships within the organization.
- **Maintaining work-life boundaries:** Blurring of boundaries between work and personal life can lead to longer working hours, increased work intensity and stress.
- **Ergonomic challenges and health risks:** Employees may lack proper ergonomic setups at home, leading to musculoskeletal issues and visual health problems.
- **Trust and loyalty:** The decrease in physical presence and interaction can lead to less trust in your manager and less loyalty towards your company.

Source: ARIX Qual Interviews, n=20, 04/2023;

Q02. What are your experiences with the benefits and problems of increased work from home in the banking sector? Please elaborate on this.

Consequences of social isolation: Increase in anxiety, depression and stress

- COVID19 pandemic triggered **25% increase** in prevalence of **anxiety and depression** worldwide a WHO survey said. Even more in financial services in Europe with 30%.
- **30%** of respondents in financial services reported at least one health problem (overall fatigue (tiredness), headaches, eyestrain, muscle problems or pain) caused or made worse by work.
- More than four out of ten finance workers (**47%**) say that their **work stress** has increased as a result of the pandemic, according to an EU-OSHA's workers' survey.

Nevertheless:

- **52% of financial services employees** said information and **training on wellbeing and coping with stress** are provided at their **workplace**.

Source: WHO news; [COVID-19 pandemic triggers 25% increase in prevalence of anxiety and depression worldwide](#), March 2, 2022, EU-OSHA – European Agency for Safety and Health at Work: [Mental health at work after the COVID19 pandemic – What European figures reveal](#), pp. 18-20, p. 72, Feb 13, 2024

Quiet quitting

In the early 2020s, driven largely by social media, quiet quitting emerged as a much-publicized trend in the United States and other regions, e.g. also in China, where a similar workplace phenomenon called 'Tangping' which means "lying flat" appears to have originated about a year earlier.

Quiet quitting or 'Tangping' refers to doing the minimum requirements of one's job and putting in no more time, effort, or enthusiasm than absolutely necessary.

The '**Tangping**' movement, has become a social phenomenon in China in 2021.

- It's a protest against the Chinese working culture.
- Rejection of **societal pressures to overwork**, especially by Millennials and Gen Z.

This change in values can also be observed in the USA and Europe.

- According to a Gallup survey of workers aged 18 and older taken in June 2022, quiet quitters “make up at least **50%** of the **U.S. workforce** – which would mean about 809 million. people.”
- According to Gallup, only **33%** of workers in the US and Canada said they were engaged at work.
- In Europe it seems to be even worse, with only **14%** of workers in Europe state to be engaged.

However, these figures could not be substantiated by current data.

Source: ABC News: [‘Lying flat’: The millennials quitting China’s ‘996’ work culture to live ‘free of anxiety’](#); Sep 22, 2021;
Frankfurter Allgemeine Zeitung (FAZ), „Flachliegende aller Welt vereinigt euch!“ (“Flat-lying people of the world unite”), p. 33, Jan 29, 2023;
South China Morning Post: [“Quiet Quitting’ and ‘Lying Flat’: Why the US and China Cannot Ignore These Trends”](#), Sep 14, 2022

4.1.4.4. Programs for remote working employees by banks to prevent isolation

The prolonged lockdowns and the need for many employees to work from home increased the risk of social isolation and associated psychological problems. Banks initiated various programs during and after COVID19 to protect employees from the consequences.

Measures focus on hybrid work models, which prove to be rather effective, whereas also online meetings, social events, wellness initiatives including buddy systems for new employees show creative solutions.

Hybrid work approach

- **Hybrid work approach:** The danger of **social isolation has decreased significantly** with the transition to a hybrid working model. Various measures, including hybrid team meetings, coffee breaks, and work organization measures that encourage on-site office presence. A minimum presence in the office is required to facilitate communication and visual contact between employees. Other countries advocate hybrid models with **limitations on full-time remote work of 1 to 2 days a week**.

Digital and personal initiatives

- **Collective / local agreements:** Local agreements allowing more flexible work arrangements including insurance. Remote work agreements include provisions for training and support and remote work guides.
- **Digital measures:** Online town hall meetings, online coffee breaks. **Apps:** Well-being app, walking apps and **Instagram** account to engage people, working with webcam on all the time, that people can see each other.
- **Personal measures:** Synchronized work hours, flexibility in employment terms. Expansion of corporate welfare.
- **Workplace wellness:** Initiatives like “Work Better and Enjoy Life”, to improve physical, emotional, and psychological health. Therapy and relaxation sessions. Programs to enhance employee inclusion, increased psychological assistance. More preventive than reactive initiatives.

- **Integration of new employees:** Efforts to make new employees feel welcome and engaged, e.g., with social events, sponsorship, digital induction and buddy systems.
- **“Staying healthy together” program***(see below): Online socialization opportunities, quizzes and Zoom parties, virtual 5k run: Training for remote employees.

Staying Healthy Together program in Ireland:

.... To catch tension, we did a **virtual 5k run**. Everyone did their training remotely, but we all ran at the same time all around the world in 2020. With a defined start and an end program we caught people's attention, we got some **well-known bands or artists** to perform, and it made them feel they were part of something rather than just receiving information..... (IR)

Source: ARIX Qual Interviews, n=20, 04/2023;

Q05: In order to ensure integration and prevent any risk of isolation as part occupational health and safety, have you foreseen any programs for employees working remotely?

4.1.4.5. Other impacts of COVID19 on banking employees

In addition to remote working, COVID19 also had other effects on bank employees. It accelerated digital collaboration, increased focus on well-being and work efficiency, but employees hesitated to return to the office, work patterns changed, and social relations weakened after the pandemic.

Positive impacts:

- **Accelerated digitalization:** Adoption of new digital tools, technological transformation, and ways of meeting.
- **Work organization:** Hybrid work models and the organization of work in terms of hours and physical spaces.
- **Improvement in corporate culture:** Enhanced communication and accelerated efforts to improve corporate culture and relations.
- **Increased focus on well-being:** Greater emphasis on employee well-being, with initiatives to encourage breaks, exercise, and healthier habits.
- **Cost savings:** related to commuting and office space.
- **Management by trust:** Managers had to manage employees based on trust rather than control in remote workspaces.
- **Productivity and efficiency:** Enhanced work efficiency and productivity due to more focussed work.
- **New hybrid workers:** New groups of workers could do hybrid work (back-office staff, production etc.).

Negative impacts:

- **Changes in work patterns and work intensification:** Disruption of traditional work hours, leading to work extending beyond regular office hours. Work intensification with the expectation of immediate responses.

- **Hesitancy to return to the office:** Uncertainty and challenges related to the shift to hybrid work models. Hesitancy among employees to return to the office after experiencing remote work.
- **Employee interactions and socialization:** Decline in employee interactions and socialization within companies, affecting relationships and office culture. Challenges for unions in engaging with employees.
- **Changes in workspace:** Shift away from personal office spaces to open space. Downsizing of office space.
- **Work surveillance.** Privacy concerns related to the surveillance and recording of virtual conversations.

Source: ARIX Qual Interviews, n=20, 04/2023;

Q03: Please also elaborate on other impacts COVID19 had on banking employees and/or the workplace?

4.1.4.6. Collective agreements on remote work

Collective agreements on remote working have been negotiated in Croatia, Denmark, France, Italy and the Netherlands, while Germany, Spain, Ireland, Romania and Sweden have their own internal bank agreements.

Yes, we have an agreement

- **Croatia:** Several Croatian banks have negotiated collective agreements. The new work law in Croatia addresses elements related to remote work (maximum of 7 days/ month).
- **Denmark:** Two main agreements in the financial sector (insurance and banking) on remote work. A flexible model for remote work has been adopted.
- **France:** Banks renegotiated individual agreements after COVID19. Flexibility in remote work with hybrid work is sought. A maximum remote work of 2 days/week + 1 flexible day/month. Minimum time on-site of 40%/14 days.
- **Italy:** The Italian National Collective agreement is in place. A joint declaration on remote working principles has been signed by UniCredit and unions. Maximum remote workdays per month (10 a month), right to disconnect, training, right for office-work are regulated.
- **Netherlands:** Health and safety provisions and reimbursements for remote work. Employers invested in home office equipment e.g., Wi-Fi signal booster and remote working policies, max remote work is 50%.

No, we have no agreement

- **Germany:** No collective agreements on remote work in the private banking sector. Companies have their own agreements on mobile working, which vary by business model and corporate culture. Public banks have agreements for mobile work, but they focus on transferring office working conditions to remote work.
- **Spain:** No collective agreement on remote work but some collective bargaining agreements have sections on remote working and digitalization. Also, company specific agreements exist.
- **Ireland:** No collective agreements on remote work exists. A policy and guidelines for colleagues in place, but no formal consultation process.
- **Romania:** Negotiations and partly collective agreements on remote work but without specific benefits for employees beyond the agreements before the pandemic.

- **Sweden:** An old collective agreement with a precept on remote working exists but is not active. A global policy allows three days in the office and two days remote work per week, with manager discretion. Employees are welcome to come to the office if they want to.

Source: ARIX Qual Interviews, n=20, 04/2023; Q04. Have you or has someone else in your work environment negotiated a collective agreement on telework or on future workplace developments more generally, including those which cannot be foreseen?

4.2 Agile working

4.2.1 Definition of agile working

Agile methods have their origins in **software development** and continue to focus on areas where development is paramount, such as product development and project management.

The agile methodology is a **project management framework**, used by **cross-functional teams** to iteratively complete tasks and projects. The approach is characterized by continuous improvement and a fast delivery of results.

Teams go through a **cyclical process** of planning, executing, and evaluating. Constant collaboration between team members and project stakeholders throughout the process is crucial.

The methods use agile forms of work and communication, e.g. **Scrum, Design Thinking or Kanban**.

The advantage of agile methods is that it helps to complete complex projects on time and within budget, it improves communication between the development team and the product owner and reduces the risks associated with complex projects.

4.2.2 Status Quo and development of the use of agile working methods

Starting point of the usage of agile methods

The use of agile methods in the banking sector started in Europe several years ago, for example in the Netherlands about 10 years ago. Agile methods are now spreading beyond IT and software development.

Estimated start of usage in the banking sector:

- **Netherlands:** About **10 years** ago. Now are spreading from larger to smaller organizations.
- **Germany:** **For many years**, with a significant increase over the last decade.
- **Spain:** Since **2015** in software development and since **2018** in all central services.
- **Croatia:** Since **2018**
- **Sweden:** In **2018-2019**, particularly linking IT development with the business branch.
- **Denmark:** For a while.
- **Ireland:** In various parts of the organization.
- **Italy:** For several years, with experiments in other parts of the organization.
- **Romania:** Used in software development and are seen as suitable for process optimization.
- **France** For years.

Source: ARIX Qual Interviews, n=20, 04/2023; Q14. Are agile working methods already used in your business environment, apart from software development, and if so, since approximately when? How much is agile working already common in your business environment, and is the extent constant, increasing or decreasing?

Development of the usage

The adoption and evolution of its use varies by country and organisation, but generally reflects a growing interest in agility and adaptability in working practices in the banking sector.

How much is agile working already common in your business environment?

Small but stable trend:

- In **Croatia**, Raiffeisen Bank uses agile heavily (50% of work), mainly in development, but it is the only bank in Croatia at the moment.
- **Romania** expects agile methodologies to grow, especially in response to digitalization.
- **Ireland**: Agile working is probably increasing, but not in a significant way. Main areas besides IT are HR and change management.
- **Italy** notes a constant presence of agile methods with a transition of the waterfall approach.¹
- In **Spain** BBVA has implemented agile methodologies in all central services since 2018. But that is not the case in all banks in Spain. Especially larger companies use agile methods, but smaller are not so familiar with it.

Growing and increasing trend:

- Private banks in **Germany** have seen a significant increase in agile working over the last decade, with half of their employees (50%) now working in an agile way. 5 years ago, it was only 1/3. In several other banks it became rather quiet during the pandemic, but it is expected to further grow.
- **Denmark** notes a growing trend in agile, especially in IT. In 2021 33% of all digital projects used some form of agile working method.
- **France** mentions that agile methods have been in use for years, indicating stability in adoption and remain a strong trend.
- **Netherlands** indicates that agile methods have been prevalent for at least a decade. Larger banks have been using agile methods for over years, and smaller organizations are also increasingly adopting them.
- **Sweden** highlights an increasing trend in business-IT collaboration using agile methodologies.

Decreasing trend:

- No country reported a decreasing trend.

In BBVA it is a trend that there is no turning back. Also the feedback we have received from employees is very positive, we are more efficient, we are more agile, we are more liquid. So I believe that the scope is constant or growing and I would not recommend going backwards (ES)

Source: ARIX Qual Interviews, n=20, 04/2023; Q14. Are agile working methods already used in your business environment, apart from software development, and if so, since approximately when? How much is agile working already common in your business environment, and is the extent constant, increasing or decreasing?

1: In a waterfall approach, planning is a linear process done at the beginning of the project, with all requirements and objectives laid out in detail upfront.

4.2.3 Usage patterns of agile working methods in the banking sector

Usage by business area

Agile working methods have been adopted in various areas beside IT and software development, with a strong emphasis on project and service development, Human Resources and change and optimization projects.

Ranking by frequency of mention:

- **IT and software development**
- **Project and service development:**
- **Human Resources, training, and recruitment**
- **Organizational, change management and optimization of business processes.**
- All areas of work
- Central functions and central services
- Marketing
- Finance and financial markets
- Customer satisfaction
- Supervision department and board level
- Credit card business, client accounts, and business accounts
- Legal
- Risk management
- Less frequent in **stationary branch sales.**

“
*It spilled over into other sectors and then it has a slightly different name they call it **short cycle management.** (NL)*

In my own department, we've also looked at what we can adjust. At some point you do get this pressure of having to get more done with less people and if you look at it every two weeks then everything goes much faster. (NL)

Every employee can be agile at his or her level, whatever the activity: the agile state of mind is accessible to all. (FR)

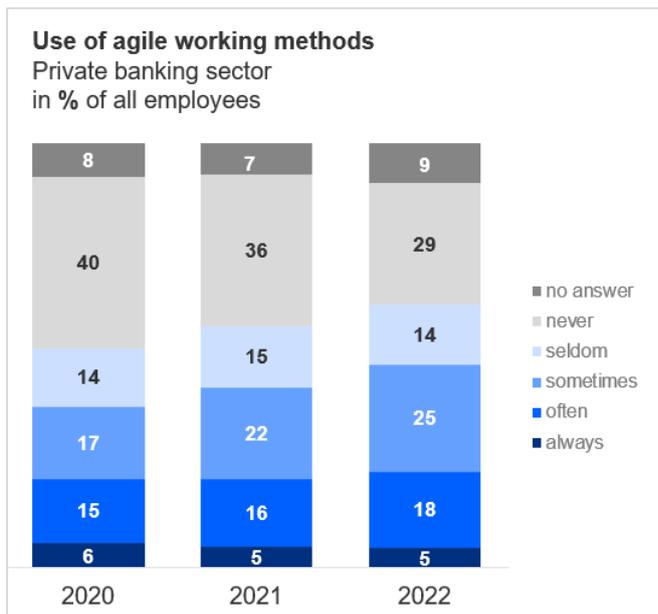
HR, transformation, customer satisfaction, claims, all of this is now done on flex office platforms and with the aim of not working in silos but with the common goal of customer satisfaction.. (FR)

Source: ARIX Qual Interviews, n=20, 04/2023;
Q15. In which areas, apart from software development, does the banking sector in your country mainly use agile working methods? * Ranking by frequency of mention.

Usage by frequency

Data availability for this point is marginal except for a study in Germany. Agile working methods usage increased in banking according to a survey conducted in 2022. 48% of employees in the private banking sector use it at least sometimes (38% in 2020) and 23% (21% in 2020) regularly. (Figure 5)

Figure 5: Use of agile working methods in the German private banking sector



Source: AGV Banken: Representative employee surveys in the private banking industry, Kantar on behalf of the AGV Banken 2020-2022 - Employers' Association of the Private Banking Industry e.V., 800 interviews per survey.

4.2.4 Effects of agile methods on employees and workplace, incl. perception by employees

Positive and negative effects of agile methods on employees and workplace

Positive effects for employees mentioned are increased autonomy, productivity, and employee well-being. But it also presents challenges such as a longer learning curve, role ambiguity, and potential psychological stress.

Positive effects on employees and workplace

- **Increased autonomy and trust.** More autonomy and trust and larger influence can contribute to increased well-being and job satisfaction.
- **Enhanced productivity:** Influence over work tasks can lead to higher productivity, and more likelihood to be engaged and motivated with a perception of lower workloads.
- **Improved work planning:** Clear processes and defined tasks help in proper work planning, reducing unnecessary extensions of the working day.

- **Employee development:** Employees can develop a broader range of skills, as they take on various roles contributing to their professional growth.
- **Flexibility and mobility:** Agile working can be adapted to mobile and hybrid work structures, making it easier for employees to work remotely or in flexible workspaces.
- **Adaptability:** Agile methods make organizations more adaptable to changing market conditions and customer needs.
- **Customer perspective:** Including the customer's perspective into the design and development process leads to better alignment with clients' needs.

Negative effects on employees and workplace

- **Learning curve:** Agile working requires education and training for employees to understand roles, responsibilities, and processes. An adjustment period is often needed, even after training.
- **Role ambiguity:** It can lead to role ambiguity when traditional roles and tasks dissolve. This may create challenges for employees, particularly if they are unsure of their responsibilities.
- **Complexity in evaluation:** There can be a challenge to evaluate jobs and determine salaries, as traditional job roles become more dynamic and flexible.
- **Monitoring and control:** Psychological challenges, including concerns about constant evaluation, monitoring, and control versus the need for psychological safety and security.
- **Potential for stress:** Hypercompetitive work environments, increased workload, and a constant need to justify progress can lead to stress among employees.
- **Difficulty in regulation:** Existing collective bargaining agreements and regulations may need to be adapted to accommodate agile working methods.
- **Mixed management:** Rapid shifts of managers and different responsibilities for HR-issues and more work-related issues could cause uncertainty for the workers.

Source: ARIX Qual Interviews, n=20, 04/2023;

Q16. What does this mean exactly for the banking organizations and their workforce? What are the positive or negative effects on the employees and the workplace?

Perception of agile methods by employees

Perceptions of agile methods are mixed, with positive aspects mentioned such as a better alignment of goals, increased communication within teams, and more growth opportunities. On the other hand, banking employees stated concerns about an increased workload, challenges to adapt to changing priorities, and unrealistic goals.

Positive aspects of agile methods

- **Alignment and clarity:** Employees in agile teams often perceive better alignment of their goals with the team's objectives, resulting in increased clarity of purpose.
- **Communication within teams:** Positive communication within agile teams is seen as beneficial for collaboration and productivity.
- **Opportunities for growth:** Employees view agile methods as opportunities for personal and professional growth, where they can work on interesting and complex tasks and learn new skills.
- **Empowerment and autonomy:** Agile methods can empower employees by giving them more autonomy, leading to greater job satisfaction.
- **Focus on one task:** Employees can focus on one task and don't have to prioritize different goals.

Concerns and challenges

- **Workload:** Many employees express concerns about increased workloads due to agile methods, with some attributing this to staff reductions and task intensification.
- **Excessive meetings:** Some employees find that agile methods result in a high number of meetings, which they perceive as unnecessary and time-consuming.
- **Adaptability:** The dynamic nature of agile work can create challenges for employees who need to reset workload boundaries daily and adapt to changing priorities.
- **Regulatory conflicts:** In certain industries like banking, there can be conflicts between agile working concepts and regulatory requirements, making it difficult to implement agile methods fully. The reason is that the prerequisite for regulation is the definition of a responsible person. In agile teams, everyone is responsible and not just one person, which makes regulation difficult.
- **Scepticism and resistance:** While newer employees may embrace agile methods more readily, there can be scepticism and resistance among those more accustomed to traditional work methods.
- **Stress with unrealistic goals:** Workplace stress, often associated with unrealistic goals and challenging timelines, is mentioned as a concern in agile work environments.

Source: ARIX Qual Interviews, n=20, 04/2023;

Q17. How do employees perceive the introduction of agile methods? Does it increase or decrease the workload and the satisfaction?

4.2.5 The future of agile working in the banking sector

Agile methods are expected to persist and grow within the banking sector, driven by technology with a focus on departmental not company-wide adoption but it might be also displaced by other solutions or methodologies in the long run.

Positive outlook

- **Continuity & persistence:** Agile working methods are expected to continue expanding in the banking sector. The trend is not perceived as a temporary fad; rather, it's expected to persist.
- **Ongoing implementation trials:** There's a belief that most banks will attempt to implement agile methods within the next five years but not all will succeed.
- **Global adoption:** It's seen as a trend that is present in various regions, not limited to a specific bank or country.
- **Technological advancements:** The trend in agile methods is expected to continue, especially as banking becomes more IT-based, driven by technology and digitalization.
- **Applicability** to various industries beyond finance.

Challenges and limitations

- **Regulation:** Regulation normally requires one person in charge, but in agile working this is on the whole team, which leads to regulatory problems.
- **More flexibility:** Specific banking departments may need more flexibility than agile methodologies provide, leading to varied adoption levels.
- **Departmental adoption:** While agile methods will persist, there's an expectation that the adoption will become more departmental and less company wide. It may be introduced step by step in specific work areas.

- **Lifecycle:** DevOps* methodology is used in parallel with agile, and it is not yet clear which one will persist on the market. This might also be the case with other developments, that agile will be displaced in some years.

“*Together with AI, I think it's going to be a growing trend. But there are also these **DevOps* trends**, working methodologies that seem to be used on a rather larger scale lately. I think that at least for the next five years, both methodologies will remain on the market (RO)*”

Source: ARIX Qual Interviews, n=20, 04/2023;

Q18. How do you assess the future of agile working methods in the banking sector? Is this an on-going trend that no bank can escape because it has proven successful, or will it disappear again? What are your expectations for the upcoming five years?

*DevOps is a team build from Development and Operations employees to streamline processes mainly in software development.

4.2.6 Assessing the need for further regulation on agile working

There was a consensus within the interviewees that no further regulation on agile is needed, but concepts, guidelines and training programs including collective agreements can help companies to organize agile work in a healthy manner.

Do we need further regulation on agile working?

- **No**, apart from internal ones related to **work structure**.
- **Protocols & laws** are already signed on agile work.

How could negative effects on employees be mitigated?

- **Co-determination and appropriate collective agreements** can help limit negative effects on employees and to reflect the changed work processes and ensure positive overall outcomes.
- **Guidelines, aids to action, implementation, and support for operational practice** in collaboration with Social Partners can help companies organize agile work in a healthy and contemporary manner.
- **Flexible framework and flexible contractual employment relationships** are needed, that allow companies to work more agile while ensuring that the necessary framework conditions are in place.
- **Efficient training methods and programs** should be seen as an investment that companies can write off to improve agile working. Training should be possible for everyone.
- **Continuous management of processes, dialogue, and best practice** development would be necessary.
- **Enforcement of existing legislation** and penalties for non-adherence, along with a rebalance in penalties, can improve the effectiveness of workplace regulations.
- **A clear and present leadership** is an important factor regardless of regulation.

“ There is a social partner initiative under the umbrella of the VBG (social accident insurance for the public sector). We have founded an initiative called “Thinking 4.0”, where we are developing new concepts for contemporary and modern forms of work, how to organise them in a healthy way. We have developed guidelines, training programs, etc. to give the companies something to make people fit and how they can work in an agile way. (DE)

Source: ARIX Qual Interviews, n=20, 04/2023;
Q21. Do we need further regulation on agile working, and if so, how could it help to mitigate any negative effects on the employees and their workplace?

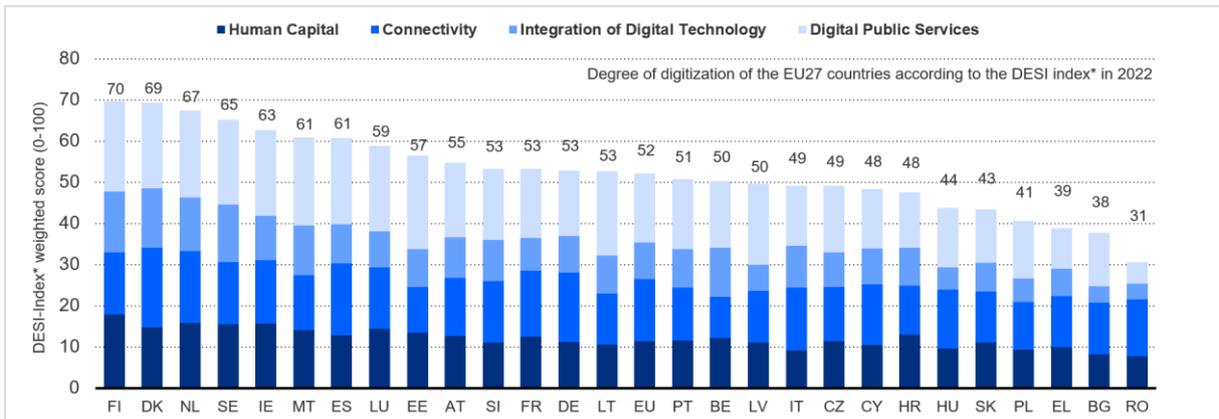
4.3 Digitalization

4.3.1 Digitalization divide in Europe

According to the Digital Economy and Society Index (DESI) 2022*, which was set up by the European Commission, the Nordic and Benelux countries lead in digitalization, while the Eastern European countries lag behind.

Finland, Denmark, the Netherlands, and Sweden have the most advanced digital economies in terms of human capital, connectivity, integration of digital technology and digital public services among the EU27. Romania, Bulgaria and Greece (EL) had the lowest DESI scores in 2022.

Figure 6: Digitalization divide in Europe



Source: European Commission: [DESI 2022](#), *(DESI) Digital Economy and Society Index by Main Dimensions. Analysis without Financial Services
The Digital Economy and Society Index (DESI) of 2022 is a composite index that summarizes relevant indicators on Europe’s digital performance and tracks the evolution of EU Member States, across four main dimensions: Human capital, Connectivity, Integration of digital technology and Digital public services. 2022

4.3.2 Adoption of cloud computing, Big Data and AI

Within technology adoption, Big Data, cloud computing and AI feature highly on likelihood of adoption according to a report by the World Economic Forum of 2023. More than 75% of companies are looking

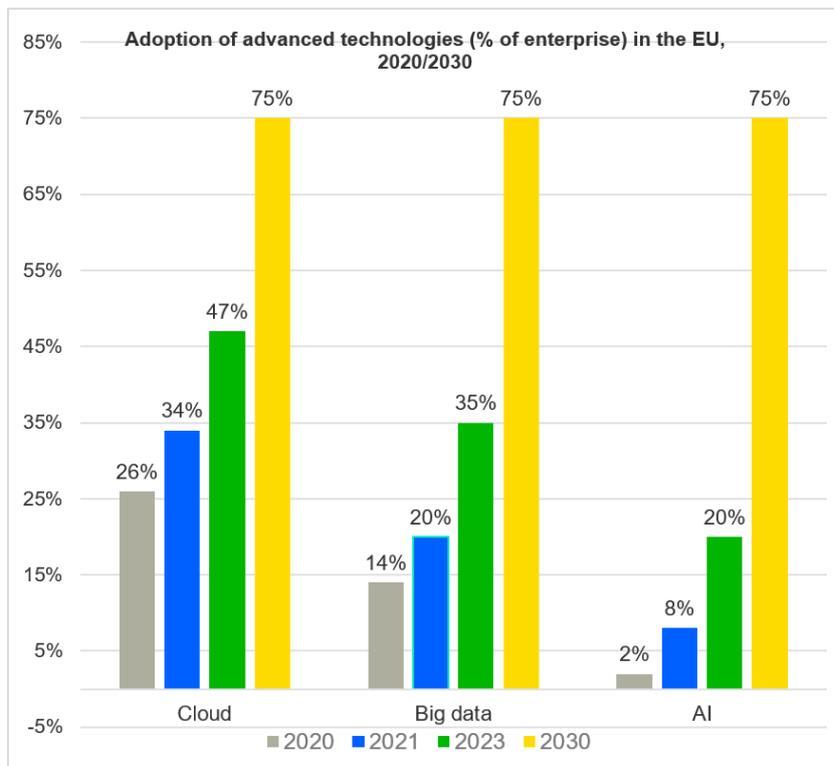
to adopt these technologies in the next five years. The speed of digitalization is increasing exponentially. The usage of cloud computing remains leading before Big Data and AI says the current DESI survey published by Eurostat in 2023. But with the launch of ChatGPT, the interest in AI is exploding among companies. Some companies are reprioritizing AI before others.

The use of advanced digital technologies is increasing rapidly among all companies of all sizes in the EU in 2023: 47% of companies rely on cloud computing, 35% work with big data and 20% use AI. This proportion is expected to increase to at least 75% in all three areas by 2030.

In larger companies and especially in the sector of financial services, the adoption rate is already remarkably higher. A survey from the UK by Oliver Wyman, published in November 2023, found that 91% of financial institutions have either narrowly or widely deployed Predictive AI in fraud detection and back-office functions with recorded benefits. More than 70% of financial institutions are in the proof of concept or pilot stage for Generative AI use cases.

Across Europe these figures might be a bit lower. According to a McKinsey report, while only 20% of financial service companies were using AI for at least one business application back in 2017, this number has now grown to 50%. Over half of Europe's financial services CEOs told EY in July 2023, they have already integrated AI into their capital allocation, with 43% planning to do so within the next year.

Figure 7: Adoption of cloud computing, Big Data and AI in the EU



Source: Eurostat: [European Union survey on ICT usage and E-commerce in enterprises: Shaping Europe's digital future, 2022](#); Analysis without Financial Services;; UK Finance/ Oliver Wyman: [The impact of AI in financial services, p. 2, Nov 2023](#); Fintech Futures: [Unpacking the hype: Generative AI in banking and finance, Aug 22, 2023](#);

4.3.3 Impact on personnel and change of job profiles in the banking sector

The occupational composition of employment within **retail banking** has dramatically changed between 2011 and 2021 mainly due to **digitalization**.

Figure 8: The change of job profiles in retail banking between 2011 and 2021

2011			2021		
1	Tellers, money collectors and related clerks	776,000	1	Finance professionals	518,000
2	Financial and mathematical associate professionals	556,000	2	Financial and mathematical associate professionals	515,000
3	Finance professionals	357,000	3	Tellers, money collectors and related clerks	480,000
4	Professional services managers	319,000	4	Numerical clerks	210,000
5	Numeric clerks	254,000	5	Sales and purchasing agents and brokers	143,000
6	General office clerks	107,000	6	Software and applications developers and analysts	112,000

Source: Eurofound (2022), [Going digital: Restructuring trends in retail banking](#), Publications Office of the European Union, Luxembourg. p. 21; Sep 26, 2022

Between 2011 and 2021, the number of **IT employees** in the sector **increased by 55%**. The largest increase was in the category of “software and application developers and analysts”, which has almost doubled (from 66,000 to 112,000 employees). **Software developers** are now the sixth most common occupation in retail banking.

In 2011, the most common occupational category in retail banking was ‘**tellers, money collectors (cashiers) and related clerks**’, mainly in customer-facing roles. In 2021, the most common category was **finance professionals** – employees who manage and conduct quantitative analyses of either financial accounting systems or funds for individuals (up to 45% from 2011).

The increase in the category '**sales and purchasing agents and brokers**' was also very significant, as this category was previously not very well represented.

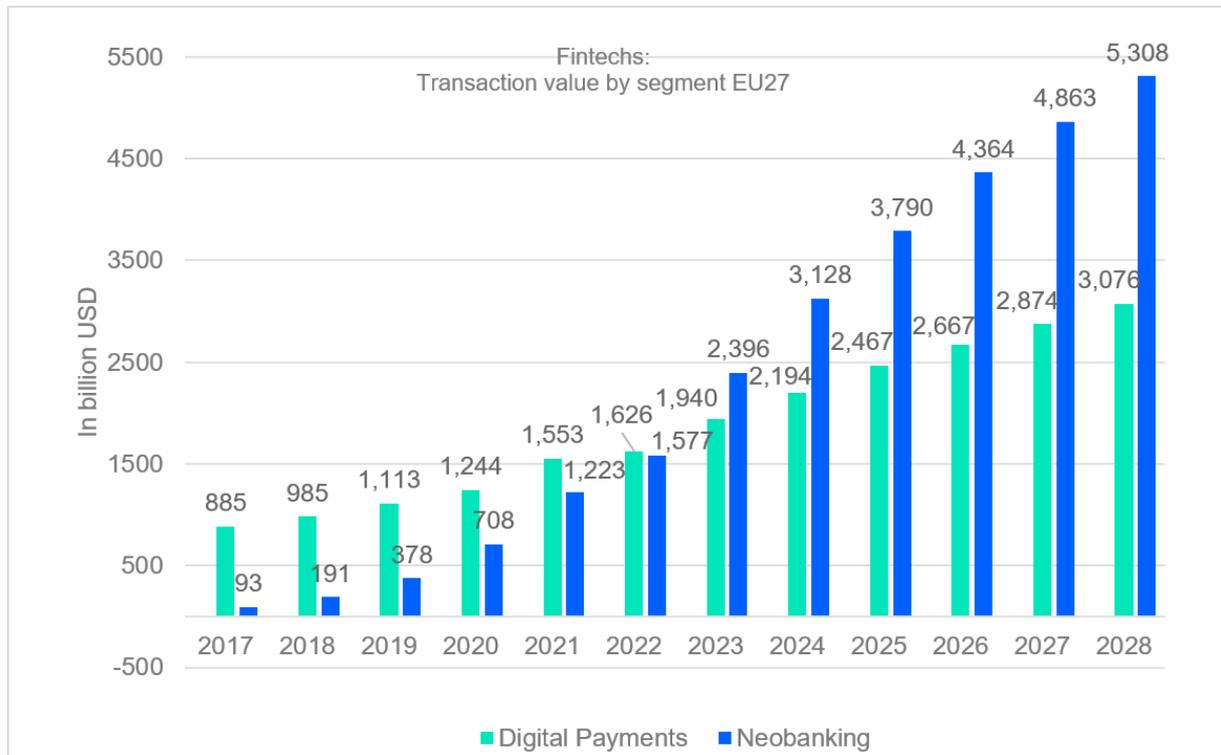
The employment share of **managers** in the sector has fallen in all areas, the only notable exception being **sales and IT managers**, a category that has seen some increase. The managerial occupation recording the most marked decrease is **professional services managers**, a category that includes branch managers (this category has fallen by 185,000 in 10 years). This decline is most likely linked to the contraction of branch networks between 2008 and 2020: according to the European Banking Federation, the number of bank branches fell by 36% during this period.

4.3.4 The rise of Fintechs, neobanking and increase of digital payments

The rise of Fintechs and neobanking

Fintechs are succeeding in digital payments and especially in neobanking, challenging incumbent banks globally and also in Europe. Neobanking is forecasted to see a huge increase in transaction value, up to USD 2,396 billion in 2023 (an increase of USD 819 billion or 52%) and more than double in 2028 compared to 2023.

Figure 9: The success of Fintechs in neobanking and digital payments



Source: Statista Fintech, Transaction Value by Segment, Data for EU27, data is using current exchange rates and reflects market impacts of the Russia-Ukraine war, Mar 2024,

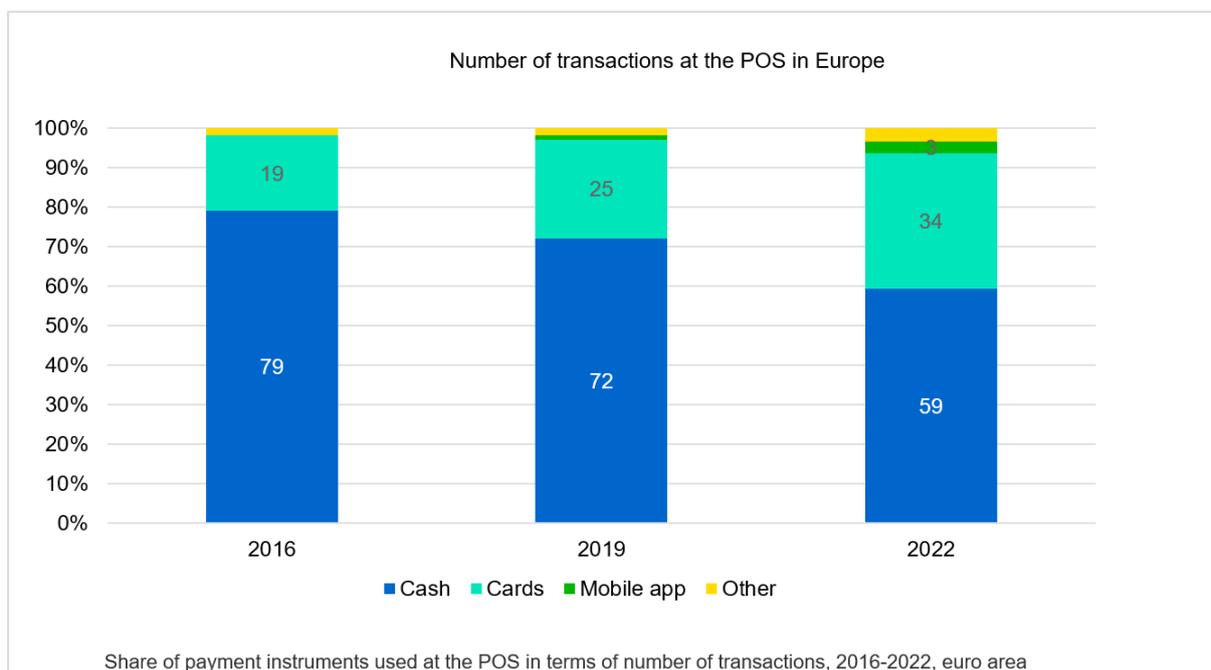
Every year, tech companies are digging deeper into the **financial services value chain**. The **fintech market** is evolving rapidly, with digital payments, digital investment, digital capital raising, digital assets, and **neobanking** emerging as some of the most significant trends. **Digital payments** have seen an unprecedented **surge in popularity**, with consumers increasingly relying on mobile payment solutions for their day-to-day transactions. Finally, neobanks have disrupted the traditional banking industry by providing innovative, customer-centric solutions that cater to the needs of today's digital-savvy consumers.

The growth of the fintech market is being driven by several factors. Firstly, the increasing **adoption of smartphones and the internet** has made digital solutions more accessible to consumers, leading to a surge in demand for fintech services. Secondly, the **COVID19 pandemic** has accelerated the shift towards digital payments and investments, as consumers have had to adapt to remote and contactless transactions. Third, **regulatory changes** have enabled fintech companies to compete with traditional financial institutions on a more level playing field. Finally, advancements in technology, such as **AI and blockchain**, have opened up new opportunities for fintech innovation, driving further growth in the market. The fintech market is expected to continue its rapid growth trajectory, driven by ongoing **technological advancements, changing consumer behaviour, and regulatory support**. Digital payments are likely to remain a dominant trend, as consumers increasingly prefer the convenience and speed of mobile payment solutions. Additionally, the rise of digital assets and neobanking is likely to continue, as these trends reshape the financial landscape. Overall, the fintech market is expected to remain dynamic and innovative, with new solutions and services emerging to meet evolving consumer needs.

Increase of digital payments compared to cash.

Cash is still the most dominant payment method in Europe at the point of sale (POS), but it experienced a strong decrease compared to card payment. Cash is down to 59%, whereas card payment rose to 34% and mobile payments to 3% in Europe in 2022. There are large cross-country differences: In the Netherlands and Finland cash is down to only 20%.

Figure 10: Decrease of cash and increase of digital at the point of sale in Europe



Source: ECB: [ECB Study payment attitudes in the Eurozone 2022](#); Study on the payment attitudes of consumers in the euro area (SPACE) 2016-2022.

The SPACE 2022 results show that:

- Cash was the most frequently used payment method at the point of sale in the Euro area and was used in 59% of transactions, down from 79% in 2016 and 72% in 2019.
- Card payments were used in 34% of POS transactions, up from 19% in 2016 and 25% in 2019.
- Other payment methods were used for 7% of POS transactions.
- The share of payments using mobile apps increased from less than 1% in 2019 to 3% in 2022.

There are large cross-country differences in the payment habits of consumers when purchasing goods or services at the POS. In several countries, a clear majority of POS payments in 2022 were made in cash. The highest shares in terms of **number of payments** were observed in Malta (77%), Slovenia (73%), Austria (70%) and Italy (69%), and in terms of **value of payments** in Malta (65%), Lithuania (61%) and Slovenia (59%). Card payments were the most frequently used method at the POS in 2022 in four Euro area countries: Finland (70%), the Netherlands (67%), Luxembourg (52%) and Belgium (48%). In Estonia, the share of card payments was almost identical to the share of cash payments (both 46%).

4.4 Artificial Intelligence (AI)

4.4.1 Global AI competitiveness landscape

4.4.1.1. AI definitions and the rise of ChatGPT

What is AI?

AI is the ability of a machine to display human-like capabilities such as reasoning, learning, planning and creativity.

AI enables technical systems to perceive their environment, deal with what they perceive, solve problems and act to achieve a specific goal. The computer receives data - already prepared or gathered through its own sensors such as a camera - processes it and responds.

AI systems are capable of adapting their behaviour to a certain degree by analysing the effects of previous actions and working autonomously.

Source: European Parliament: "[What is artificial intelligence and how is it used?](#)", Jun 20, 2023

The difference between “Predictive/ traditional” and Generative AI

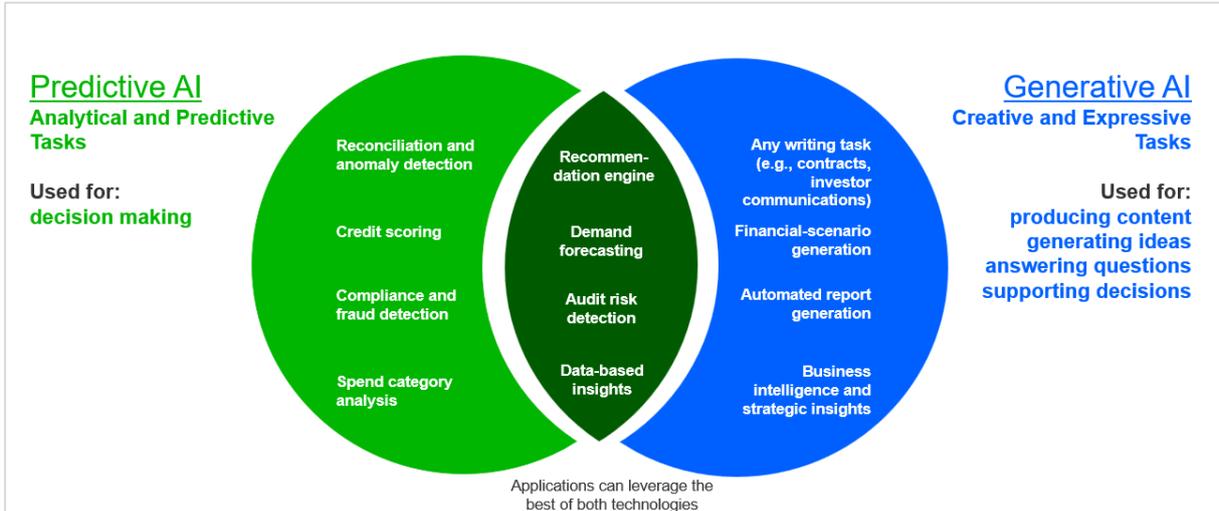
“Predictive” or “Traditional” AI has been used in banking for several years. It refers to systems designed to respond to a particular set of inputs. These systems have the capability to learn from data and make decisions or predictions based on that data according to a pre-defined strategy within a specific set of rules. In financial services this type of AI is used to predict a customer’s credit risk or purchasing propensity, also for fraud detection and risk management.

With the launch of ChatGPT, a new type of AI was made available to the public. Generative AI (e.g. ChatGPT) can be thought of as the next generation of artificial intelligence. It’s a form of AI that can create something new. Generative AI is used for creative and expressive tasks, for producing content, generating ideas and for answering questions. It can not only create text outputs, but also images, music and even computer code. Generative AI models are trained on a set of data and learn the underlying patterns to generate new data that mirrors the training set. Generative AI is and will be used extensively for decision supporting as well. (Figure 11).

A main challenge for AI is, as it is based on historical data, to avoid built-in biases.

Predictive/ traditional and Generative AI (ChatGPT) complement each other like a left and a right brain half and can be used together. Certain applications can leverage the best of both technologies.

Figure 11: Predictive/ traditional and Generative AI



Sources: [BCG](#) Generative AI in the Finance Function of the Future, Aug 22, 2023; [BCG](#): A Generative AI Roadmap for Financial Institutions, Nov 13, 2023; [Forbes](#): The Difference Between Generative AI And Traditional AI: An Easy Explanation For Anyone Jul 24, 2023

The rise of ChatGPT

ChatGPT, released on November 30, 2022, reached one million users only 5 days after the launch and 100 million users in January 2023, after two months making it the fastest growing platform in history to date. This is the quickest application to scale to 1M and to 100M users ever.

Figure 12: ChatGPT – Time to reach 1M users.



Source: Credit Suisse: [ChatGPT Unlocking the potential of large language models](#), p. 21, Mar 2, 2023

Figure 13: ChatGPT- Time to reach 100M users



Source: Credit Suisse: [ChatGPT Unlocking the potential of large language models](#), p. 21, Mar 2, 2023

ChatGPT was developed by OpenAI, an U.S. based AI Institute founded in December 2015 as a non-profit organisation with a USD1B commitment from investors like Elon Musk, Peter Thiel or Amazon Web Services.

ChatGPT is built on a large language model (LLM) and falls into the Generative Artificial Intelligence segment. A LLM is a deep learning algorithm that can recognize, summarize, translate, predict and generate text and other content based on knowledge gained from massive data sets.

Source: Credit Suisse: [ChatGPT Unlocking the potential of large language models](#), p. 13-21, Mar 2, 2023

4.4.1.2. What determines a nation’s AI competitiveness?

“A nation’s competitiveness depends on the capacity of its industry to innovate and upgrade. (Michael E. Porter, Professor, Harvard University, 1990)

To understand how members of the EU compare with other countries, BCG Henderson Institute developed a set of criteria to measure the AI competitiveness of economies. The analysis concentrated on two aspects. The first was whether a country has the capacity to develop AI. Several factors determine a country’s capacity, including the availability of talents and skills and the accessibility of startup funding by private-sector and governmental players. The second aspect is whether a country had the capacity to deploy AI. To assess this, BCG considered whether companies developing AI applications could commercialize them and implement them at scale in local industries.

4.4.1.3. Key advantages in AI by nation

Figure 14: Comparison of nations between capacities to develop and to deploy AI

Capacities to develop AI		Capacities to deploy AI	
Technology development	Startup infrastructure	Application commercialization	Implementation on an industrial scale
<ul style="list-style-type: none"> • Big Tech & AI startups: USA Size of community • Talents and skills: USA Number of R&D AI researchers and AI talents • AI patents: USA Number of AI patents • AI publications: China Number of AI publications: 	<ul style="list-style-type: none"> • PE & VC finance of startups: USA (percentage of GDP) • Government investment AI: China (percentage of GDP) • Private investment AI: USA (percentage of GDP): • Legal framework: Europe AI Regulation 	<ul style="list-style-type: none"> • GDP: China (AI impact of GDP) • AI readiness of the market: USA Future readiness multiplied by a country's working population • Usage by companies: China Number of companies, that use or deploy AI 	<ul style="list-style-type: none"> • Data Availability: China Mobile data that is uploaded and downloaded, facial recognition etc. • Infrastructure: USA Number of supercomputers • Microchips: USA/China Production and consumption of semiconductors (chips)

Source: [BCG Henderson Institute: Europa can catch up, but must act – today](#), IMD World Competitiveness Centre; World Economic Forum; BCG Henderson Institute analysis. IMD World Digital Competitiveness Ranking 2019_2022 defines future readiness as the level of preparedness of an economy to assume its digital transformation. ARIX: own research and calculations, Dec 2023.

The above scheme developed by BCG, was slightly changed and updated with the data of 2022 and 2023 by ARIX Research. The overall results remained the same.

To sum it up: The United States is the leader in the development of AI and China the leader in the deployment of AI.

Sources: [Worldpopulation Review](#); Semiconductor Manufacturing by Country 2024; [The Economist](#): Taiwan's dominance of the chip industry makes it more important, March 6, 2023;

Key advantages and challenges

USA:

The United States is the leader in capacities to develop AI. The US leads the way in the number of Big Tech firms and AI start-ups, as well as in terms of talent and skills. It also has the majority of AI patents and private investments in AI and leads in private equity and venture capital to fund AI startups. In terms of infrastructure, the USA has the largest number of supercomputers in the world in 2023, taken over from China, which was the leader in 2022.

In the field of semiconductors, the US is ahead of China on the production side, but Taiwan is leading overall. Taiwan is the most important player in the production of microchips and produces more than 50% of the world's microchips and more than 90% of the most advanced microchips worldwide.

Private investment

The United States continues to outpace other nations in terms of private AI investment, with (EUR 44 billion) in 2022, about 54% of the global AI market with EUR 81 billion in 2022. Source: 1, 2

Tech companies and start ups

The US is leading by number of Tech companies with 13,770 with tech giants, e.g. Google, Microsoft, Meta. IBM, also by number of startups since years. Source: 1, 4

Talent and skills

The US is the destination of choice for AI scientists around the world, even for China's and European Top AI students. Source: 5, 6

AI patents

The US is leading with 40% of AI patents granted. Source: 1, 2

Microchips:

The US possesses 12% of global manufacturing capacity, but more than 46% of total semiconductor sales market. Exports account for USD62 billion. Source: 7

Supercomputers:

In terms of systems share (32,2%) and performance (53%), the US is leading before China and Europe (2023). IT takes over China from 2022. Source: 8

Sources: 1: [HAI Artificial Intelligence Report 2023](#); 2: [HAI Artificial Intelligence Report 2022](#); 3: [EPRS: AI investment: EU and global indicators 2024](#); 4: [Pitchbook: Why Europe struggles to scale its deep-tech startups](#), 28 March 2023; 5: [Politico: 'Four Battlegrounds' shaping the U.S. and China's AI race](#), 28 February 2023; 6: [The Nation: China's Race to Become an AI Superpower](#) 10 Apr2023; 7: [Worldpopulation Review: Semiconductor Manufacturing by Country 2024](#); 8: [Top 500. List statistics](#); Mar 2024

China:

Concerning the capacity for AI deployment, China is leading the way.

In the area of AI development, China leads in governmental investments in AI and AI publications.

In AI deployment, China is leading in the impact of AI on GDP and has the largest number of companies that use or deploy AI. The population in China is very tech-savvy. They are dominating in the amount of mobile data uploaded and downloaded, and in facial recognition. China has the largest share in facial recognition cameras in the world, more than 50% of these cameras worldwide are installed in China. China is the leader in microchip consumption as well.

Private investment

China ranks second in terms of private AI investment, with EUR12 billion in 2022, about 15% of the global AI market. Source: 1

Data availability

China leads in facial recognition, with 50% of the world's cameras, about 1 billion CCTV installed watching people even in schools. Source: 2, 3

Government

China's government has launched a national AI development plan with a goal to become a world leader in AI by 2030. Source: 4, 5

Talents

About 1.4 million engineers qualify annually, six times as many as in the United States, at least a third of them in AI. Source: 6, 7

AI adoption:

China leads in AI adoption, with 58% of companies report using AI in their business. Source: 8

Publications:

China is leading with 40% of AI publications in journals in 2021. Source: 9, 10

Microchips:

Responsible for 9% of global chip sales. Forecasted to reach 25% by 2030. The largest market worldwide. Source: 11

Supercomputers:

In terms of systems share (20,8%) and performance (15,5%), China ranks third after the US and Europe. Source: 12

Sources: 1: [EPRS: AI investment: EU and global indicators 2024](#); 2: Brookings: [Exporting the Surveillance State via Trade in AI](#), Dec. 2022; 3: DW: [AI: How far is China behind the West?](#), 24 Jul 2023; 4: The New York Times: [Beijing Wants A.I. to Be Made in China by 2030](#) 20Jul2017; 5: ETOC: [The AI Development In China](#) 7Dec2023; 6: BCG Henderson Institute: [Europa can catch up, but must act – today](#) ; 7: The Nation: [China's Race to Become an AI Superpower](#) 10 Apr2023; 8: IBM [Global AI Adoption Index 2022](#); 9: HAI [Artificial Intelligence Report 2023](#); 10: HAI [Artificial Intelligence Report 2022](#); 11: [Worldpopulation Review: Semiconductor Manufacturing by Country 2024](#); 12: Top 500. [List statistics](#); Mar 2024

Europe:

Europe leads in AI regulation and ethical aspects (legal framework).

Private investment

Europe + UK ranks third in terms of private AI investment, with EUR10,2 billion in 2022, about 7.5% of the global AI market according to EPRS. Source: 1

High ethical standards

Europe has higher ethical standards and it's quicker in regulating possible threats, e.g. in the AI Act Source: 2, 3

AI start-ups

Europe + UK outpaced China for the third year in a row, with 293 AI start-ups in 2022 (China 160), but after the US (542) Source: 2, 4

AI publications and patents

Europe and UK rank second after China with 15% of AI publications in 2021 and also in number of AI patents granted with 8% Source: 4, 5

AI adoption

Europe ranks second after China in AI adoption with 33% of companies on average using AI Source: 2, 4

Supercomputers:

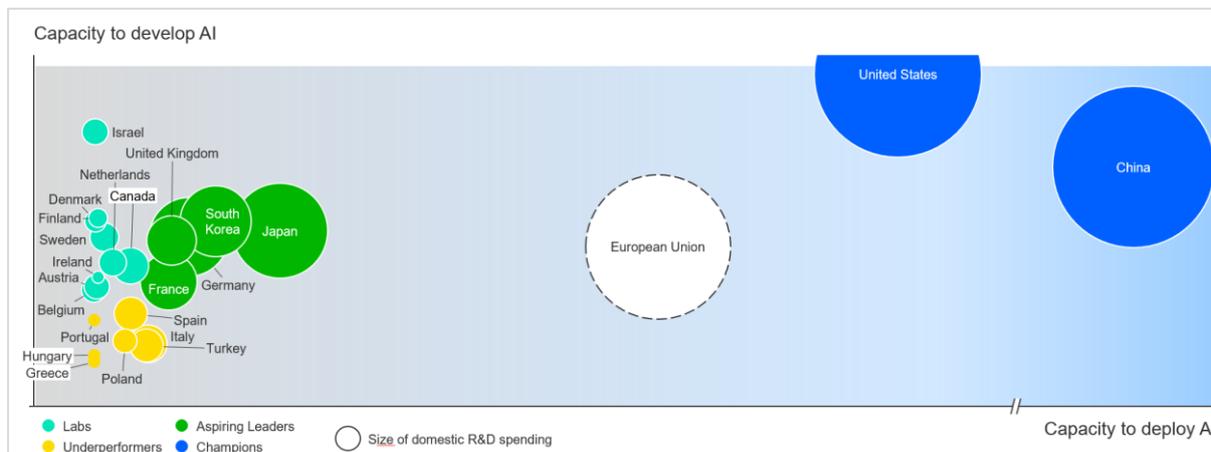
In terms of systems share (28,6%) and performance (25,1%), Europe ranks second after the US. Source: 6

Sources: 1: [EPRS: AI investment: EU and global indicators 2024](#); 2: BCG: [Europe can catch up in AI, but must act – today](#) 15Jun2020; 3: Carnegie: [Europe and AI: Leading, Lagging Behind, or Carving Its Own Way?](#) 09Jul2020; 4: HAI [Artificial Intelligence Report 2023](#); 5: HAI [Artificial Intelligence Report 2022](#); 6: Top 500. [List statistics](#); Mar 2024

4.4.1.4. The AI competitiveness landscape

To see where each country stands in comparison, BCG has developed the AI competitiveness landscape. The US leads in the capacity to develop AI, China in the capacity to deploy it. If the EU were one country, Europe would be closer to the champions. Within the EU, the UK, Germany and France are the leaders.

Figure 15: The AI competitiveness landscape



Source: [BCG Henderson Institute: Europa can catch up, but must act – today](#), Jun15, 2020; IMD World Competitiveness Centre, World Economic Forum; BCG Henderson Institute analysis. Note: We calculated an AI competitiveness score from 0 to 1 for each country using the following formula: The country’s score minus the lowest country score divided by the difference between the lowest and highest country scores in the data set.

The BCG analysis was published in 2020 but is still valid based on current figures.

Champions: China and the US have developed enormous innovation capabilities and excel at using AI to improve productivity. They are ahead of every other country in the world.

Aspiring leaders: France, Germany, Japan, South Korea, and the UK have reached the threshold level of innovation capability, and, because of large domestic industries, they also possess an AI-ready market. Importantly, if we were to treat the EU as one country—that is, if we were to assess the combined capacity of all member countries—it would be closer to the champions in terms of AI competitiveness. However, the EU is a highly fragmented market.

Labs: Countries such as Denmark, Finland, Ireland, the Netherlands, and, in the EU’s proximity, Israel have all developed the capacity to innovate, with Israel even at par with the champions in this regard. However, industries in these countries don’t have the scale to fully benefit from their nation’s capabilities. As a result, these countries are entirely dependent on other countries to capitalize on the AI that they’ve developed, which is unlikely to lead to AI competitiveness. These countries will be able to become more competitive only by negotiating mutually beneficial partnerships with companies and countries outside the EU.

Underperformers: Most Southern and Eastern EU economies (including, for example, Italy) haven’t built their innovation capabilities to a global level yet. They also possess a limited capacity to deploy AI.

Source: [BCG Henderson Institute: Europa can catch up, but must act – today](#), Jun 15, 2020

4.4.1.5. Key challenges for Europe

Key challenges for Europe to keep pace in the AI race are a fragmentation of the digital market, difficulties in attracting IT talents, including lack of venture capital. The major strength is a higher ethical standard.

Fragmentation of the EU's digital market

A unified EU market could potentially be large, but existing policy incentives favour national ecosystems, that create national monopolies rather than potential EU champions. Brexit increases fragmentation, with the UK accounting for around 70% of AI investment in the EU from 2008 to 2019.

The aspiring leaders and labs should strike global partnerships to expedite the business application of their technologies.

Difficulties in attracting talent

The EU is facing a digital skills gap; hiring new talent for firms on the scale needed is impractical, therefore, companies will need to proactively upskill their current employees.

Investment barriers

Lack of venture capital for deep tech is a main reason why startups struggle to scale. As European investors and LPs are more risk averse, deep-tech startups end up overseas in order to scale.

Ethical advantage

Europe should seek to focus its efforts in AI sectors where it has potential to reach a leading position. AI technologies can provide European developers with a competitive advantage by meeting high ethical standards, so that users ultimately favour their products over those from the US or China.

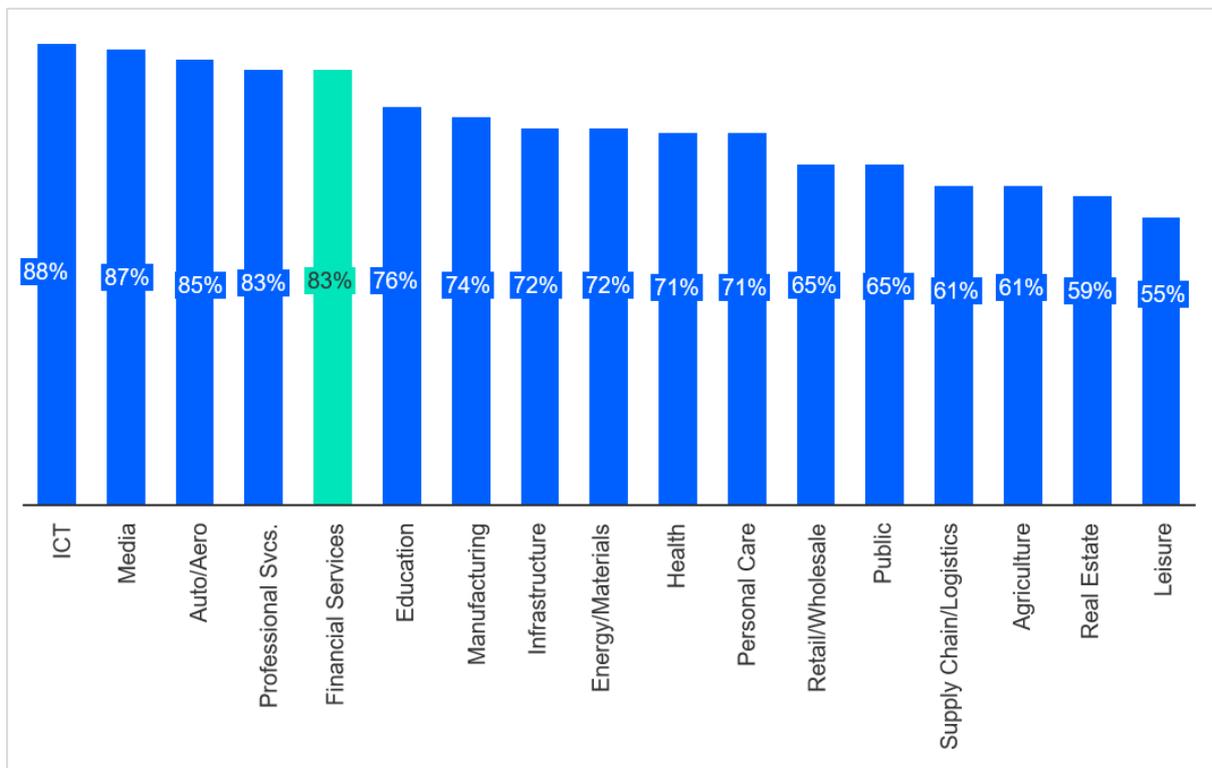
Source: BCG: [Europe can catch up in AI, but must act – today](#), June 2020; Pitchbook: [Why Europe struggles to scale its deep-tech startups](#), March 27, 2023; Carnegie: [Europe and AI: Leading, Lagging Behind, or Carving Its Own Way?](#) Jul 9, 2020

4.4.2 Impact of AI on the global banking sector and its employees

4.4.2.1. Expected global AI adoption by industry

According to the World Economic Forum, Future of Jobs Report, 2023, there is a widespread increase in prioritizing AI strategies across sectors worldwide. Financial services have a leading position in adopting AI. 83% of financial services firms are expected to have adopted AI technologies in the next five years, ranking it among the industries that are affected the most. AI and big data will comprise more than 40% of the technology training programs undertaken in surveyed companies until 2027.

Figure 16: Global AI adoption by industry in 2027 (%)



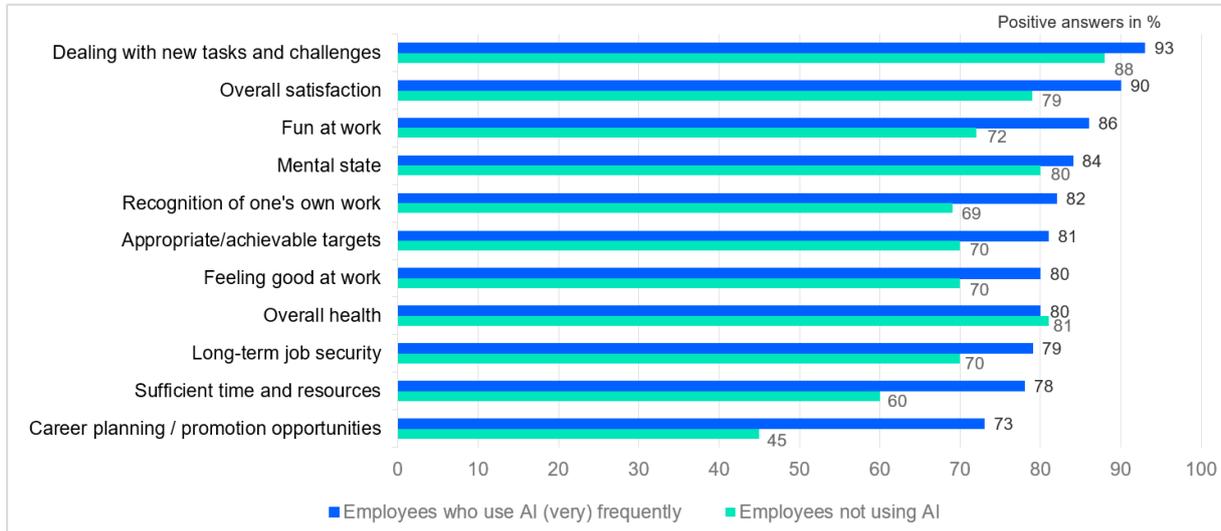
Source: World Economic Forum: [Future of Jobs Report 2023](#), May 2023

4.4.2.2 Positive impact: Increase of satisfaction

In an OECD survey conducted in 7 countries and published in March 2023, both employers and employees in the finance and insurance sector in Europe, the USA and Canada who use AI were asked about the impact on satisfaction. 57% of employers reported a positive impact on employee productivity and 39% on satisfaction. In the survey of employees, 25% of AI users said that AI had improved their enjoyment of work a lot, 37% a little, so that overall, 62% reported an improvement in satisfaction due to AI.

Also in Germany, AI users in financial services are significantly more satisfied than non-users, with a big lead in career planning/advancement opportunities according to a 2022 AGV survey among private banking employees in Germany.

Figure 17: Positive impact of AI use on finance employee satisfaction in Germany



Source: AGV Banken: Representative Survey of employees in the private Banking industry, positive answers in %, 2022

In this survey the satisfaction of employees who use AI (very) frequently was compared to employees who don't use AI. They were questioned about the dealing with new tasks and challenges, enjoyment of work, mental state and, in particular, career planning and promotion opportunities.

The group of employees who frequently used AI was significantly more satisfied compared to the other group. Especially career planning / promotion opportunities received significantly more positive answers. These results for Germany are consistent with results from other surveys. In a MIT survey from 2023, about [Generative AI at work](#), employees who received an AI assistant were more satisfied, more productive and less likely to quit.

Sources: [OECD](#): The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers, March 2023; AGV Banken: Representative Survey of employees in the private Banking industry; positive answers in %, 2022; [Business Insider](#) AI boosts productivity, May 3, 2023;

4.4.2.3. Ambivalent impact: AI will reduce but also create jobs

AI impact across industries

Many consultancies and research institutes publish on the possible impact of AI on jobs, with varying results. But most analysts currently agree that AI will eliminate jobs but also create new ones.

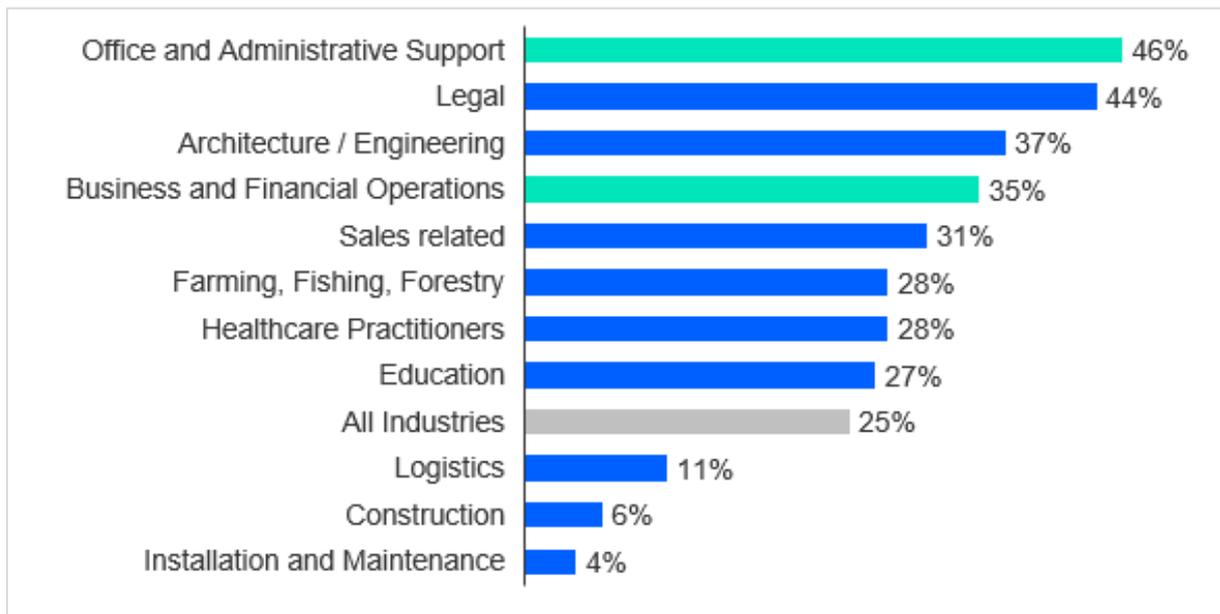
Using data on occupational tasks across all industries in both the US and Europe, Goldman Sachs found that roughly two-thirds of current jobs are exposed to some degree of AI automation, and that generative AI could substitute up to one-fourth of current work. Extrapolating their estimates globally suggests that generative AI could expose the equivalent of 300 million full-time jobs to automation. On the other hand, they also report that AI will create new jobs and a productivity boom.

The World Economic Forum has estimated that artificial intelligence will replace some 85 million jobs by 2025, but AI and machine learning will also help workers by creating new occupations.

PwC estimates that by the mid-2030s, up to 30% of jobs could be automatable, with slightly more men being affected in the long run as autonomous vehicles and other machines replace many manual tasks where their share of employment is higher.

According to a report by Goldman Sachs, a quarter of current work tasks in the US could be automated by AI, with a particularly high proportion in **administration (46%)** and **business and financial operations (35%)**, both of which are among the main areas of employment in the financial services sector. (Figure 18)

Figure 18: Share of industry employment exposed to automation by AI (USA)



Source: Goldman Sachs: [The Potentially Large Effects of Artificial Intelligence on Economic Growth](#), March 26, 2023

The professions included in the subcategories 'Office and administrative support' and 'Business and financial operations' from the O*NET-SOC occupational taxonomy used by Goldman Sachs and the WEF are listed in chapter [5.1 Definitions and Abbreviations](#).

Performing a similar exercise for the Euro area yields estimates of a similar magnitude, both in aggregate and across industries. Here, too, professions with a high prevalence in the banking sector such as “**clerical support workers**” (bank tellers, cashiers, data-entry clerks, etc.) or “**professionals**” are predicted to be highly exposed to AI. (Figure 19) Definitions of these two categories according to the ISCO classification see as well here [5.1 Definitions and Abbreviations](#).

Figure 19: Share of industry employment exposed to automation by AI (Euro area)



Source: Goldman Sachs: [The Potentially Large Effects of Artificial Intelligence on Economic Growth](#), March 26, 2023

On the **other hand**, Goldman Sachs predicts the potential for a **labour productivity boom**, that will significantly increase global output, as capacity is freed up for productive activities, which will also **increase employment**. Most of the job growth is expected to be in **IT**, as we can already see from employment figures.

Impact on Financial Services

Job loss and job gains in financial services according to the World Economic Forum (WEF)

Overall, the WEF expects a churn rate in financial services of about 26 to 29%. They predict job loss but also job gains due to AI.

Job loss: The decline of face-to-face and record-keeping roles (e.g. bank tellers and related clerks) is consistent across industries and at around 40%, in financial services. In the administrative area, related to financial services, respondents expect to see 25-35% less demand for cashiers, data-entry clerks, accounting, bookkeeping and payroll clerks and secretaries, with an overall churn rate of about 29%.

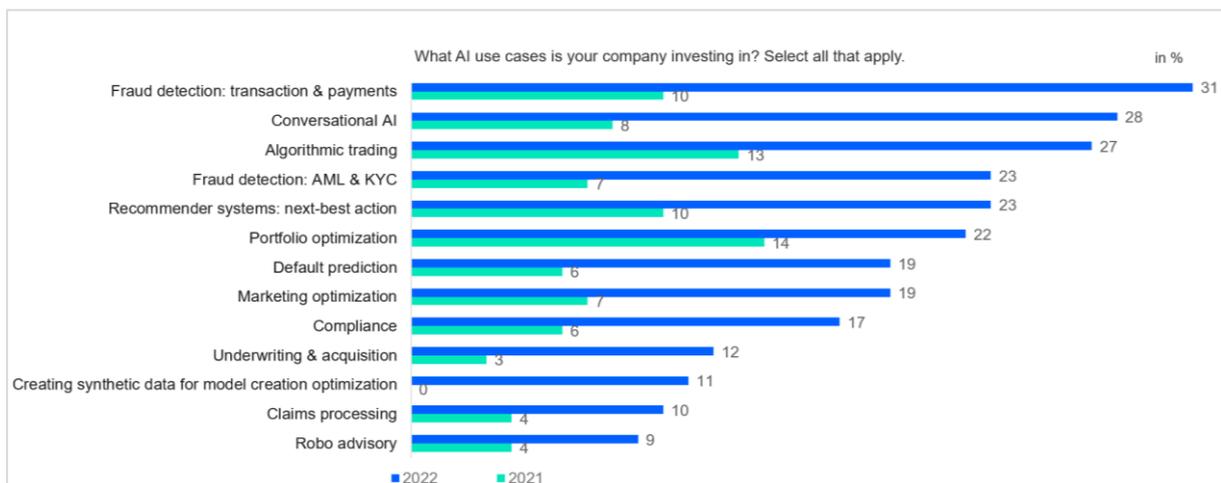
Job gains: Demand for AI and machine learning specialists is expected to grow by 40%, e-commerce specialists, digital transformation specialists, and digital marketing and strategy specialists are expected to increase by 25-35%. About 31% increase is expected in demand for roles in financial services such as data analysts and scientists, business intelligence analysts, big data specialists, database and network professionals, data engineers, financial analysts and financial and investment advisors. The jobs gained might be of course also outside the traditional banking sector.

Sources: Goldman Sachs: [The Potentially Large Effects of Artificial Intelligence on Economic Growth](#), March 26, 2023;
 World Economic Forum: [Future of Jobs Report 2023](#), May 2023
 Nexford: [How Will Artificial Intelligence Affect Jobs 2024-2030](#), (PwC) Jan 10, 2024

4.4.2.4. Usage of AI in the banking sector by area

A survey by NVIDIA among 500 financial services professionals around the world in 2022 stated that the main AI use cases companies in financial services are investing in are fraud detection, conversational AI and algorithmic trading. (Figure 21).

Figure 21: Top AI applications financial services firms are investing in



Source: [NVIDIA State of AI Financial Services](#), Jan 2022

Fraud detection and algorithmic trading, remained in the top group of AI investments from 2021, while conversational AI is a new entrant in the top three. More importantly, the percentage of companies investing in each use case jumped significantly year-on-year, with extraordinary percentage gains. This demonstrates the rapid adoption of AI across financial services, which is requiring banks to invest in enterprise AI strategies and infrastructure.

4.4.2.5. Predictive AI and Generative AI (ChatGPT) use cases in financial services

Almost every aspect of the financial services industry is likely to benefit from or to be affected by Predictive/traditional AI and Generative AI (e.g. ChatGPT). Credit Suisse analysts have identified the following as key use cases for AI in the industry.

Predictive/traditional AI use cases

HR related:

- **Personnel planning and development**, e.g., personnel deployment, planning, matching of requirement and competence profiles.
- **Personnel selection and marketing**, e.g., robo-recruiting (pre-selection of applicants, AI-based search for potential employees)
- **People analytics:** (e.g. performance, engagement, wellbeing)

Forecasting

- **Real-time financial market trading advice:** Advanced AI will be able to navigate through enormous data sets, quickly parsing out trends, and providing actionable advice on trading decisions in real-time. In addition to being quick, the AI simultaneously distills the complex information into easily understandable summaries.
- **Financial forecasting:** Utilizing limited inputs, AI can create financial forecasts to determine the viability of an investment. The AI will be able to utilize its training set to incorporate assumptions not simply limited to the proposed investment, but the industry trajectory, at large.

Analytics:

- **Fraud detection:** Novel AI will be able to analyse not only individual banking transactions but view many activities together across accounts and customers to detect fraudulent and/or other criminal activities.
- **Risk management:** Verify customer information to assess the eligibility for loan applications, automate loan underwriting, assess credit risks, etc.
- **Product personalization:** Using certain user-defined inputs, AI can provide personalized financial product advice. For example, if a customer is looking to purchase an insurance policy, AI can analyse the customer's financial situation, budget, protection requirements, and product features and recommend the policy that will work best for the customer.
- **Enhancing excel:** Users will be able to quickly and easily communicate with ChatGPT to create complex excel formulas, improving productivity and transferability between workers, as differences in skillsets are not a limiting factor.

Generative AI (e.g. ChatGPT) use cases

Content generation:

- **Extract financial information:** Extract information from documents to quickly analyse and process customer inquiries and generate financial reports.
- **Introductory analysis for bankers:** Initial overviews of company business models and for summaries of earnings calls and other important events.

Answers:

- **General level financial advisory**
- ChatGPT provides simplistic financial advice to a broader range of customers, impacting advisory services.
- **Financial calculations for consumers:** End consumers can use ChatGPT to conduct financial calculations conversationally.
- **Chatbots: Extending customer service:** ChatGPT's ability to communicate in a humanistic way eases customers' automated assistance.

Idea generation:

- **Product marketing:** Generate marketing campaign script and creative marketing ideas.
- **Create pictures:** For illustrations.

Source: Credit Suisse: [ChatGPT Unlocking the potential of large language models](#), Mar 2, 2023; ARIX Research Dec 2023;

4.4.2.6. Sample AI/automation projects in the banking sector

Sample AI/automation projects in the banking sector named by survey participants

Interviewees from the banking industry in 10 countries elaborated on sample projects powered by AI, which had a positive and/or negative impact on employees. The projects presented related to the following areas: HR systems, customer dialogue, credit rating and back-office processes.

Human resources systems:

- **Speech analytics system:** Measures and assesses employees' empathy during customer conversations to improve customer service. But the system caused frustration and mistrust among employees (DK)
- **Resume screening:** AI-powered engine reads resumes and matches profiles with open positions, reducing workload but potentially introducing bias in the selection process. (ES)

Customer dialogue systems (front office):

- **Chatbots in the front office:** Implementation of chatbots, like the program “David”, to automate repetitive tasks, free up time, and maintain a positive climate in the front office area. (RO)
- **Outbound calls with bots:** Automation of outbound calls in banks, where the system determines when to call, who to call, and what to offer. (HR)
- **Augmented advisor implementation (robo-advisors):** AI augments customer relationships in a bank by providing expertise, saving time, and facilitating multi-channel interactions. (FR)

Credit rating of new customers:

- **Elaboration of customer profiles:** AI simplifies the process of determining suitable financial products for customers but raises concerns about potential algorithmic discrimination. (ES)
- **UniCredit customer experience consumer finance platform:** AI-based platform for digital loan applications, streamlining the process and using machine learning for creditworthiness analysis. (IT)

Back-office processes:

- **Contract analysis:** AI used to check contracts for specific clauses, saving time and reducing the need for manual work from 20 days to 2 hours. (DE)
- **Cash currency management:** Digitization of payments reduces the need for manual cash handling, leading to job cuts and limited access to cash in rural areas. (NL)
- **Robotization of data processing:** Scanning and processing documents automatically without manual input. (HR)
- **People portal with AI:** AI-powered portal for employees to find answers quickly, improving efficiency but requiring cultural change and adoption. (IR)

Source: ARIX Qual Interviews, n=20, 04/2023;

Q9. Could you please describe a sample AI/automation project including the positive and/or negative impact on the employment/workplace situation in your banking environment?

4.4.2.7. Positive and negative impact of AI on job profiles

Positive impacts of AI/automation mentioned are increased efficiency and speed, higher quality and reduced workload, negative aspects are potential job loss, change in job profiles, errors of AI and over-reliance with loss of critical thinking.

Positive impact

- **Efficiency and quality:** Automation of tedious and repetitive tasks, leading to increased efficiency, higher quality output and reduced workload.
- **Job enrichment:** More complex, creative and people-oriented tasks (e.g., counselling and customer needs), which increases job satisfaction and enriches work.
- **Supporting role:** Support of decision making and problem solving by processing and identifying insights from large data sets. It speeds up processes.
- **Job security** increases in certain areas related to AI/automation.
- **New job roles emerge in IT** (e.g. data scientists, trainers), product/process management and governance/ethics.
- **New competence requirements** and opportunities, e.g. requiring of additional skills to control and monitor AI systems.
- **Training:** Employers must provide effective handling of new requirements and training opportunities. Retraining processes will be necessary for adjusting to the new technological reality.

Negative impact

- **Job cuts:** The potential reduction of the number of employees, job displacement or redundancy for certain job profiles, creating concerns about job security.
- **Job profiles may change**, emphasizing the need for more technical roles, so a **decrease** in easily automated **administrative roles** including fewer salespeople and consultants and on the other hand an **increase** in AI engagement roles is to be expected.
- **Mistakes in communication** can occur due to the nature of AI being moulded by people and the possibility of AI making errors (e.g., hallucinations of AI).
- **Disruptions in AI-driven systems**, like occasional ATM errors, highlight mistakes that can happen.
- **Over-reliance on AI** can lead to a loss of critical thinking and problem-solving skills. This can create a sense of loss of meaning, job identification, and job satisfaction.

Source: ARIX Qual Interviews, n=20, 04/2023;

Q10. What positive or negative impact on job profiles do you already see or expect from the development of AI/automation?

4.4.2.8. AI impact on employment in banking in the next five years

For the upcoming five years, the supporting role of AI, the creation of new roles and possible job enhancement are viewed positively, while uncertainty, potential job losses, and the need for adaptation are seen as challenges.

Positive aspects

- **Efficiency and productivity:** Streamline processes and rationalize routine tasks, assist in making decisions based on data analysis, increases efficiency and productivity.
- **Fill the employee gap:** Closing the already existing gap in the search for qualified labour in banks due to an aging population and retiring baby boomers' generation.
- **Job enhancement:** Supporting & supplementing human employees, allowing them to focus on more complex and value-added activities, which may lead to a more satisfying and intellectually stimulating work environment.
- **Creation of new roles:** New job roles in the banking sector, e.g., in data analysis, cybersecurity, and AI system management may require specialized technical skills and expertise.
- **Customer service improvement:** Enhancement of customer service by providing personalized recommendations and support. Increase in customers could generate more opportunities for employees.
- **Flexibility:** AI and automation may drive flexibility in work arrangements, e.g. four-day workweeks, flexible work location. Opportunity for employees to get more downtime and better work-life balance.

Negative aspects

- **Uncertain impact on employment:** It is difficult to predict whether AI will lead to a net increase or decrease in jobs.
- **Job displacement and degradation:** Routine and repetitive jobs may be automated, leading to job displacement in certain areas reducing the value of some roles. This might be the case also for "higher-level" jobs which need a master or PhD.
- **Job stability:** Employment could become **more freelance** or project-oriented, potentially reducing long-term job stability.
- **Work intensification:** As AI takes over certain tasks, there is a need to adapt to more demanding and diversified job roles. This can lead to increased stress and pressure on the workforce.
- **Employee skills adaption:** Employees are expected to become more digital and need to continually update their skills to keep pace with rapidly evolving technology. That might cause problems for example for elder employees.
- **Regulatory uncertainty:** The lack of clear regulations surrounding AI makes companies hesitant which impacts the adoption rate of AI.*
- **Ethical concerns:** Raised concerns about data privacy, data security, and the ethical implications of its implementation.
- **Global competition:** Banks face competition not only from local institutions but also from global and tech-based companies.

Source: ARIX Qual Interviews, n=20, 04/2023

Q11. What are your expectations how the development of AI/automation will affect the employment and workplace in the banking sector in the upcoming five years?

*The interviews took place before the European AI Act was finalised.

4.4.2.9. Collective agreements on AI

The majority of respondents stated that there have been no collective agreements on AI in their work environments. They stated that AI discussions are better suited for cooperation committees and local dialogues.

Collective agreements on AI, which already exist:

- **Existing collective agreements** related to **AI or digital transformation**, were mentioned by some respondents.
- In **Denmark and Spain**, for instance, there were mentions of such agreements within the banking sector on Digital Transformation and Digital Rights

No collective agreements on AI:

- **No collective agreements** on AI in their work environments, was stated by the majority of respondents.
- **It is too early to consider such agreements** as AI development is in its early stages, and there is a **lack of overarching regulations***, was highlighted by several respondents.
- **Cooperation committees and local dialogues** would be better suited for AI discussions, rather than traditional collective agreements, given the dynamic nature of technology.

“
The AI experiments carried out generally support employees (simplification of tasks, decision support) and have not generated negative impacts on jobs or the adaptation of skills. The social partners have therefore not needed to set rules that would protect employees' jobs or the respect of their fundamental rights (protection of privacy in particular).(FR)
”

Source: ARIX Qual Interviews, n=20, 04/2023;

Q13. Have you or someone in your work environment negotiated a collective agreement on AI?

*The interviews took place before the European AI Act was finalised.

4.4.2.10. Regulation activities in AI

4.4.2.10.1. AI risks in the banking industry

To assess the need for regulation in the AI area, banks must carefully consider the ethical, regulatory, and security implications and risks of AI.

Data privacy and security

Banks collect vast amounts of customer data, and AI algorithms require access to this data to function effectively. Ensuring data privacy and security is critical to prevent data breaches and protecting customers' confidential information.

Ethical considerations

The use of AI raises ethical concerns, such as bias in decision-making, for example in the HR field related to recruitments or dismissals. Banks must ensure that their AI systems are transparent, fair, and unbiased.

Regulatory compliance

Banks are subject to strict regulations and compliance requirements. The use of AI can raise regulatory concerns, such as the use of unexplainable AI algorithms.

Cybersecurity risks

AI systems can be vulnerable to cyber-attacks, and banks must implement robust cybersecurity measures to prevent breaches.

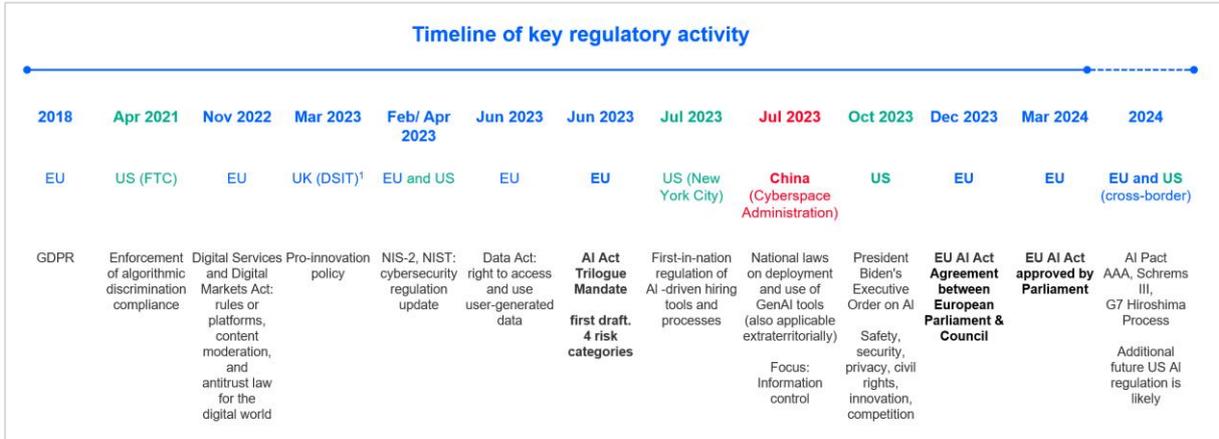
Source: LinkedIn: [The Impact of Artificial Intelligence on Banking: Opportunities and Challenges](#), March 13, 2023

4.4.2.10.2. Worldwide regulation activities in AI

With the global AI race heating up, regulators around the globe have been busy finalizing specific AI laws, amending them with GenAI provisions, and updating data privacy, liability, and copyright laws for the new technology.

- The **EU AI Act** Trilogue Mandate from June 2023, a framework to categorize risks associated with AI, was agreed by Parliament and Council on December 9, 2023. It is a risk-based consumer protection law and the first horizontal law on AI in the world. In March 2024, the EU AI Act was approved by the EU Parliament.
- In October 2023, the Biden administration issued an **Executive Order on AI**. It is a sector-specific set of checks and balances, along with measures to foster the safe and responsible use of the technology by companies and by the government itself. It is the first step toward legislation, but when and how the US will regulate AI remains a subject of debate in Congress and within the administration.
- In July 2023, China published **national laws** on the deployment and use of GenAI tools (also applicable extraterritorially) by the Cyberspace Administration. The main focus is on information control.

Figure 22: Existing and impending AI regulations: US, China and the EU

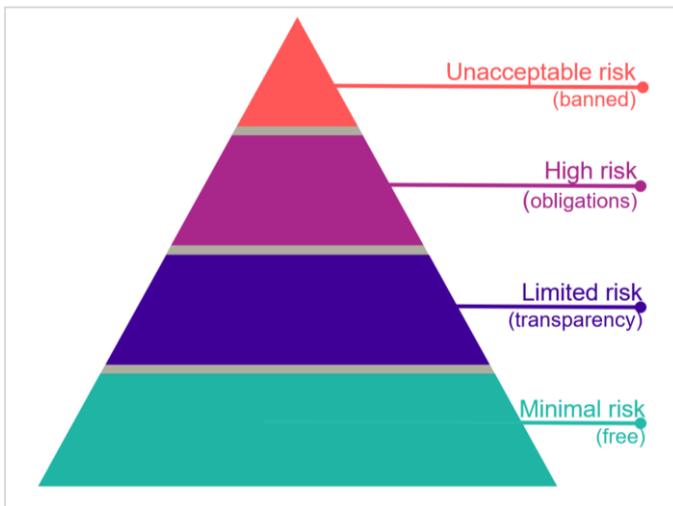


Source: BCG [A Generative AI Roadmap for Financial Institutions](#), Nov 2023, S. 13
 1 DSIT = Department of Science, Innovation, and Technology. Adapted and updated by ARIX Research, March 2024.

4.4.2.10.3. The EU AI Act – Classification of different kinds of risks

The EU AI Act classifies "Predictive AI" and "GenAI" applications into four risk categories. Applications that fall into the "unacceptable risk" category will be banned from the European market, while applications that fall into the "high-risk" category will be subject to pre- and post-deployment barriers and obligations.

Figure 23: EU AI Act: Different rules for different risk levels



Source: European Commission: EU AI Act, [Shaping Europe's digital future](#), Feb 2024

Unacceptable risk (banned):

Unacceptable risk AI systems are systems considered a threat to people and will be banned. They include:

- Cognitive behavioural manipulation of people or specific vulnerable groups: for example, voice-activated toys that encourage dangerous behaviour in children.
- Social scoring: Classifying people based on behaviour, socio-economic status or personal characteristics.
- Biometric identification and categorisation of people.
- Real-time and remote biometric identification systems, such as facial recognition.

Some exceptions may be allowed for law enforcement purposes. “Real-time” remote biometric identification systems will be allowed in a limited number of serious cases, while “post” remote biometric identification systems, where identification occurs after a significant delay, will be allowed to prosecute serious crimes and only after court approval.

High risk (obligations):

1) AI systems that are used in **products** falling under the EU's **product safety legislation**. This includes toys, aviation, cars, medical devices and lifts.

2) AI systems falling into specific areas that will have to be registered in an EU database:

- Biometric identification, categorisation and emotion recognition systems
- Critical infrastructure, such as water, gas and electricity; medical devices;
- Educational and vocational institutions or for recruiting people;
- Certain systems used in law enforcement, migration, asylum and border control,
- Administration of justice and democratic processes, assistance in legal interpretation.
- Employment, worker management and access to self-employment
- Access to and enjoyment of essential private services and public services and benefits

Obligations: Systems have to comply with strict requirements, e.g. risk-mitigation systems, high quality of data sets, logging of activity, detailed documentation, clear user information, human oversight, and a high level of robustness, accuracy and cybersecurity. Regulatory sandboxes will facilitate responsible innovation and the development of compliant AI systems.

Limited risk (transparency):

- E.g. **General-purpose AI and GenAI (e.g. ChatGPT)**, used for chatbots, deep fakes, biometric categorisation or emotion recognition systems have to be labelled as AI,
- Synthetic audio, video, text and images content is marked in a machine-readable format, and detectable as AI manipulated.
- Designing the model to prevent it from generating illegal content
- Publishing summaries of copyrighted data used for training

Minimal risk (no obligations, code of conduct):

- e.g. AI-enabled recommender systems or spam-filters

Fines: High cost of calling short

- **Non-compliance with prohibited AI** practices or data governance requirements can lead to fines up to EUR35 million or 7% of the total global annual turnover (whichever is higher).
- **Lesser breaches** of the AI Act carry penalties up to EUR15 million or 3% of the annual turnover.
- Even providing **incorrect information** to authorities may result in fines up to EUR7,5 million or 1.5% of the turnover.
- More proportionate caps are foreseen for administrative fines for SMEs and start-ups in case of infringements of the AI Act.
- Oversight will be managed by national authorities and the European Central Bank.
- To sum it up: The cost of non-compliance can be substantial, and the EU is serious about enforcing these rules.

Source: LinkedIn: [The EU AI Act Decoded: What It Means for Banks?](#) Dec 4, 2023
European Parliament: [Commission welcomes political agreement on AI Act \(europa.eu\)](#); Dec 9, 2023

What does the EU AI Act mean for banks?

The AI Act (AIA) will affect financial institutions differently, depending on how they use AI.

High-risk AI applications like **predictive credit scoring models** need to meet strict standards since such solutions can determine an individual's access to financial resources and potentially restrict them from obtaining loans.

Limited-risk AI (transparency) AI tools like **customer service chatbots**, and **GenAI (e.g. ChatGPT) applications** considered **limited-risk**, have to clearly inform users they're interacting with AI.

The types of AI systems **excluded from the high-risk** classification under the AIA include those dedicated to enhancing **customer experience**, **detecting fraud**, **predicting customer lifetime value**, and **conducting pattern analysis**, provided they don't directly influence decisions about individual customers.

Certain **high-risk AI systems already on the market** or in use before the AI Act's effective date **will be granted an exemption**. However, if these systems undergo significant changes in design or intended purpose from that point forward, they will then fall under the Act's regulatory scope. This stipulation is crucial for maintaining compliance without stifling ongoing operations.

Source: LinkedIn: [The EU AI Act Decoded: What It Means for Banks?](#) Dec 4, 2023

4.4.2.10.4. Assessing the need for further regulation on working with AI

The interviewees were asked if further regulation on AI is needed and if so, how it could help to mitigate any negative effects on employees. As interviews took place before the AIA was decided, the majority was in favour of further regulation of AI. It was said that regulation and transparency are key factors in steering the impact of AI in a positive direction. The European AI Act (AIA) will provide guidelines and regulations on AI liability to prevent discrimination and avoid risks in AI systems.

Answers supporting the need for regulation:

- **European AI Act:** The European legislator is currently working on the AI Act, which will provide guidelines and regulations on AI liability and clarify open legal and liability issues. *
- **GDPR:** The General Data Protection Regulation already imposes implicit limitations on fully machine-based processing in certain processes.
- **Responsibility:** Regulation is needed to determine the responsibility in case of damage or legal violations and to ensure a level playing field.
- **Ethical aspects:** European regulation should provide regulation on human oversight, rights, health, transparency, fairness, equity, safety, and accountability to prevent exclusion or discrimination in AI systems.
- **Principles for risks and benefits:** The regulation should be based on principles and proportionality, taking into account the risks and benefits of AI technology.
- **Trust:** Regulation can help create legal certainty, establish trust among users, and mitigate the negative effects of AI/automation.
- **Transparency:** Transparency in AI use and adherence to principles are seen as important in redefining the workplace's impact positively.

“
...The European legislator is currently working on the AI Act. These are guidelines and regulations on AI liability, legal regulations that clarify open liability issues, especially for high-risk AI applications. From our point of view, it is to be hoped that this will create more legal certainty without hindering the existing opportunities of AI... (DE)
”

Alternative approaches to regulation

- **Wider focus:** Regulation of technology should not only focus on a specific technology such as AI but should consider wider principles and proportionality.
- **Sufficient regulation in place:** Existing regulations on protection of fundamental rights, safety, health, and consumer protection may already be sufficient.
- **Focus on existing legislation:** The existing infrastructure of rules needs to be rendered effective.
- **European solution:** Rather than individual countries or associations, compliance with European Union rules should be effective and efficient.

“
...I'm not sure further regulation is needed. I think that the legislative schemes of compliance with the rules of the European Union, rather than individual countries or large transactional associations, must be rendered effective and efficient. It's necessary for the infrastructure of rules that already exists, from an ethical point of view, to be rendered effective..... (IT)
”

Source: ARIX Qual Interviews, n=20, 04/2023:

Q12 “Do we need further regulation on working with AI, and if so, how could it help to mitigate any negative effects of AI/ automation on banking employees?”

*The interviews took place before the European AI Act was finalised.

4.5 Viewpoint of the sector: Options for banks and the Social Partners

4.5.1 Strategies for banks to stay fit and maintain and develop good jobs for employees

As a general outlook, the interviewees recommended the following aspects for banking institutions until 2030. Banks need to balance their focus on profitability and customer satisfaction with employee well-being, skill development, and adaptability to stay fit for the future and create satisfying jobs for their employees.

Measures for the fitness and stability of banks:

- **Investment in AI:** Banks should invest heavily in digital and IT innovation, including AI.
- **Universal banking system** remains the best strategy to enable banks to have a holistic view of the financing of the economy and to adapt to changes.
- **Communication and education** on the role of banks in financing the economy and making it more secure (in contrast to Fintechs).
- **New services:** Banks should not give up their role as financiers of the economy and should offer new services to adapt to changes.
- **Improve business model and profitability:** Banks should prepare for resilience and invest in strategic priorities to improve the business model and profitability.
- **Monitor and adapt to trends:** Follow and monitor trends to stay updated with the changing landscape and adapt strategies accordingly.
- **Foster innovation** to stay competitive in a challenging environment.
- **Definition of an AI-strategy** anchored at top-level in the organization.

Measures to maintain and develop good jobs for employees:

- **Attractive workplace:** Banks should invest in attractive workplaces and be more employee-oriented in their HR policies, emphasizing satisfaction and show care for employees.
- **Good working conditions**, collective agreements, and institutional employee co-determination can make the company more attractive.
- **Flexibility, remote working**, and **reconciliation** measures are essential for employees to combine work and personal life.
- **Training and competence development:** Banks should invest in their people and innovative training regimes to provide training and career development opportunities, including competence development, reskilling and upskilling of employees to meet digitalization trends.
- **Coaching with retraining and redeployment options:** Measures like coaching, support for personal interests, and social benefits can help retain employees.
- **Diversity and inclusion:** Adoption of inclusive practices that value diversity in their workforce, such as gender and intergenerational diversity.
- **Value-creating team:** Nurturing good relationships between managers, employees, and colleagues.

Source: ARIX Qual Interviews, n=20, 04/2023;

Q20. What options and strategies can banks pursue to stay fit for the future while at the same time preserving good and satisfying jobs for their employees?

4.5.2 The role of the European Social Partners and social dialogue to influence the development, implementation and use of AI positively for the sector

The European Social Partner's role comprises collective agreements and co-determination, a development of guiding principles and frameworks, the promotion of learning and skill development and an advocacy for ethical AI.

Measures for a positive influence:

- **Collaborative social dialogue:** Social partners should engage in social dialogue, negotiations, and collaboration to ensure a balance between technological advancements and human rights.
- **Collective agreements and co-determination:** Collective bargaining, negotiating of work conditions, introducing regulations, and ensuring institutional rights for employees are crucial for creating positive work environments and addressing the impact of AI, digitization, and agile work.
- **Develop guiding principles and frameworks:** Transparent frameworks and guiding principles should be established to support countries and organizations to choose their own measures from a European perspective.
- **Promote learning and skill development:** Social partners should promote communication, learning from each other, from colleagues, representative & regulatory bodies and other organizations, to develop new skills to manage rapid changes in the workplace and to achieve better outcomes.
- **Advocate for ethical AI:** Social partners should advocate for ethical AI development that improves safety, to ensure respect for fundamental values and to avoid bias, exclusion and discrimination.
- **Legislative regulation and transparency:** Social Partners can engage in dialogue with policymakers to raise awareness and ensure appropriate regulations and transparency.
- **Foster industry attractiveness** by innovation and learning: Fostering an attractive industry that values performance development, learning, and creating a safe and contextually appropriate environment.

The use of AI also raises the question of who bears responsibility if damage or legal violations occur. In our view, the human-in-control principle is important here, i.e., the principle of human final decision, (DE)

Source: ARIX Qual Interviews, n=20, 04/2023;
Q22. What can be the role of the Social Partners to influence the development of ethical and responsible AI/digitalization and agile working in a positive way?

4.6 Key take aways

1. **COVID19** triggered work from home in retail banking much faster than in other sectors due to highly "teleworkable" jobs.
2. **Hybrid work** is here to stay: There is no way back. Employees will continue to work from home, even in the long run.
3. **The positive effects** of agile working are increased autonomy, productivity and employee development. But it also brings challenges such as role ambiguity and potential psychological stress.
4. **AI-leadership:** The US leads in AI development, China in AI use. The EU leads on ethical standards.
5. **Key challenges** for Europe are fragmentation of the digital market, difficulties in attracting AI talents and lack of venture capital.
6. **Adoption:** 83% of financial services firms are expected to have adopted AI technologies in the next 5 years.
7. **Key AI use cases** in banking in Europe are fraud detection, conversational AI and algorithmic trading.
8. **Penetration:** Almost every area of financial services is likely to benefit from or be impacted by traditional and GenAI.
9. **Impact on jobs:** Goldman Sachs and other institutes such as WEF predict that AI will cause job losses but also job gains over the next five years.
10. **Views on AI:** The supporting role of AI, the creation of new roles and potential job enhancement are seen as positive, while potential job losses and ethical concerns are seen as challenges.
11. **Regulation:** The EU is at the forefront of regulation with the EU AI Act adopted in March 2024.
12. **Compliance:** Banks will need to review their AI applications to ensure they are compliant with the AI Act.
13. **Banks** must balance their focus on profitability and customer satisfaction, with employee well-being and skill development being one of the priorities.
14. **The role of Social Partners** is to develop guiding principles and frameworks, to promote learning and skills development, and to advocate for ethical AI.
15. **The war for talent:** Demographic change will exacerbate the shortage of qualified workers. Banks must adapt and make the sector more attractive.
16. **Retention:** Banks are at risk of losing talent to other sectors, so retention should be a priority.

5. Appendix

5.1 Definitions and abbreviations

Definitions:

Term	Definition
Agile working	A project management framework, used by cross-functional teams to iteratively complete tasks and projects in short time frame.
<u>AI</u>	AI is the ability of a machine to display human-like capabilities such as reasoning, learning, planning and creativity. AI enables technical systems to perceive their environment, deal with what they perceive, solve problems and act to achieve a specific goal. The computer receives data - already prepared or gathered through its own sensors such as a camera - processes it and responds. AI systems are capable of adapting their behaviour to a certain degree by analysing the effects of previous actions and working autonomously
Big Data	Extremely large data sets that may be analysed computationally to reveal patterns, trends, and associations, especially relating to human behaviour and interactions.
BigTech	The term refers to the largest and most dominant companies in the information technology industry such as Google, Apple, Facebook, Amazon, Microsoft, Alibaba and Tencent (WeChat)
Business and Financial Operations (Taxonomy)	e.g. Accountants and Auditors, Compliance Officers, Credit and Loans Officers, Digital Transformation Specialists, Financial Analysts, Financial and Investment Advisers, Human Resources Specialists, Investment Fund Managers, Project Managers, Risk Management Specialists, Sales and Marketing Professionals, Social Media Strategist, Training and Development Specialists, Valuers and Loss Assessors. Source: modified and extended from O*NET SO.
ChatGPT	A GenAI model developed and released to the public for free by OpenAI in Nov 2022
<u>Clerical support workers</u>	according to ISCO, record, organize, store, compute and retrieve information, and perform a number of clerical duties in connection with money-handling operations, requests for information, and appointments, e.g. tellers, money collectors and related clerks
Cloud Computing	The delivery of computing services - incl. servers, storage, databases, networking, software, analytics, and intelligence—over the Internet (“the cloud”)
<u>Conversational AI</u>	Conversational artificial intelligence (AI) refers to technologies, such as chatbots or virtual agents, that users can talk to. They use large volumes of data, machine learning and natural language processing to help imitate

	human interactions, recognizing speech and text inputs and translating their meanings across various languages.
COVID19	Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus, which caused a global pandemic from officially spring 2020 to middle of 2023.
Deep Learning	A type of machine learning based on artificial neural networks in which multiple layers of processing are used and which involves large amounts of images and text.
DevOps	DevOps is a team build from Development and Operations employees to streamline processes mainly in software development.
European Labor Force Survey	The EU-LFS is a large household sample survey, conducted in the EU member states by the European Union
FinTech	FinTechs (Financial Technology companies) are young companies (start-ups) that offer improved and customer-oriented financial services with the help of new technologies such as apps
Generation Z	The generation born in the late 1990s or the early 21st century, perceived as being familiar with the use of digital technology, the internet, and social media from a very young age
Generative AI (GenAI)	Generative AI is a type of artificial intelligence that is able to generate text, images, videos or other data using generative models, often in response to prompts, e.g. ChatGPT. It is a subset of deep learning.
<u>Hybrid work</u>	Hybrid work accounts for a broader picture by representing the intersection of various work situations, including telework or remote work and work performed at the employer's premises.
International Standard Classification of Occupations (ISCO)	The International Standard Classification of Occupations (ISCO) is a four-level classification of occupation groups managed by the International Labour Organisation (ILO). Its structure follows a grouping by education level. The two latest versions of ISCO are ISCO-88 (dating from 1988) and ISCO-08 (dating from 2008).
LLM	A LLM is a deep learning algorithm that can recognize, summarize, translate, predict and generate text and other content based on knowledge gained from massive data sets.
Machine Learning	is a subset of AI. Computer systems that are able to learn and adapt without following explicit instructions, by using algorithms and statistical models to analyse and draw inferences from patterns in data.
Neobank	Neobanks are fintech firms that offer innovative, customer-centric apps, software and other technologies for mobile and online banking.
Office and Administrative Support (Taxonomy)	e.g. Accounting, Bookkeeping and Payroll Clerks, Administrative and Executive Secretaries, Bank Tellers and Related Clerks, Client Information and Customer Service Workers, Data Entry Clerks, Statistical, Finance and Insurance Clerks. Source: modified and extended from O*NET SO
<u>Professionals</u>	According to ISCO, includes occupations whose main tasks require a high level of professional knowledge and experience in the fields of physical and life sciences, or social sciences and humanities. Relevant here are the Finance and administration professionals.

Quiet Quitting	Quiet quitting is when employees continue to put in the minimum amount of effort to keep their jobs, but don't go the extra mile for their employer. The term went viral on TikTok in 2022
<u>Remote work</u>	Remote work is a work arrangement in which an employee resides and works at a location outside the local commuting area for his or her employer's worksite. A remote worker can be self-employed or dependent on an employer. Remote work is a comprehensive concept and does not require visits to the main workplace or the use of electronic personal devices, thus allowing many types of and locations for work, and it can involve mobile work.
Robo-advisors	Robo-advisors utilize algorithms to automate investment advice to lower cost and increase accessibility.
Robo-Recruiting	The use of algorithms, programmes and artificial intelligence in the selection process of companies to help recruit personnel
<u>Telework</u>	is a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work that could be performed at the employer's premises is carried out away from those premises on a regular basis
Traditional / Predictive AI	refers to systems designed to respond to a particular set of inputs. These systems have the capability to learn from historical data and make decisions or predictions based on that data. It can use machine learning and deep learning and is widespread since years e.g. in banking.

Abbreviation and acronyms

Abbreviation/acronym	Definition
AI	Artificial Intelligence
AIA	Artificial Intelligence Act
DESI	Digital Economy and Society Index
DPA	Data Protection Act
EACB	European Association of Co-operative Banks
EBA	European Banking Authority
EBF	European Banking Federation
EC	European Commission
ECB	European Central Bank
EPRS	European Parliamentary Research Service
ESA	European Supervisory Agency
ESBG	European Savings and Retail Banking Group
ESP	European Social Partners
EU	European Union
EU-LFS	European Labor Force Survey
EU-OSHA	European Agency for Safety and Health at Work
GDPR	General Data Protection Regulation
HR	Human Resources
IT	Information technology
ISCO	International Standard Classification of Occupations
POS	Point of Sale
UNI Europa Finance	European trade union federation for finance sector workers (part of UNI Europa/UNI Global Union)
WEF	World Economic Forum

Country abbreviations

Abbreviation	Country
DE	Germany
ES	Spain
FR	France
IT	Italy
HR	Croatia
NL	Netherlands
RO	Romania
IR	Ireland
SE	Sweden
DK	Denmark

5.2 Minutes of the workshops

1. Minutes of the workshop in Paris

1st Workshop of the European Social Partners project 101051930

“Banking in 2030 - How will the current global trends, especially AI, shape the post COVID19 pandemic future of the European banking industry and its employees?”

Minutes and Summary

17 Feb 2023, 9h00-15h30, Paris

The 1st Workshop for the Social Dialogue project 101051930 took place on 17 Feb 2023 at the premises of the French Banking Federation in Paris with representatives from the bank sector’s Social Partners from across Europe and the consultant Kantar. 104 participants were registered for the event, about 60 took part.

The purpose of the first European workshop was to set the direction of travel of the whole project by highlighting and discussing the key components of this project:

- the key megatrends that are transforming the banking sector from a multi-level perspective (digitalization and the adoption of new technologies, i.e. Artificial Intelligence)
- the relevance of social dialogue as a way to anticipate and deal with change

Welcome by Maya Atig, Chief Executive Officer, French Banking Federation / AFB

The Introduction was given by Anna Maria Romano, Vice President, Uni Europa Finance & International Policy Coordinator, FISAC/CGIL and Jens Thau, Chairman, EBF-BCESA & Deputy General Manager, AGV Banken

Anna Maria Romano, Vice President, Uni Europa Finance & International Policy Coordinator, FISAC/CGIL

The banking sector and its employees must face many challenges currently and also in future, such as:

- Globalisation
- Connectivity
- Demographics
- Digitisation (with IoT, AI)
- Fintechs
- Biotechnology
- Emerging Economies
- Environment

Jens Thau, Chairman, EBF-BCESA & Deputy General Manager, AGV Banken

The aim and task of the Social Partners is to react on these challenges, some ideas which might be important to keep in mind

- AI can be seen as an opportunity but has also risks
- European solutions would be necessary
- There is a need for information gathering, which we aim to tackle with this project

Keynote Speech by

- **Mark Pearson, Deputy Director, Directorate for Employment, Labour and Social Affairs, OECD**
- **Bianca Cuciniello, Vice President of Trade Union Advisory Committee (TUAC) Working Group on Multinational Enterprises, OECD**

Presentation: Shaping the AI Transition: The role of the Social Dialogue

Social partners can ease transitions in the changing world of work

When Social Partners work co-operatively in a framework guaranteeing fundamental labour rights, collective bargaining can:

- Help companies respond to technological changes in a flexible and pragmatic but yet fair manner.
- Shape the design and definition of new rights and improve existing ones (e. the right to training).
- Complement government efforts in strengthening labour market security and adaptability

Collective bargaining can foster inclusive labour markets and enhance job quality.

Worker consultation can improve outcome

- 43% of employers consult worker or workers reps regarding the use of new tech.
- Where workers are consulted, they are even more likely to report positive impacts of AI on performance and working conditions.
- 87% of consulted workers say that AI improved performance
- Only 68% of non-consulted workers report that AI improved performance.

...Yet social dialogue is facing some challenges. Trade union density has more than halved on average since 1975

Collective bargaining coverage has also shrunk between 1985 and 2020, especially in Germany.

Main opportunities and risks of AI adoption, according to Social Partners.

Perceived risks: (answers by employer organizations and trade unions)

- Trustworthy use of AI
- Changing skill requirements (more employer)
- Physical and mental health risks

Perceived benefits: (answers by employer organizations and trade unions)

- Higher job quality
- Creation of new tasks and jobs
- Higher job safety
- Increased productivity gains (more employer)

Social partners already respond to AI adoption in...

Informing, alerting and participating in decision making at the workplace level, but also developing new AI strategies

- Position papers, principles and guidelines
- Calling for the introduction of new rights
- Particularly linked to workplace data and surveillance
- Providing guidance through framework agreements and negotiating collective agreements

Yet many Social Partners still lack capacity

- **Responses to AI are very concentrated** among a few active Social Partners/countries with dynamic social dialogue (e.g. several initiatives in Germany, DGB, 2020; ver.di and IBM, 2020)
- **Capacities to respond differ among social dialogue levels**
- Different workers' voice type, small vs. big companies
- Many Social Partners still struggle with digitalization issues, let alone gaining AI related knowledge and skills.

AI adoption in the workplace new challenges and opportunities

Pros:

- New business models and tasks
- Productivity gains
- Higher job quality
- Lower monitoring costs
- Reduced human bias

Cons:

- Changing/increasing skill demand
- Lower job quality
- Health and safety risks
- Liability risks for AI decision
- Ethical concerns

ETUC Survey 2018

- No clear view: ½ think opportunities will outweigh the challenges
- Job destruction and job creation: ranked as the most important concern and opportunity
- Job autonomy as one of the biggest opportunities
- Precarious work as one of the biggest challenges

Further remarks:

- Recent developments like COVID19, Digital Transition, Green Transition, etc. foster the social dialogue
- Job losses in Europe, 13-14% of current jobs destroyed (OECD employment outlook) BUT jobs are changing, not lost

- Data usage is central: BigData, AI
- Digital skills support job security
- Need to preserve human dignity
- Human oversight will still be needed

- AI as an automatization of learning with a high complexity
- Human must stay in control, not AI: Ethical recommendations necessary
- A clear understanding of algorithms is needed to prevent risks, avoid biases, and secure the respect of fundamental rights
- AI must be in line with existing regulation (e.g., GDPS)

- Often there is not enough knowledge about AI for decision makers
- Need to keep inhouse AI-knowledge to not become hostage of AI

Future topics, which will be relevant now and in the upcoming years:

- Cyber attacks
- Investment in infrastructure
- Fintechs need to be regulated
- Sustainability

Case Study presented by

- Etienne Barel, Deputy Chief Executive Officer, FBF
- Sébastien Bertrand, Activity Director, Euro-Information

Topic: A real-life example of the implementation of AI-based technologies – Robo advisor and augmented adviser in customer relations

Etienne Barel, Deputy Chief Executive Officer, FBF

Title: Retail investment strategy and the potential ban on inducements

Inducements are a key source to fund retail advisors

Inducements are the amount paid by the manufacturer of the financial instrument to the distributor.

There are three income sources to fund retail advisors

- Net interest margin
- Commissions (bank fees)
- Inducements

Without inducements, advice will become chargeable (up to 250 or 300 EUR/hour). Lots of customers will not accept that, which will trigger a loss of income and the closing of branches like in the Netherlands (which banned inducements since 2014).

Commissioner M. McGuinness' project of a ban on inducements. (21. Dec. 2022)

Extract of a letter where she is promoting robo-advice.

"I believe that also under a **fee-based distribution system without inducements**, advice should and will generally be **available** for **small scale investors**, for a fee that is affordable to retail investors. In fact, retail investors already now do pay for advice as part of the **integrated products costs**, however they may not realise it. Advice in particular robot-advice or automated advice, does not need to be expensive. Nevertheless, some retail investors may not want to pay for advice, but instead prefer to invest on their own. This is a legitimate economic decision for them to make. We are, however also checking whether we can facilitate access to advice and/or guidance in this instance.

Sébastien Bertrand, Activity Director, Euro-Information

Title: The advisor at the heart of the customer relationship

An augmented relationship based on AI

- Strengthen expertise on an increasingly complex scope of products and services
- Free up time for customer relations
- Facilitate the relationship with their customer in a complex multi-channel environment

AI at the service of advisors and customer relations

Solutions at the service of the advisor

- The email analyzer
- The research assistant

Solutions at the service of customer relations

- Customer Assistant - web and mobile
- The natural language interactive voice server

Solutions deployed today

Email analyzer

Target audience: Advisors

Service provided: Accelerate the processing of customer emails

Main features: Intent detection, Automatic routing, Response templates to be completed, Link to business applications

- 30,000 users of the solution
- 40 business scenarios
- 6.1 million emails received per month
- 3.9 months of feature usage per month in 2022

Assistant Advisor

Target audience: Advisors

Service provided: Benefit from a support service, accessible at any time

The main features: Response, Routing to the right expert, Quick access to information

- 800k questions per month in 2022
- 22,000 business branches
- 91% correct answers
- 30,000 employees using the solution

Customer Assistant

Target audience: customers and prospects

Service provided: benefit from a support service, accessible at any time, from the Web or Mobile

The main functionalities: response, navigation, raising of centres of interest, linking

- 1.4 m questions asked in 2022
- 80% rate of correct answers

Telephone Assistant

Target audience: customers (individuals and professionals) & prospects

Service provided: direct to the right contact and notify the reason for the call

The main features: determine the reason for the call, route calls

- 30.5 million calls in 2022

Upcoming Solutions:

Voice dictation integrated into business tools

Target audience: network users

Service rendered: optimize the processing time and the quality of entries, by adding a voice dictation feature in the tools of the adviser or teleactor

The main features: dictation, transcription of punctuation

Customer Verbatims

Target audience: sales management & point of sale managers

Service rendered: reconstitute in a visual tool the reasons for satisfaction and concern of our customers

The main functionalities: automatic analysis, restitution of usable data, specific management of authorizations

Explain the actual capabilities of the technology

Programmed Systems: Programming rules & algorithms

For 50 years, computing has allowed us to automate problems that we know how to break down into a series of precise instructions.

“Artificial Intelligence” trained systems: Learning by example

New training techniques now make it possible to reproduce a behaviour based on examples of the expected results.

Educate all stakeholders

4 keys to adopting our solutions

- Give sense
- make time
- Continuous improvement approach
- Demonstrate gains

Are cognitive solutions changing the profession of banking advisors at Crédit Mutuel?

Panel discussion: AI-based technologies impact on the European banking industry and its employees: stock-taking of past activities / current trends/expectations/ risk or opportunity? Perspectives of representatives from the Employers and the Unions

- **Jens Thau, Chairman, EBF-BCESA & Deputy General Manager, AGV Banken**
- **Michael Budolfson, Vice President, Finansforbundet**

Moderated by **André-Guy Turoche, Director Social Affairs,**

Michael Budolfson

- Ethical use of AI is Key
- Main challenge is the transformation of competences by training to avoid job losses
- Robo Advisors without human aspect is a loss => personal + robo advice should be complementary
- Esp. GAFTAs, China, USA are strong in robo advisory; human relationship is a strength of European banking
- A change of perspective on IT is needed: Humans must be in control
- Central question should be what humans or companies want to do, not what systems are able to do
- Regulation is too slow to rely on; therefore, Social Partners should pick up

Jens Thau

- Confronted with demographic change, AI is an opportunity
- We need to identify tasks where people are missing => enough people for relationship management
- With AI it is crucial to control the data fed in the system
- Let mistakes happen but analyse and correct quickly

French National Experience - Joint Bank Career Observatory (OMB)

Introduction by

- **Quitterie de Fonbrune, President, OMB**
- **Damien Deschepper, Vice-President, OMB**

Pierre Blanc, General Manager, Athling Speech - Update on AI Observatory study

AI in the banking sector, employment & skills

- A feedback 5 years after the first industry specific study by l'Observatoire des Métiers de la Banque and Athling

A first in France in 2017

- To assess the state of the art of AI roll-out
- To have a forward-looking analysis of the prospects for the banking sector and their impact on the organization of companies
- To put attention to the scale of the transformations to be carried out
- To highlight existing and future HR approaches and tools
- 70 entities
- More than 200 people interviewed
- 9 job analysed out of the 26 standardized banking positions
- Using our unique and innovative model for assessing the impact of AI on activities and skills, called GPS 2 IA.

Operational lessons, dense and sometimes counter intuitive

- AI is still at a "superficial" layers. There are two more years to position on the transformations in greater depth.
- All bank divisions and hierarchical levels are involved.
- A profusion of AI projects in the banking sector.
- Potentially a higher demand for transversal skills against the technical skills.
- Operational transformations induced by the very deep-seated AI that will unfold as the underlying technologies becomes more sophisticated.
- A central actor: the Human Resources Department, calling for a new type of HR department: the HRMD (Human Resources and Machines Department).

The 10 recommendations of the 2017 study

1. Realize a comprehensive AI plan to optimize the use of different domains of AI and streamline technology selection.
2. Take in consideration the conditions of industrialization as soon as possible during an AI project.
3. Appoint an AI executive in charge of coordinating the AI plan and to act as an interface between internal and external staff.
4. Carry out an assessment of AI use cases in all activities and not only those which are « repetitive » or « low value added ».
5. Realize detailed studies about the time transferred to the AI tools based on the deployment plan to enhance potential impacts.
6. Prioritize a skills approach rather than an activity/tasks approach when assessing HR impacts of the deployment of AI based tools.
7. Endeavour a cognitive function approach to improve the required innovation in training approach.
8. Develop acculturation of managers and leaders to the topic of AI.
9. As part of AI impact, or even coordination of the central AI plan, to the Human Resources Department, which would become an HRMD (Human Resources Machines.)
10. Within the banking sector, pool the investments in research and development and share the resources in non-strategic fields.

AI wasn't as much on top of the agenda of institutions and universities after 2017-2018...

In France and Europe

- March 2020 : appointment of a interministerial coordinator of the French AI strategy
- April 2020 : Athling survey « Oxford's university How jobs are susceptible to computerization, 7 years later »
- December 2020 : French sector study « AI in the health industries »
- April 2021 : proposal of a new AI act at EU level
- March 2022 : « Prospective métiers et qualification 2030 » by France Strategy with a chapter on AI
- Ongoing : SecoIA Deal Project (European project on AI impact on managers by a consortium of managers trade unions)

In the world

- June 2020 : launch of Global Partnership on AI (GPAI)
- 2021 : emergence of a new concept about « Pandemic Induced Automation » with some case studies (e.g. Purdue University, Indiana, USA)
- At the end of 2022, 60+ countries have released a national AI Strategy, of which 20 are benchmarked by the OECD* :
- Australia, Czech Republic, Denmark, France, Finland, Hungary, Japan, Korea, Latvia, Netherlands, Norway, Poland, Turkey, UK, USA, China, India, Singapore, Malta, Saudi Arabia, UAE

...but a steady operational development, without much noise (until ChatGPT came)

In France and Europe

- A slow roll out of AI applications in banking sector, mainly on back-office tasks such as in risk and compliance, fraud detection, or in-bank communication (eg internal chatbots)
- January 2022 : roll out of « Mon Espace Santé » the French digital health records platform that should enable AI designed preventive healthcare
- October 2022 : article by Revue Banque « AI in banking, still a daunting task »*

In the world

- A steady growth as per the US Patent Office: number of AI patents** x3 between 2017 and 2020 (x41 since 2000)
- A pervasive roll-out of AI layers in multiple applications (social networks, email, connected devices, picture re-touching, unmanned vehicles...)
- November 30th 2022: release of the v3.5 of Chat GPT with broad media coverage. Focus on the generative AI

The context completely shifted compared to 2017 impacting the AI tools deployment in the banking sector

1. The COVID19 pandemics accelerated the transition of the workplace with massified work from home and boosted e-commerce.
2. Geopolitical crisis with macroeconomic outcomes (high inflation, slowed down growth, energy crisis, supply-chain crisis...).
3. A growing pressure from government and society on extra financial performance (Green Asset Ratio, CSR reporting...) of companies.
4. A steady technological innovation on AI, albeit at a slower pace than anticipated, and a confirmation of GAFAM dominance.

**Eric Peres, General Manager, FO Cadres
Speech - Making AI a topic of social dialogue**

Summary:

- Data protection for AI is key
- Usage of personal data is in the centre of the discussion
- OECD – AI principles are relevant
- Banks are trusted for keeping and protecting client data

Martina Keil, Associate Director, Kantar GmbH (Consultancy)

Presentation: Fact and Figures on the impact of AI / digitalization and other megatrends on the banking workplace in Europe

COVID19 and other crises were an accelerator not a trigger of change.

Evolving working conditions:

- The finance sector decreased in total employment by 9.6 percentage points in 13 years. Further loss of 100,000 in the pandemic 2019-2021 (EU27)
- Occupations and job profiles in finance changed a lot 2011-2021 (EU27).
- Remote working in retail banking grew much faster than in other sectors. (48% vs. 24%) due to highly „tele-workable“ jobs (EU27).
- Remote working divide between Benelux & North and Eastern Europe in the Financial Services sector
- Well being & mental health: Increase in anxiety, depression and stress due to COVID19.
- The “Tang Ping” (lying flat) and “Quiet Quitting” movement. It's about doing the bare minimum, and not going “above and beyond”

What is agile working?

- IT is the business function which uses agile methods most by 91%, but use in Business Unit (77%) and Marketing & Sales (59%) is following
- Germany: Agile working methods increased usage in banking. 48% use it at least sometimes and 23% regularly.

Continuing digitalization

- DESI: The Nordic and Benelux countries lead in digitalization, while the Eastern European lag behind
- Decrease of cash to 59%, rise of card and mobile payment in Europe in the last three years. In the Netherlands and Finland cash is down to 20%.
- Fintechs are succeeding in the digital payments and especially Neobanking area and challenging incumbent banks worldwide and also in Europe.
- EU: Cloud computing, Big data and AI are especially strong in bigger companies.

The rise of Artificial Intelligence

- Asia and North America are leading the way in AI for Financial services
- Germany: 44% of banking employees use AI, 16% regularly. USA: AI adoption is high in financial firms (2019).
- Worldwide: Main AI use cases are fraud detection, Conversational AI and Algorithmic trading.
- Europe: Main barriers among financial firms to adopt AI are costs, lack of staff and insufficient infrastructure.

“We’ve never seen a technology move as fast as AI has to impact society and technology.” Paul Daugherty, Chief technology and innovation officer, Accenture

Fireside chat on the projects next steps:

- **Martina Keil, Associate Director, Kantar GmbH**
- **Sébastien de Brouwer, Chief Policy Officer, European Banking Federation**

Sébastien de Brouwer:

Can you tell us how these three projects are related and how the new one builds on the previous projects?

Martina Keil:

Overall aim of these projects is to identify key areas which have an impact on the employers and employees in European banking sector and which are relevant for the work of the Social partners.

2017: Pillar I: Facts and figures on the development of employment in the banking industry in Europe.

2019: Pillar II: Impact of European regulation on this development.

2022: Pillar III: impact of recent trends and developments like COVID19 and other crises, AI / digitalization and agile working.

Sébastien de Brouwer: *What are the most relevant challenges for banks employers and banks' employees in next few years?*

Martina Keil:

1. Digitalization and AI: Keep an eye on what is happening in Asia and North America, as they are way ahead of Europe in the adoption of AI.
2. Fin and Bigtechs, they compete with banks concerning payment systems, but also in other areas that will be a challenge for the sector.
3. Working conditions. Remote working will stay in focus: How will this develop in the long run concerning collaboration, teambuilding, recruiting and integration of new employees?

Sébastien de Brouwer: *What will be your next steps?*

Martina Keil:

We will proceed with 20 qualitative interviews in 10 countries, countries are Italy, France and Spain, Germany, the Netherlands, Romania and Croatia, Sweden, Denmark and Ireland. The interviews will be conducted via Webcam and Zoom-Meetings in local language.

Sébastien de Brouwer: *Can you tell us something about the interviews? What will be the topics?*

Martina Keil:

We will discuss the same topics I just presented in my presentation. COVID19 and other trends, AI and digitalization. The last topic is agile working. During these interviews, we will record video-snippets together with the interviews.

Sébastien de Brouwer: *The video element sounds new to me! Can you tell me a bit more about it? What is the goal of the video and what will it look like?*

Martina Keil: The overall aim is to make the final presentation more lively and personal and to give the audience an idea of different opinions and views from different persons, different angles - the employers and the employees side - and also different countries.

Closing remarks by

- **André-Guy Turoche, Director Social Affairs, AFB**
- **William Portelli, President, Malta Union of Bank Employees**
- **Jens Thau, Chairman, EBF-BCESA & Deputy General Manager, AGV Banken**

Summary: Main aspects discussed and stated during the Workshop

- Humans must be in control and understand what AI is doing
 - A change of perspective on IT is needed: Humans must be in control
 - Central question should be what humans or companies want to do, not what systems are able to do
 - Often there is not enough knowledge about AI for decision makers: Skills needed (also in leadership) to understand, assess and steer AI
 - Need to keep inhouse AI-knowledge to not become hostage of AI
 - Human must stay in control, not AI: Ethical recommendations necessary
 - Human oversight will still be needed
 - AI as addition to human
 - Robo Advisors without human aspect is a loss => personal + robo advice should be complementary
- Regulation is necessary
 - A clear understanding of algorithms is needed to prevent risks, avoid biases, and secure the respect of fundamental rights
 - Social dialogue might act as forerunner (faster than regulators)
 - Let mistakes happen but analyse and correct quickly
 - Ethical use of AI is Key
 - AI must be in line with existing regulation (e.g., GDPS)
 - European solutions necessary
- Changes in jobs must be managed to mitigating job losses
 - Job losses in Europe, 13-14% of current jobs destroyed (OECD employment outlook) BUT jobs are changing, not lost
 - Confronted with demographic change, AI is an opportunity
 - We need to identify tasks where people are missing => enough people for relationship management
 - Main challenge is the transformation of competences by training to avoid job losses
 - Digital skills support job security
- Data usage, quality and security is crucial for AI
 - With AI it is crucial to control the data fed in the system
 - Data usage is central: BigData, AI
 - Banks are trusted for keeping and protecting client data
 - Data protection for AI is key
 - Usage of personal data is in the centre of the discussion

2. Minutes of the workshop in Stockholm

2nd Workshop of the European Social Partners project 101051930

“Banking in 2030 - How will the current global trends, especially AI, shape the post COVID19 pandemic future of the European banking industry and its employees?”

Minutes and Summary

13 Jun 2023, 9h00-15h00, Stockholm

The 2nd workshop for the Social Dialogue project 101051930 took place on 13 June 2023 at the Näringslivets hus in Stockholm with representatives from the bank sector’s Social Partners from Sweden and across Europe and the consultant Kantar. 55 participants attended in person, 14 took part online.

The purpose of the second European workshop was to continue the fruitful exchange among experts in the banking industry, building on the success of the first workshop held in Paris on 17 February.

- Focus was a continuing exchange about the European Social Dialogue project in the banking industry, namely, how current global trends, particularly in the area of Artificial Intelligence (AI), will shape the future of the European banking industry and its employees.
- Additionally, the workshop wanted to explore further the significance of social dialogue in anticipating and managing changes.

Moderation by **Mariell Juhlin**, CEO of Policy Impact.

Welcome speech by **BAO and Finansförbundet**

- **Hanna Byström**, CEO Bankinstitutens Arbetsgivareorganisation (BAO)
- **Ulrika Boëthius**, President of Finansförbundet

Hanna B.

- BAO with 158 members
- First collective agreement in 1947
- Since 2015: Collective agreement without end date => continuous dialogue
- Most important work is done on local level

Ulrika B.

- Finansförbundet is the largest union
- AI is a complex topic with different aspects and risks
- We should be aware of these risks

Introduction

- **Oliver Roethig**, Regional Secretary, UNI Europa
- **Jens Thau**, Chairman, EBF-BCESA & Deputy General Manager, AGV Banken

Oliver R.

- AI must fit for workers and companies.
- Social dialogue has a longstanding history of dealing with new technologies.
- Important to focus on what we can do with AI and not on what AI does.
- We have to remain in control of AI.
- Data coming out of AI poses several challenges: data protection, surveillance, ethical considerations, etc.
- Social partners are better fitted than the commission to give good advice to the sector concerning AI

Jens T.

- AI as a tool to mitigate the problems of demographic change

- 40% of workforce will go into retirement.
- There will be an employee gap, which can be filled by technology
- For workforce will be important: recruiting – retaining – retraining
- Financial industry is competing against legal and law firms in terms of employees
- Central question: Where is AI different /similar to other digital technologies?
- Most important: Human in control principle
- With AI, we cannot control the process, as this is a black box, we must control input and especially results
- AI must not be the decision maker, but an advisor
- To be discussed: What is AI and how it differs from digitalisation? What is its impact on the workplace and on employment relationship?
- Regulators want that robots advice, not humans

Oliver R.

- Humans need to have a role to play in decision making processes and to check the results of AI

Jens T.

- Make clear where we need human intelligence, not AI
- Advice: Interface of AI needs to fit to the user

Key take aways:

- *AI can help to address the challenges of demographic change, workforce shortage and competition in the banking sector, but it must be designed and used in a way that respects human dignity, autonomy and control.*
- *Social dialogue is a key mechanism to ensure that AI is beneficial for workers and companies, and that it does not pose risks for data protection, surveillance, ethics or quality of service.*
- *AI is different from other digital technologies in that it is less transparent, more autonomous and more complex, which requires more scrutiny and regulation of its inputs and outputs.*
- *Humans need to have a clear role and responsibility in the decision-making processes involving AI, and to be able to verify and challenge the results of AI.*

Ethical AI in practice

- **Salla Franzén**, D&A Domain manager for the Customer domain in IKEA Retail (Ingka Digital) and former SEB Group Chief Data Scientist, next: Investment manager, Navigare Ventures AB

Salla F.

- **What is Ethical AI?** Robust, trustworthy, transparent
- **Ethics guidelines for trustworthy AI:** (According to the High Level Expert Group of the European Union).
- Trustworthy AI systems should include: Human agency and oversight, Technical robustness and safety, Privacy and data governance, Transparency, Diversity, non discrimination and fairness; Societal and environmental well being. Accountability.
- **1. Human agency and oversight: "The Human in the Loop"**.
- How does an automated underwriting system works? Automated underwriting systems use credit scoring as a scientific way of measuring the relative amount of risk a potential borrower represents to the lender or investor. A credit score is a number that rates the likelihood an individual will pay back a loan.
- AI systems should empower human beings, allowing them to make informed decisions and fostering their fundamental rights. At the same time, proper oversight mechanisms need to be ensured, which can be achieved through **human in the loop**, human on the loop, and human in command approaches.
- **2. Technical robustness and safety:** Resilient and secure, accurate, reliable and reproducible.
- **3. AI systems need to be resilient and secure.** They need to be safe, ensuring a fall back plan in case something goes wrong, as well as being accurate, reliable and reproducible . That is the only way to ensure that also unintentional harm can be minimized and prevented.
- **4. Privacy and data governance:** FAIR data: Findable, Accessible, Interoperable, Reusable.
- **5. Transparency:** 1. Discover, 2. Design 3. AI by design decision 4. Develop 5. Test 6. Deliver & Evaluate.
- **AI by design decision:** Here teams are encouraged to ask themselves if this is a problem that can and should be solved with AI? If yes, assess which data is needed, and research if the solution might have

unethical consequences. If no and AI is not the right solution, this is also a great outcome. AI is expensive and time-consuming. If other alternatives can solve the problem, then that should be the first approach.

- **6. Diversity, non discrimination and fairness:** Unfair bias must be avoided, as it could have multiple negative implications, from the marginalization of vulnerable groups, to the exacerbation of prejudice and discrimination. Fostering diversity, AI systems should be accessible to all, regardless of any disability, and involve relevant stakeholders throughout their entire life cycle. Joy Buolamwini. (an African-American woman, which called out bias hidden in facial recognition technology.
- **7. Societal and environmental well being:** AI systems should benefit all human beings, including future generations. It must hence be ensured that they are sustainable and environmentally friendly. Moreover, they should take into account the environment, including other living beings, and their social and societal impact should be carefully considered.
- **8. Accountability is there a scalable model?**

Appendix: Upcoming regulations where to focus.

Keep track of the definition of High-Risk AI systems (it will most probably be modified): The legal requirements will concern data, documentation and traceability, provision of information and transparency, human oversight and robustness and accuracy and would be mandatory for high risk AI systems.

Key take aways:

- *Make the use of AI scalable. Ensure Values of your company are known by all data practitioners.*
- *Educate and upskill everyone on the opportunities and challenges.*
- *Create a culture as free of positioning as possible - collaboration is key*
- *Necessary, that AI says/marks what it does not know/what is not in scope to be able to assess results.*
- *Large language models help to create trust in AI by communication in a better/more humanlike way*
- *It is important to value the sceptics: What are objections, feelings, fears, etc.*
- *Regulations can have an positive impact*
- *Keep an eye on upcoming regulations on High-risk AI systems.*

Case study, Swedbank - AI solutions within Financial Crime helping investigators achieve sustainable workload

- **Rikke Berner Nilsson**, Swedbank, Chief Product Owner Advanced Analytics Anti Financial Crime
- **Camilla Linder**, Swedbank, Head of Finansförbundet at Swedbank

Rikke B. N.

- Swedbank: more than 200 years of history.
- Swedbanks AI Journey: 2014: First blueprints for AI journey. 2015: Consolidation of analytical resources across the bank. 2016: Establishment of Advanced Analytics group function. 2017: Significant capability build-up. 2018: Industrialized processes and launch of first business-integrated models. 2019: Launch of an AI platform as well as work on AI models in different domains. 2020: A recognized community with outreach within and outside of the bank. 2021: Merge and integration of Analytics&AI and Anti financial crime unit – significant upscaling of operations. 2022: Tech leader in the bank pioneering. Many novel efforts on cloud. Formalization of AI Centre of Excellence and AI solutions migrated to cloud.
- More than 80% of AI use cases of Swedbank are connected to financial crime prevention. – But none-financial crime related use cases growing due to Generative AI.
- AI solutions are supporting efficient financial crime prevention processes in many dimensions:
- 1. KYC: Capture/update customer information. 2. Risk Rating: Create risk profile of customer based on multiple parameters. 3. Activity monitoring: Monitoring of customer behavior.
- Card Secenario use case: Cards are the most frequently used products for making payments. In general, AI models have significantly higher risk detections compared to rule-based-solutions.
- What do we need to build sustainable AI solutions: 1. Modern DevSecOps. 2. Mediculous governance. 3. Strong business involvement.
- Cards model: A combination of simple ranking and sophisticated AI solution.
- Result: Card scenario helping investigators achieve sustainable workload.

Camilla L.

- Managing changes with AI through Social Dialogue /Co-Determination.
- It is important to start early / in time
- Transparency is key
- New for many of us in the Unions.
- It is important to include employee perspective
 - Concerning surveillance, evaluation
 - Concerning education

Key take aways:

- *Being open is a success factor for AI implementation*
- *Important: No decision making by AI but by humans only*
- *AI is more precise than rule-based solutions (too many alerts, that need human deep dives)*
- *Risk to be considered when developing AI: Drifting/decaying of AI models*
 - *Good governance needed*
 - *Evaluation of ruled out cases also necessary*
- *AI can help to explain/check AI-black-boxes*
- *Keys are being early, transparency, including employees perspective*

Panel discussion on case study

- **Hanna Byström**, CEO at BAO
- **Ulrika Boëthius**, President of Finansförbundet
- **Nima Ghorbani**, Swedbank, CTO AI, FinCrime & Cyber Security

Hanna B.

- AI based on corporate values as success factor
- AI can help to reduce overtime and to give value to the work
- Creating a common language between 'techies' and others
- Big banks as AI forerunners, small banks are picking up
- Local initiatives and individual dialogue to control AI
- We see slight rises in employment with new roles emerging

Ulrika B.

- Importance of stakeholder dialogue
- We need to educate union employees to understand and to be able to discuss AI
- Regulation helps to control AI but the employee perspective must be in the centre
- Employees are used to adapt to new technologies and a continuous restructuring is the new normal and promising
- AI will change job profiles
- Self-learning, but financing of learning through collective agreements is needed

Nima G.

- People need to be in the centre of AI
- We are far from a replacement of jobs
- No one wants to do recurring jobs => AI helps to concentrate on 'fun' job parts
- Creation is key: We are all revolutionary as we all contribute
- Concerning AI the banking sector was behind in past years but picks up and is leading the pack in certain areas atm
- Putting humans in the centre is a central success factor
- Compliance is more important than law when it comes to AI
- Regulation needs to accept reality, it cannot hinder technology as AI tools are becoming more available
- Screening for talents and upskilling is needed
- For AI and esp. in the field of financial crime it is necessary to collaborate more with other companies

Key take aways:

- *AI is a powerful tool that can improve work quality, efficiency and creativity, but it needs to be aligned with corporate values and human interests.*
- *AI requires a common language, education and dialogue among different stakeholders, including employees, unions, customers and regulators.*
- *AI will change the nature and profile of jobs, creating new roles and opportunities, but also challenges for learning and adaptation.*
- *AI is a competitive advantage for the banking sector, especially in areas like financial crime prevention, but it also demands more collaboration and compliance.*

Presentation by the European Commission on their work re. AI (online)

- **Yordanka Ivanova**, Unit, A.2 Artificial Intelligence Policy Development and Coordination, DG Connect

Update on the Artificial Intelligence Act and the impact on finance.

1. AI package: April 2021. Excellence and trust.

- Coordinated plan on AI (review from 2018).
- Proposal for a legal framework on AI.

2. AI Act (State of Play) (ordinary legislative procedure).

- European Commission: AI Act Proposal: 21 Apr 2021.
- Council: General approach: 6 Dec 2022
- Parliament: Expected vote in the Plenary. in mid. June 2023
- both (Council & Parliament) adopt legislation - trilogues starts

3. Proposal for a Regulation on AI

Horizontal legislation laying down uniform rules for AI in the EU market

- "Classic" internal market rules applicable to the placing on the market, putting into service and use of AI
- Horizontal in scope and covering the full AI lifecycle
- Two main objectives:
 - address risks to safety, health and fundamental rights
 - create a single market for trustworthy AI in EU
- Consistent with and complementing existing EU and national law (incl. on financial

Innovation friendly and risk based legislation

- Provide legal certainty to operators and stimulate trust in the market
- No overregulation: designed to intervene only where strictly needed following a risk based approach

Creates a level playing field for EU and non EU players

- Applicable independent of origin of provider or user

4. Risk based approach

- I. **Unacceptable risk**, e.g. social scoring – **Prohibited**
- II. **High risk** e.g. recruitment, medical devices – **Permitted subject to compliance with AI requirements and ex ante conformity assessment**
- III. **'Transparency' risk** 'Impersonation' (bots), deep fake – **Permitted but subject to information/transparency obligations**
- IV. **Minimal or no risk** – **Permitted with no restrictions**

5. High risk Artificial Intelligence Systems (Title III, Chapter 1 & Annexes II and EU-approach to AI: risk-based-approach

1. SAFETY COMPONENTS OF REGULATED PRODUCTS (ANNEX II)

(e.g. medical devices, machinery) which are subject to third party assessment under the relevant sectorial legislation

2. CERTAIN (STAND ALONE) AI SYSTEMS LISTED IN ANNEX III IN THE FOLLOWING AREAS:

- Biometric identification and categorisation of natural persons
- Management and operation of critical infrastructure
- Education and vocational training
- Employment and workers management, access to self-employment
 - **Use cases: for recruitment or selection (advertising vacancies, screening/filtering applications, evaluating candidates; promotion and termination of work-related relationships, task allocation, monitoring and evaluating performance and behavior)**
- Access to and enjoyment of **essential private services** and public services and benefits
 - **Only 1 use case in finance: creditworthiness, assessment and credit scoring of natural persons**
- Law enforcement
- Migration, asylum and border control management
- Administration of justice and democratic processes

COUNCIL GA AND EP REPORT:

- Both add a new risk filter for Annex III use cases in Annex III
- Both add as high risk also individual risk assessment and pricing in health and life insurance

6. Requirements for high-risk AI (Title III, chapter 2)

Establish and implement an iterative risk management process (identify & mitigate risks)

(Parliament and Council agree)

- Use high quality training, validation and testing datasets. Implement data governance procedures
- Establish documentation in Annex IV and design the system with logging features (traceability & auditability)
- Ensure appropriate degree of transparency and interpretability of the system by design. Provide users with information (on how to use the system, its capabilities and limitations, potential risks etc.)
- Enable human oversight aimed to minimize residual risks (measures built into the system and/or to be implemented by users)
- Ensure robustness, accuracy and cybersecurity throughout the lifecycle
- NB! Harmonised technical standards developed by ESOs will support providers to demonstrate compliance.

7. Overview: obligations of operators (Title III, Chapter 3)

(Parliament and Council agree)

Provider obligations:

- Establish and Implement quality management system in its organization:
- Draw up and keep up to date technical documentation
- Undergo conformity assessment and potentially re assessment of the system (in case of significant modifications)
- Register standalone AI system in EU database (listed in Annex III)
- Sign declaration of conformity and affix CE marking
- Conduct post market monitoring
- Report serious incidents & malfunctioning leading to breaches to fundamental rights
- Collaborate with market surveillance authorities

User obligations:

- Operate high risk AI system in accordance with instructions of use
- Ensure human oversight & monitor operation for possible risks
- Keep automatically generated logs
- Report any serious incident & malfunctioning to the provider or distributor

- Existing legal obligations continue to apply (e.g. under GDPR)

8. Focus of discussion between co-legislators

General agreement on foundations, risk based approach and reliance on standards

Parliament:

Extend the prohibitions and the high risk AI, protection of fundamental rights, redress rights, environmental concerns

Council:

No overregulation, keep high risk very targeted, innovation (sandboxes) needs of law enforcement authorities national security and military exception

-> AI definition General purpose AI, AI used by public authorities governance, enforcement

9. How will it work for the financial sector? - 1

Entities not regulated and supervised under EU financial service law (for example credit bureaus), subject to full set of rules under the AI Act

Financial institutions regulated by EU law subject to a special regime:

- Supervision of compliance with the AI Act integrated into the existing financial supervisory system:
- same supervisory authorities (art. 63(4)) and integrated conformity assessment process (Art.43(3))
- Integration of some of the providers' procedural obligations into existing internal governance processes: risk management (e.g. Art. 9(9)), technical documentation and logs keeping (Art. 18(2), 20(2) and 29(5)), post market monitoring (Art. 61(4)), reporting of serious incidents (Art. 62(3))
- Targeted derogations from certain obligations: quality management (Art. 17(3)) and users' monitoring obligations (Art. 29(4))

10. How will it work for the financial sector? - 2

NEW relevant modifications in COUNCIL GA version

- Article 63(4) 4): for regulated financial institutions in so far as the placement on the market, putting into service or the use of the AI system is in direct connection with the provision of those financial services , supervision under the AI Act will be carried out by national financial supervisory authorities, unless Member States decide to designate another authority to fulfill these market surveillance tasks in justified circumstances and provided that coordination is ensured.
- Recital 80 and modification in Article 42(3) 3): the conformity assessment under the AI Act is disentangled from the financial Supervisory Review and Evaluation Process self-assessment for providers & more flexibility for financial supervisors how to integrate the market surveillance activities, as appropriate, into their existing supervisory procedures under the relevant Union financial services legislation.
- Annex III, point 5 a new high risk use case in the insurance sector added.

11. Next steps

1. The European Parliament and the Council will start Trilogues on 14 June

2. Once adopted, there will be 2 or 3 years of transitional period before the Regulation becomes directly applicable across the EU. Agreement expected by end of 2023.

3. In parallel, harmonized standards of CEN/CENELEC should be ready and support operators in the practical implementation of the new rules& conformity assessment procedures

Key take aways:

1. *The European Commission proposed the AI Act to establish a legal framework for AI in the EU, aiming to address safety, health, and fundamental rights while creating a trustworthy AI market.*
2. *The AI Act follows a risk-based approach, categorizing AI systems based on their risk levels and defining specific requirements for each category.*
3. *High-risk AI systems include those used in critical infrastructure, education, access to services, law enforcement, migration, **finance** (e.g. creditworthiness, assessment and credit scoring of natural persons) **and employment**: (Use cases: for recruitment or selection (advertising vacancies, screening/filtering applications, evaluating candidates; promotion and termination of work-related relationships, task allocation, monitoring and evaluating performance and behavior)*
4. *Requirements for high-risk AI systems include risk management processes, transparency, human oversight, robustness, accuracy, and cybersecurity.*
5. *Operators of AI systems have obligations such as quality management, conformity assessment, registration, post-market monitoring, and reporting incidents, while users must follow instructions, ensure human oversight, and report incidents.*
6. *In the financial sector, entities not regulated under EU financial service law will be subject to the full set of AI Act rules, while financial institutions regulated by EU law will have a special regime integrated into existing financial supervisory systems.*
7. *Trilogue negotiations between the Parliament and Council will begin in June, with an agreement expected by the end of 2023. During the transitional period, harmonized standards will be developed to support implementation.*

Presentation by Kantar:

The impact of AI on the banking workplace in Europe and beyond: results from desk research and first results from interviews.

- **Martina Keil**, Associate Director, Kantar GmbH

1. ChatGPT - the fastest growing tool in history

- ChatGPT is the quickest application to scale to 1 M and to 100M users ever, the fastest growing tool in history
- ChatGPT (Generative/Conversational AI) is only one tiny part within the huge spectrum of emerging AI technologies
- AI Is as Risky as Pandemics and Nuclear War, Top CEOs Say, Urging Global Cooperation

2. Who is leading in AI - China or the USA, and where does Europe stand?

- The US is leading the AI race by number of major tech companies, private investment and talent supply. China leads in facial recognition and governmental investment. Europe is leading in ethical standards.
- Private Investment in AI is dominated by the U.S., but have experienced a sharp decline in 2022 across all major regions across the globe. The EU + UK ranks third but is close to China
- The number of newly funded AI companies is also dominated by the U.S., however Europe comes in 2nd place, outpaced China
- China is leading at AI publications in journals as well as applications for AI patents, most patents granted are to the U.S. though. Europe ranks second in publications and patents granted
- Though Europe clearly lags behind the U.S., when it comes to innovating in AI, the adoption in Europe is in line with the U.S.
- The US and China have the highest number of AI players, but the UK is the country with the highest AI player intensity. The US has more than twice as many players as the EU, the same goes for intensity.
- Key challenges for Europe is a fragmentation of the digital market, difficulties attracting IT talents, including lack of venture capital. A strength are higher ethical standards.

3. Impact of AI on global employment

- Academic Studies Generally Find That AI Adoption Increases Annual Worker Productivity Growth by 2-3 percentage points
- AI users are significantly more satisfied than non-users, big lead in career planning/advancement opportunities – This matches with MIT survey, users are happier, more productive, and less likely to quit.
- One-Fourth of Current Work Tasks Could Be Automated by AI in the US and Europe and affect around 300 million full-time jobs globally and about 35% in financial services.

4. Impact of AI on Banking

- 83% of financial services firms are expected to have adopted AI technologies by 2027, ranking it among the industries that are affected the most.
- Nearly every aspect of the financial services industry is likely to benefit from AI/ChatGPT in future.
- Banks must carefully consider the ethical, regulatory, and security implications of AI

Positive or negative impacts on job profiles from AI/automation:

- Positive impacts from AI on jobs in the banking industry mentioned are increased efficiency and speed, higher quality and reduced workload, negative aspects are potential job loss, change in job profiles, errors of AI and over-reliance with loss of critical thinking.

5. Regulation activities in AI

- The European AI Act, drafted in 2021 and about to be approved 2023, provides a framework to categorize risks associated with AI. The US have a patchwork of state specific laws and China regulates only general principles.

6. Options for banks and the Social partners

- **Strategies for banks to stay fit and preserve good jobs for employees:**
Banks need to balance their focus on profitability and customer satisfaction with employee well-being, skill development, flexibility, and adaptability to stay fit for the future and create satisfying jobs for their employees.
- **The Role of the Social Partners to influence the development of AI positively:**
The social partner's role comprises knowledge sharing, dialogue, regulations, and protecting workers' rights to positively influence the ethical and responsible development of AI/digitalization and agile working.

Key take aways:

1. *The US leads the AI race in terms of major tech companies, private investment, and talent supply. China leads in facial recognition and governmental investment, while Europe leads in ethical standards. Private investment in AI is dominated by the US, with Europe ranking third but close to China. Europe lags behind the US in innovation but is on par with adoption.*

2. *AI adoption generally increases worker productivity growth and job satisfaction. Around 25% of work tasks in the US and Europe could be automated by AI, impacting approximately 300 million full-time jobs globally, and about 35% in financial services.*

3. *The banking industry is heavily affected by AI, with 83% of financial services firms expected to adopt AI technologies by 2027. AI has the potential to benefit various aspects of the industry, but ethical, regulatory, and security implications must be carefully considered. Positive impacts include increased efficiency, speed, and quality, while negative aspects include potential job loss, changes in job profiles, errors, and over-reliance on AI.*

4. *Regulation activities in AI vary across regions. Europe is leading in AI regulation. The European AI Act, drafted in 2021 and about to be approved in 2023, provides a framework for categorizing AI risks. The US has up to now only state-specific laws, while China focuses on general principles.*

5. *Banks should prioritize profitability, customer satisfaction, and employee well-being, skill development, flexibility, and adaptability to preserve good jobs for employees. Social partners play a role in influencing the positive development of AI through knowledge sharing, dialogue, regulations, and protecting workers' rights.*

Reflections & discussions by the Social Partners on Kantar report

- **Adrian Soare**, President of the Trade Union UPA Romania
- **Lucia Peveri**, Segretaria Generale UILCA Lombardia e Milano presso Uilca Nazionale
- **Jens Thau**, Chairman, EBF-BCESA & Deputy General Manager, AGV Banken

Question: Are you surprised by the results?

Lucia P.

- I would like to learn more on impact of AI on HR

Adrian S.

- How are Social Partners involved regarding the density of AI usage?

Jens T.

- Emphasis on risks is typical for emerging trends
- Social partner are ready for the mitigation of risks
- AI is going fast: Not linear but exponentially
- AI as a tool to overcome the demographic change
- In general: AI as an opportunity

Question: Is there a new war for talents?

Jens T.

- We see a value based new generation.
- Looking for a living and a meaning.
- EU-values might be an asset for new talents
- We need digital freedom of movement
 - Remote working from everywhere
 - Independently of the social systems

Lucia P.

- People are moving because of career opportunities or wages, so not by choice but by necessity
- Common rights at a high level as strengths to attract talents

Adrian S.

- There are not yet immediate threats of AI, but it might become a threat comparable with the atomic bomb
- AI can be used for attacking tools on banking systems and it is necessary to protect the banks/clients assets

Question: What do you think about 'humans in the loop/in control'?

Lucia P.

- Human in control must be the first principle
- We need a set of rules regarding AI

Jens T.

- Human in control means also, that AI is not making decisions but only preparing them

Lucia P.

- We need a continuous process of dialogue to be on time for the recent developments

Adrian S.

- Sometimes it is good for the social dialogue if there is a certain push by authorities

Jens T.

- We must focus on the impact of AI in social dialogue, not on technical issues
- We can check the input and the output of AI, even if we do not understand the processing
- We cannot be too specific in regulation

Lucia P.

- We will need to talk about AI in social dialogue, e.g. about the topic of data collection (that needs to be communicated) or data protection

Moderator

- There is a need for AI-KPIs

Key take aways:

1. *There is an interest in learning about the impact of AI on HR and how Social Partners are involved.*
2. *Risks associated with AI are acknowledged, and Social Partners are ready to mitigate them. AI is seen as an opportunity and a tool to address demographic changes.*
3. *The new generation values meaning in their work, and EU values can attract new talents. Digital freedom of movement is desired for remote work independently of social systems.*
4. *Common rights at a high level can attract talents, and protecting banks and client assets from AI-based attacks is necessary.*
5. *The importance of humans being in control and having a set of rules regarding AI is emphasized.*
6. *Continuous dialogue is needed to keep up with AI developments.*
7. *Authorities can play a role in pushing for social dialogue on AI.*
8. *Focusing on the impact of AI in social dialogue, rather than technical issues, is important. Checking input and output is possible even without understanding the processing.*

Fireside chat on the projects next steps:

- **Tobias Weber**, Director, Kantar GmbH
- **Sébastien de Brouwer**, Chief Policy Officer, European Banking Federation

Introduction by Sébastien d. B.

Questions

Sébastien d. B.: *Looking at your findings, what is most important concerning AI from your point of view?*

Tobias W.: There is a great momentum concerning the subject of AI at the moment. As Martina already said, ChatGPT really brought the topic to a new level and AI by now is really discussed broadly and not only in expert rounds. But this is only the tip of the iceberg. The use of AI in banking will change the sector, its processes, business models and also the working conditions. Threats of AI are real and must be mitigated, e.g. through technical or ethical regulation, and the social dialogue can be part of this. But there are also opportunities for businesses and employees that are even larger than for end users.

Sébastien d. B.: *Speaking of the opportunities: What is your overall assessment of the banking industries potential regarding AI?*

Tobias: As we see in other studies, the financial sector is - in some regions - already a forerunner in AI usage. Data availability and quality is excellent, what is a very important foundation for successful AI implementation. Now, it is the task of banks all around the world to find the best way of using AI-tools and solutions for the best of the sector. Balancing threats and opportunities is key for success and for keeping the trust of clients and employees. And one last point: Have a look at this project. It is running for nearly one year now and it really shows the foresight of the banking Social Partners, to have brought up this subject that early.

Sébastien d. B.: *Your colleague Martina has shown us the interim results of the project. What are the next steps in the project?*

Tobias W.: We have already finished the interviews and are now busy to analyse the findings. For this workshop we have concentrated on the topic of AI mainly. But we have more input to come: Agile Working, the impact of recent crisis on the sector and some deep dives will complement the picture.

We are really looking forward to the workshop in Zagreb as we will be able to present some more selected findings from the interviews.

And for sure we are proud that our analysis will then feed into the discussion of the Social Partners for a joint declaration and are really looking forward to this.

Key take aways

Tobias W. shared his views on AI in banking, highlighting the momentum, challenges and opportunities of the technology. He emphasized the data quality and foresight of the sector and mentions other topics that will be covered in the project. He anticipated the workshop in Zagreb and the joint declaration of the Social Partners.

Conclusions and final remarks by

- **Jens Thau, Chairman**, EBF-BCESA & Deputy General Manager, AGV Banken
- **Lucia Peveri**, Segretaria Generale UILCA Lombardia e Milano presso Uilca Nazionale
- **Hanna Byström**, CEO Bankinstitutens Arbetsgivareorganisation (BAO)

What are your key take aways from this workshop?

The aim and task of the Social Partners is to react on these challenges, some ideas which might be important to keep in mind.

- AI can be seen as an opportunity but has also risks.
- European solutions would be necessary.
- There is a need for information gathering, which we aim to tackle with this project.
- Keep the human in the centre, not only the human -in -the-loop.
- Skills will be necessary.
- Collaboration and a culture of failure. Learn from mistakes, change your system-
- Constant dialogue is needed.

Summary: Main aspects discussed and stated during the workshop

AI and the global landscape

- *The US leads in AI companies, investment, and talent. China leads in facial recognition and government funding. Europe leads in ethics.*
- *The US dominates AI investment, followed by China and Europe. Europe is behind in innovation but equal in adoption.*

AI and technology

- *AI is less transparent, more autonomous and more complex than other digital technologies, requiring more scrutiny and regulation.*
- *AI is more precise than rule-based solutions but has risks of drifting or decaying models.*
- *Good governance and evaluation are needed.*
- *AI can explain or check AI-black-boxes.*
- *Large language models create trust in AI by communicating better.*

AI and the labor market with a focus on the banking industry

- *AI can help to address the challenges of demographic change, workforce shortage and competition in the banking sector, but it must be designed and used in a way that respects human dignity, autonomy and control.*
- *AI will change jobs, creating opportunities and challenges. AI is a competitive advantage but demands collaboration and compliance.*
- *AI increases productivity and satisfaction. It could automate 25% of work tasks globally, and 35% in finance.*
- *AI is a powerful tool that improves work quality, efficiency and creativity, but needs common language, education and dialogue among stakeholders.*
- *Make AI scalable and aligned with values. Educate and upskill everyone. Create a collaborative culture.*
- *The new generation values meaningful work and EU values. They want digital freedom and security.*
- *AI affects 83% of financial services firms by 2027. It has benefits and risks for the industry.*
- *Banks should balance profitability, customer satisfaction, and employee well-being, skill, flexibility, and adaptability.*

AI and regulation - The EU AI Act

- *Regulation activities in AI vary across regions. Europe is leading in AI regulation. The US has state specific laws. China has only principles.*
- *The European AI Act, drafted in 2021 and about to be approved in 2023, provides a framework for categorizing AI risks. The US has up to now only state-specific laws, while China focuses on general principles.*
- *The importance of humans being in control and having a set of rules regarding AI is emphasized. Checking input and output is possible even without understanding the processing.*
- *The EU follows a risk-based approach, categorizing AI systems by risk levels and defining requirements for each category.*
- *High-risk AI systems require risk management, transparency, human oversight, robustness, accuracy, and cybersecurity.*
- *Operators of AI systems have obligations such as quality management, conformity assessment, registration, post-market monitoring, and reporting incidents. Users must follow instructions, ensure human oversight, and report incidents.*
- *European solutions would be necessary.*
- *AI should mark its limitations and not make decisions. Regulations can have positive impact. Keep an eye on high-risk AI rules.*

AI and social dialogue

- *Social partners play a role in influencing the positive development of AI through knowledge sharing, dialogue, regulations, and protecting workers' rights.*
- *Social dialogue ensures AI benefits workers and companies, and avoids risks for data, ethics, or quality.*
- *AI can address banking challenges, but must respect human dignity, autonomy and control.*
- *Continuous dialogue is needed to keep up with AI developments.*
- *Authorities can play a role in pushing for social dialogue on AI.*
- *Focusing on the impact of AI on employees and employment, rather than technical issues, is important.*
- *Humans need clear roles and responsibilities in AI decisions and can verify and challenge AI results.*
- *Sceptics should be valued and their concerns addressed.*
- *Early, transparent, and inclusive actions are key.*

Minutes of the workshop in Zagreb

3rd Workshop of the European Social Partners project 101051930

“Banking in 2030 - How will the current global trends, especially AI, shape the post COVID19 pandemic future of the European banking industry and its employees?”

Minutes and Summary

13 Oct 2023, 9h00-15h00, Zagreb

The 3rd workshop for the Social Dialogue project 101051930 took place on 13 Oct 2023 at the Academia Hotel in Zagreb with representatives from the bank sector’s Social Partners from Croatia and across Europe and the consultant ARIX, 54 participants attended in person, 18 took part online.

The purpose of the second European workshop was to continue the valuable exchange among experts in the banking industry, building on the success of the previous two workshops held in Paris on 17 February and Stockholm on 13 June.

The focus was on further discussing the key aspects of the European project for sectoral social dialogue in the banking industry.

- Specifically, the aim was to discuss how current global trends, particularly in the field of Artificial Intelligence (AI), but also COVID19 and the methodology of agile working will shape the future of the European banking sector and its workforce.
- The workshop wanted to explore further the question of how AI will impact the workplace and highlight how social dialogue can assist in anticipating and managing these changes.

Welcome speech:

- **Tamara Perko**, Director of the Croatia Banking Association
- **Davor Tomic**, President, Croatian Union of bank and financial employees (SBF)

Tamara P.

- 2023 OECD Survey: 27% of jobs are at risk because of AI.
- 3 of 5 afraid of losing their job because of AI
- 63% in financial industry are enjoying working with AI.
- 79% say that they are more productive with AI.
- Main challenge will be to learn how to educate people.
- Important to take care of the use of personal data.
- AI has a big carbon footprint: 20-40 questions [for ChatGPT] consume ½ Liter of water

Davor Tomic.

- Banking is still one of most attractive industries.
- JPM Morgan predicts that the weekly working time will reduce to 3 ½ days.
- We have to keep the balance between employers and employees’ rights.
- Social dialogue will help to make the best use of AI.

Introduction

- **Anna Maria Romano**, President UNI Finance
- **Jens Thau**, Chairman, EBF-BCESA & Deputy General Manager, AGV Banken

Anna Maria R.

- Fast seems to be the new must. But fast comes with the risk of running behind.
- It is necessary to shape the future from a value driven point of view.
- With jobs are changing, we need new competencies, this will change Human resources.

- You cannot replace humans by AI. There is a need to complement human intelligence by AI.
- Concerning “Open Finance” (cooperation with other actors): We need to reflect that these players often don’t have the same values as banks.
- There is a risk of monopolies concerning data and data aggregations.
- Regulation of AI is a patchwork and must be harmonized.
- Regulation should not only concentrate on technical topics/done by technicians.
- There is a need for a long-term strategy concerning AI
- I am proud to have values. Social Dialogue is an asset to guarantee solid values.

Jens T.

- Europe is at a struggle about common values. The core value is Social Dialogue.
- The Commission is about to regulate AI.
- AI: US is leading in AI investments, China in face recognition. Europe is leading in AI ethics.
- The planned EU regulation foresees 3 levels of risks concerning AI.
- Employee related AI is seen as a high-risk field. But Social Partners can handle and mitigate these risks.
- Regulators should be open to advise by Social partners.
- Social partners as well as regulators need to be ahead of the development.
- Social partners should agree on a framework on European level that can be used in the countries.
- The workplace depends on the Social partners. We need harmonized rules.
- AI does not necessarily need agile working methods, but we need to be agile to a certain extent.
- We are living in a VUCA world (volatile, uncertain, complex, ambiguous).
- Agile working can help by breaking up complex processes to small, flexible tasks but this is not always necessary and its value-add depends on the tasks.
- Concerning AI and job losses: In the past all new tools have led to a development of new tasks. The invention of the computer did not reduce the workforce at the end.
- New task will come with AI and will regain new tasks.
- Demographical situation is changing (at least in Western Europe, with 40% of the workforce, which will retire) and AI might help to mitigate these effects.
- We have a competitive advantage. People trust banks, there is a fit with ethical AI in the banking sector.
- Concerning Ethical AI: We need a value-based approach.
- About the project: Data gathering is finished, now mind the joint declaration and then final conference in Brussels, May 14th.

Key take aways:

- *The necessity of value-driven decisions for shaping the future.*
- *Job changes driven by AI require new competencies, impacting HR.*
- *There is a need for a long-term strategy concerning AI*
- *AI should complement, not replace human intelligence.*
- *Social Dialogue is an asset to guarantee solid values.*
- *The European Commission is preparing AI regulations.*
- *Employee-related AI is a high-risk field, manageable by Social Partners.*
- *Regulators should be open to advise by Social partners.*
- *Both regulators and Social Partners should stay ahead of AI developments.*
- *A European framework is needed for harmonized rules among countries.*
- *Trust in banks and ethical AI create a competitive advantage.*
- *Work adaptation is necessary as demographics change.*
- *Agile methods can help, depending on the task.*
- *Historical evidence suggests new technologies create more tasks and reduce job loss concerns.*
- *AI can mitigate the changing workforce due to retirements.*

Intervention guest speaker

- **Marguerita Lane**, Labour Market Economist, ELS/Skills and Employability, OECD.
- Author of working paper: The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers.

Surveys of employers and workers in finance (and manufacturing) across 7 countries: USA, Canada, UK, Ireland, Germany, Austria, and France.

AI is commonly used for data analytics (52%) & fraud detection (~50%), Customer service & advice (30%), administration (30%), reporting (28%), risk management (21%), Human resources (18%), Trading & investment (17%), other (12%).

There is limited evidence of employment effects of AI. As with previous technologies, there are fears that AI will lead to a jobless future, but overall, there is limited evidence that AI has had an effect on net employment:

- 1/2 (50%) of employers (2000 employers) we have interviewed in finance in 7 countries say that AI hasn't influenced employment so far.
- Slightly more saying that it had decreased employment than increased it.
- BUT: early phase of adoption
- Employers say they prefer to let staff go through voluntary quits and retirements, so the effect of AI might take a while to be noticed.
- Also: employers who adopt AI often say they don't hire anymore. They try to do more with less.
 - *"Clients will continue to call. Keep in mind that we get 30,000 calls per day. Even if they do not escalate [issues] as much as before, [the introduction of the AI] does not necessarily mean a reduction of agents."* – Manager, Canadian insurer

Many workers are worried about job loss to AI.

- Even though employment has held up so far, many workers are worried about the future.
- 3 in 5 workers are worried about losing their job to AI in the next 10 years.
- 1 in 5 are very or extremely worried.

AI can have a positive effect on job quality

- There is some evidence that **AI could help improve job quality.**
 - When we asked workers in finance who work with AI, 4/5 said it had improved their performance and 3 in 5 said it had increased their enjoyment in work.
 - Workers were generally very positive also about the impact of AI on physical and mental health.
 - Impact on wages is still not clear, mostly anecdotal. While some workers (in particular those with AI skills) are in high demand and earn high wages, the overall impact of AI on wages is currently not clear 15% of workers expect AI to increase wages in their sectors, 25% expect no impact, while nearly 40% expect AI to decrease wages in the sector.

Work more interesting but also more intense?

- Automation of tedious, monotonous tasks: According to employers, AI is twice as likely to automate as to create repetitive tasks.
- AI brings some risks to job quality too.
- 75% of AI users in finance said that AI had increased the pace at which they perform their tasks.
- Workers are also worried about data collection and privacy.
 - *"There's the odd situation where you think, 'I wouldn't have minded doing that the old way,' but it's been mostly for the good which has to do with [less monotony] and being freed up to do other stuff."* – Claims adjuster, Austrian insurer
 - *"There are changes and counter-changes. On the one hand, I'm better able to manage my workload because many tasks are automated. On the other, there has been a stark increase in work intensity."* – Financial analyst, UK bank

Investing in skills will be important (interview of employers)

- **AI is already changing what tasks people do in their jobs** and, with it, the skills that they require.
 - About 50% of AI users in finance declare that AI made some of their skills less valuable

- At the same time, 2 in 5 employers (40%) cite a lack of skills as one of the main barriers to adopting AI.
- So, **investments in education and training will be critical to accompany the AI transition.**
 - Our research also shows that workers tend to be more positive about the impact of AI on performance and working conditions when they have been trained to work with AI.
 - High cost of AI an even bigger barrier to adoption than skills (53% of employers in finance). 25% said govt regulation was a barrier.
- **Share of employers saying lack of skills is a barrier to adopting AI.**
 - Percentage (%) of employers in finance and manufacturing
 - 49% in the USA, 48% Germany, 47% Austria, 41% Ireland, 41% Canada, 37% France, 33% UK

Social dialogue can lead to better outcomes:

- Collective bargaining and social dialogue have an important role to play as well in supporting workers and businesses in the AI transition.
 - AI adoption tends to result in better outcomes for workers, concerning performance and mental health, when their representatives are consulted on the matter.
 - Yet, the specific characteristics of AI and the way it is implemented, such as its rapid speed of diffusion, its ability to learn and the greater power imbalance it can create, put further pressure on labour relations.
 - While AI technologies have the potential to assist Social Partners to pursue their goals and strategies, the lack of AI-related expertise among Social Partners is a major challenge.
 - 43% of employers in finance consulted workers or worker reps regarding the use of new technologies.

The impact of AI on performance and working conditions, by worker consultation

- Percentage % of workers in finance and manufacturing who work with AI
- It is not all doom and gloom
 - There is some evidence that **AI could help improve job quality**
 - When we asked workers in finance who work with AI, **4/5 said it had improved their performance and 3 in 5 said it had increased their enjoyment in work.**
 - Workers were generally very positive also about the impact of AI on physical and mental health
 - Impact on wages is still not clear, mostly anecdotal. While some workers (in particular those with AI skills) are in high demand and earn high wages, the overall impact of AI on wages is currently not clear 15% of workers expect AI to increase wages in their sectors, 25% expect no impact, while nearly 40% expect AI to decrease wages in the sector
 - Again – something that we need to keep monitoring

Action is already being taken – but more will be needed.

- 2019 OECD AI Principles
- AI does not operate in a regulatory vacuum – but likely need to adapt policies.
- Data protection, anti-discrimination, workplace health and safety
- Need for accessible and understandable information and clearly defined responsibilities.
- E.g., EU AI Act, Blueprint for an AI Bill of Rights in the United States
- Calls and initiatives to act on generative AI: Need for international cooperation.

We know that AI also raises many “ethical” challenges, like bias and discrimination, automatic decision-making – the transparency, explainability and accountability that go paired with that-- and data protection and privacy,

- Governments, international organisations and regulators must provide a framework for how to work with AI. The OECD pioneered this work with the OECD AI Principles. Countries are taking policy action.
- Existing anti-discrimination legislation and regulation on occupational safety and health, privacy and freedom of association – while not specific to AI –need to be respected when AI is used in the workplace. But it will, most likely, need to be adapted to the specific challenges of AI.
- We are seeing also AI-specific policy action [e.g. EU AI Act and US AI Bill of rights].
- Many experts are concerned that the policy response is not keeping up with the rapid developments in generative AI. And that policies still lack specificity and enforceability.
- International cooperation will be critical to avoid a fragmentation of efforts which would harm innovation and create regulatory gaps.

- OECD work and the OECD's AI-WIPs programme will continue to provide the evidence and policy insights to help them.

Questions from the audience:

- **Michael B.:** Were there any job impacts?
- **Marguerita L:** More risks for workers with less skills
- **Michael B.:** 50% of workers are lacking digital skills, how to bridge the skill/knowledge gap?
- **Marguerita L:** No need to be an AI expert, AI applications will be easy to use, basic digital skills will be needed. Negotiation, creativity, communications will become more relevant. Unions should help identifying skill gaps and push for training.

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Key take aways:

- *OECD survey conducted in 7 countries.*
- *AI is widely used for data analytics, fraud detection, HR and trading and various functions.*
- *Limited evidence of AI's significant impact on employment. 50% state no effect, 26% decrease.*
- *Workers are concerned about job loss to AI. (60% worried). Financial workers are more worried than manufacturers.*
- *79% of finance workers state that AI improved their performance, 63% their enjoyment in work.*
- *AI can improve job quality, but its impact on wages is unclear.*
- *AI automates tedious tasks, making work more interesting but also more intense. (repetitive tasks are being replaced)*
- *AI tends to replace tasks, not jobs.*
- *Skills investment is essential to adapt to AI.*
- *More risk for workers with less skills. Basic digital skills will be sufficient to use AI.*
- *Social dialogue can aid in AI adoption.*
- *Negotiation, creativity, communications will become more relevant. Unions should help identifying skill gaps and push for training.*
- *Policymakers are addressing AI-related ethical challenges and regulations.*
- *International cooperation is crucial to tackle AI challenges.*

Case study: Ways AI is changing HR departments and Co-Determination Procedures.

- **Mr Vedran Anoljak,** AI and digital transformation expert in the Croatian Businesses

AI and its application by today

- Artificial intelligence is part of our everyday life at work and at home, although many are not aware of it. There are many examples of the application of artificial intelligence in various industries and areas of life.

Generative AI

- Generative AI is a type of artificial intelligence that is used to create new content, ideas or data based on patterns and information learned during training.

KEY REASONS WHY WE NEED AI IN HR

1. Impact of AI on productivity

- The world's leading centres and institutions predict that artificial intelligence will result in the greatest increase in productivity ever in history. + 50%

2. AI adoption in HR functions – TODAY

- The majority of HR leaders nowadays use AI across a wide range of tasks, like employee records management (78%), payroll (77%) recruitment (73%), onboarding and performance management. (69-72%)

3. AI adoption in HR functions – TOMMOROW

- Research papers suggests AI's usage in HR is expected to grow significantly in the coming years, helping HR departments to perform many important functions faster and more thorough way than ever before.
- 60% in 2023. - > 80% in 2024.

4. Employee experience and Wellbeing

- *Great resignation* is caused by rising cost of living, limited opportunities for career development, hostile work environments, lack of benefits, inflexible remote-work policies, and long-lasting job dissatisfaction.

5. Changes in talents' habits and expectations

- **Talents are primarily using digital channels** – the Internet and social networks – to find new opportunities.
- **Talents expect to use digital applications** for navigating all phases of recruitment process.
- **An increasing number of talents** (more than 70% of members of Generation Z and more than 50% of Millennials) **are using AI tools with an increased growth trend.**

HOW IS AI USED IN HR?

- AI has revolutionized the way HR professionals perform their work and the technology has become crucial for companies wanting to maximize their operations.

1. Benefits of AI in HR

- To fully harness the benefits of AI in HR, organizations must find the right balance between AI and human involvement, ensuring that AI is used as a supportive tool rather than a replacement for HR professionals.
 - Improved efficiency
 - Increased accuracy
 - Enhanced decision-making
 - Personalization
 - Cost savings

2. Challenges and ethics

- Artificial intelligence in the HR sector brings innovation, but also challenges such as privacy issues, workforce replacement, technological dependency, market perception and algorithmic bias.
 - Data privacy
 - Impact on employees
 - Creating addiction to technology
 - Distortion of market perception
 - (Un)biased algorithms

ChatGPT USE-CASE TALENT RECRUITMENT

- **Human resources: Recruiting talent**
 - 1. Getting started
 - 2. Creating effortless Job Description
 - 3. Filter applicants:
 - 4. Ask better interview questions:
 - 5. Hire in a fair and inclusive way:
 - 6. Improve onboarding:
- **Advantages of ChatGPT**
 - ChatGPT combines the human quality of conversation, the speed and efficiency of responding, and provides a scalable and cost-effective solution for a variety of applications.
 - Human speech, speed, scalability, continuous updates, languages
- **ChatGPT challenges**
 - The key challenges of ChatGPT, such as the lack of common sense, understanding of the context, and limitations in domain knowledge and creativity in responses, leave room for constant improvement.

- Lack of common sense, contextually reflections, domain knowledge, lack of creativity, hallucinations
- **Some rules for better use of ChatGPT**
- To get the most out of ChatGPT and minimize the learning curve, follow these tips along with the instructions.
 - Use ChatGPT as your assistant
 - Clearly define your prompts
 - Always check answers
 - Be kind in conversation
 - Follow updates and stay up to date
 - Practice asking questions

AI TOOLS FOR HR

- **zavvy.ai** – Amazing people development, but 10x smarter
- **clickup.com** – All-in-one HR platform with AI capabilities
- **attract.ai** – Manage your entire talent sourcing workflow on one platform
- **effy.ai** – Fast and stress free 360 feedback and performance review
- **paradox.ai** – Professional Recruiting Made Simple
- **Leena.ai** – Enterprise HR teams, now powered with AI

OTHER AI TOOLS

- **idox.ai** – comparing documents using AI
- **Decktopus.ai** – creating presentations with AI support
- **Numerous.ai** – add-in for Excel
- **Otter.ai** – taking notes in virtual meetings with the help of AI
- **Microsoft Copilot** – soon to be available
- **futurepedia.io** – database of AI tools
- **theresanaiforthat.com** – database of AI tools

FUTURE OF AI TOOLS

- **ChatGPT-a – Plugins for HR**
 - Plugins are tools designed specifically for LLM with security as a core principle and help ChatGPT to access updated information, run calculations or use third-party services.
 - TalentOrg, Find Talent, Revelo Talent, Crypto Jobs list, Gig Town, Job Description
- **ChatGPT-a – Plugins for finance**
 - Austrian bank rates, Memory bank, World bank data, interest rates, Finna Bolag, Statis Fund Finance, Trading Bro, CreditYelp.

Examples of AI in financial industry

- Application of artificial intelligence tools and solutions will save banks and financial institutions USD447 billion in 2023. Experts predict that it will save the banking industry about USD1 trillion by 2030.
- Risk Assessment,
- **PLLM – using private LLMs for financial institution data**
 - By using LLM and AI tools, financial institutions can automate tasks, improve decision-making, and uncover valuable insights that lead to greater efficiency and competitive advantage.

PRIVATE DATA OF THE ORGANIZATION

- Documents + CRM Data + Knowledge
- **Documents:** Business plan, policies, procedures, contracts, agreements, financial documents, HR data, marketing data, sales data, legal, compliance.
- **CRM Data:** Internal communication, communication history, purchase history, support tickets, service requests, campaign data, customer data, social media data.
- **Knowledge:** Operational documents, logistics documents, project documents, training documents, development documents, company information.
- **Example: AI at global business consulting corporation McKinsey**
 - Lilly, a generative AI tool, consolidates all knowledge and capabilities in one place, so that consultants have more time to interact with clients, solve tasks, coach and build capacity.
- **Example: JP Morgan Chase - AI tips for choosing financial securities**
 - JP Morgan Chase is developing a software service similar to ChatGPT – IndexGPT – that relies on a disruptive form of artificial intelligence to select investments for the bank's clients.
 - Finance chatbot for advertising, information and investment advice.
 - AI and data key to future success, says JPMorgan Chase CEO Jamie Dimon.
 - AI is shaping the future of trading, with more than 2,000 JP Morgan experts dedicated to AI capabilities.
- **Example: BloombergGPT – LLM in finance**
 - This LLM is specifically trained on large amounts of financial data to support a diverse set of natural language processing (NLP) tasks within the financial industry.

Benefits from LLM and AI tools for financial institutions

- By using LLM and AI tools, banks can automate tasks, improve decision-making, and uncover valuable insights that lead to greater efficiency and competitive advantage.
- **Improved efficiency:** by quickly accessing and examining large volumes of documents (eg contracts), organizations can quickly make informed decisions.
- **Reduced costs:** the organization saves resources and time previously invested in manual document analysis, which reduces costs at an estimated level of 20-60%.
- **Reduced workload:** the model's ability to extract, address and summarize essential information from documentation significantly reduces manual human analysis.
- **Improved innovation:** With simplified access to document databases, organizations can identify new business opportunities and trends, leading to the development of innovative products and processes.
- **Better user experience:** AI can significantly improve the performance and user experience of conversational systems by providing more accurate and engaging interactions with users.
- **Attracting new clients:** by providing personalized services according to the needs and capabilities of each client, especially in a creative and customized way of communication.

Conclusion and Takeaway

- **AI is transforming financial industry:** it optimizes processes, decreases risks, improves customer experience and positively impacts banks' bottom line.
- **Educate and experiment:** Artificial intelligence will not replace people; people will be replaced by those people who know how to use AI.
- **Sustainability is powered by AI:** AI enables bankers to be more environmentally aware, optimize resources and constantly adapt to changes.

Questions from the audience:

Anna Maria R: I would be less enthusiastic about AI. E.g., there is still the necessity to learn writing by pen as this is better for the cognitive development than to learn writing by keyboard. Are we not feeding a monster by using AI?

William P.: I see a strong need for a line of strategy concerning AI.

Vedran A.: ChatGPT was the first basic technology invented by a company not by scientific research.

Key take aways:

Generative AI creates content based on learned patterns and information.

- *Reasons for AI in HR: AI is expected to significantly increase productivity in HR by over 50%.*
- *Changes in Talent Habits: Digital channels are primarily used for job searching.*
- *Benefits of AI in HR: AI improves efficiency, accuracy, decision-making, personalization, and saves costs.*
- *Challenges and Ethics in AI in HR: Data privacy, impact on employees, technology addiction, market perception, and biased algorithms.*

ChatGPT for Talent Recruitment:

- *ChatGPT can assist in HR tasks, from creating job descriptions to improving onboarding.*
- *Advantages of ChatGPT combines human-like conversation quality with speed and scalability.*
- *Challenges include a lack of common sense, context understanding, domain knowledge, and creativity.*
- *Tips for optimal use include clear prompts, checking answers, and staying updated.*

Benefits of AI Tools in Finance:

- *Improved efficiency, reduced costs, reduced workload, innovation, better user experience, and attracting new clients.*

Conclusion:

- *AI transforms the financial industry, optimizing processes and improving customer experiences.*
- *The importance of education and experimentation with AI for individuals and organizations.*
- *AI can contribute to sustainability and resource optimization.*

Panel discussion on case study. Moderator: Mladen Kovaček

- **Michael Bodulfsen**, President, UNI Europa Finance
- **William Portelli**, President, Malta Union of Bank Employees
- **Szabolcs Annus**, Senior Director for Human Resources and Corporate Affairs, OTP Banka

Moderator: What is the influence of AI on customer banks?

Michael B.: Nobody wants to talk to machines. AI enables workforce to concentrate on human interaction.

Moderator: What do you think of Europe as an ethical leader in AI?

William P: We need to humanities AI. There is a need to keep up with AI development. We need to be in control of AI development (by proper regulation)

Moderator How are employees handling fast AI implementation?

Szabolcs A. We are at the very beginning of the journey. Digitalizing of processes gains momentum. We need to foster interdisciplinary (agile) teams. AI implementation is also a cultural change project, so change management and a compelling story are needed (incl. reassurance for employees). But also, a leadership training is necessary. We will need increased training budgets to prepare for AI aera.

Moderator: Would you like to comment on "AI is at the very beginning"?

Michael B: It is very important not to jump into AI without a proper strategy (at Board/C-level) to asses risks (e.g. lack of diversity between different banks)

Moderator: What are the opportunities for employees?

William P: A full cooperation of all stakeholders is needed, AI has to start from the top, training is important and should be included in the strategy.

Moderator: What benefits can AI bring for banks and clients?

Szabolcs A: AI will help with customer segmentation and to develop more tailored/personalized products. Other areas of use are: Automated advisory, portfolio management, market forecasting or customer churn reduction.

William P: AI can also bring benefits for sustainability.

Moderator: Can AI help to serve the underbanked and add to social responsibility?

Michael B: There is a social division, and we see that the underbanked part has digital and financial literacy. But AI can set free resources to reach out to underbanked people.

William P: AI will influence terms & conditions of our offer, and for sure all jobs and job profiles. But we need to see AI in a positive way.

Szabolcs A: AI will change the role of branches; banking evolves from transactional banking to advisory.

Moderator: In order to succeed, AI has to change human mentality. Can AI do this?

Michael B: It is not possible to change our stone age brains.

Moderator: Can AI help trade unions?

William P: Boards need experts for AI that also includes the employee's viewpoint.

Key take aways:

- *AI implementation is in its early stages.*
- *AI should enable human interactions, not replace them.*
- *Europe must lead ethically in AI development and regulate it properly.*
- *Proper AI strategy is crucial to assess risks, such as a lack of diversity between banks.*
- *Boards need AI experts who consider employees' perspectives.*
- *AI can influence job profiles and terms & conditions positively.*
- *Cooperation among stakeholders is essential, and AI training should be part of the strategy.*
- *It necessitates interdisciplinary, agile teams, cultural change, and leadership training.*
- *AI benefits include customer segmentation, personalized products, advisory services, and changing the role of banking branches.*
- *AI can allocate resources to serve underbanked individuals.*

Presentation: "How the future workplace will be changed by artificial intelligence"

- **by Prof. Sven Lončarić**, Director of the Centre for Artificial Intelligence at Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia

Faculty of Electrical Engineering and Computing, Univ. of Zagreb, Croatia

- The biggest teaching and research institution in electrical engineering, ICT, and computing in Croatia

Motivation: Big data challenge

- Big data everywhere
- The global datasphere could grow to 175 zettabytes (=175 billion terabytes) by 2025
- Almost half (49%) of world's data will be in clouds by 2025.
- In 2020, every person will generate 1,7 MB/s

Data science

- ICT developments resulted in acquisition of big data.
- Goal of data science is to extract knowledge from data.
- Data science and AI have shown to be most powerful methods for big data analysis.

Why do we need AI?

- Challenge: How to analyse big data
- Data science is an inter-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from many structural and unstructured data.
- Data science relies on AI techniques such as machine learning to achieve its goals.

What is artificial intelligence?

- AI refers to the ability of machines to perform tasks that would typically require human intelligence, such as learning, problem-solving, and decision-making.
- Beginnings of the area in 1950s, but limited by primitive computer technology.
- Recent decades brought computer technology developments that enabled deep learning with complex models.

Classifications of artificial intelligence systems

- Weak intelligence
 - Systems that solve single narrow defined problems (e.g., character recognition, email spam detection)
- Strong intelligence
 - Similar to human intelligence, it is able to solve wide spectrum of problems (e.g., speech understanding, visual scene understanding)
 - Current AI systems are not capable of strong intelligence.

AI applications

- Finance and economics, Business intelligence, Healthcare and medicine, Autonomous vehicles, Cyber-security, Government and military, Agriculture, Chatbots, Social networks

AI market and adoption

- Global AI market had value of 328 billion USD in 2021 with predicted compound annual growth rate of 20,1% until 2029.
- Adoption is uneven across sectors and countries.

Machine learning – basis for AI

- Refers to algorithms that are able to improve themselves through the learning process, similar to human learning.
- Machine learning process uses large numbers of examples.
- It is often easier to solve problem by learning instead of classical engineering approaches.

Artificial neural networks

- ANNs have structure motivated by human brain.
- Parameters are connection strengths between neurons.
- Learning algorithms determine connection strengths (aka weights)
- Developing new ANN architectures are active research area.

Deep learning

- Deep learning
 - Technological developments made possible implementation of large neural networks that learn on massive data sets.
- Computer technology developments enable implementation of very large models:
 - Chatbot GPT-3 has about 175 billion parameters
 - Chatbot GPT-4 has about 170,000 billion parameters

Desirable properties of AI systems

- Effective: Ensure AI is the right tool to address the problem/concern.

- Explainable: Logic of, and decisions produced by AI should be communicated to stakeholders in a concise and useful manner.
- Accountable: Organizations and individuals should be accountable for the outcomes of the AI systems they develop and implement.
- Secure: AI systems should be safe from outside interference.
- Fair: AI systems should be aware of and appropriately address potential discrimination and bias.

AI philosophy and ethics

- Philosophical questions:
 - Is AI possible (are there limits to what problems machines can solve)?
 - Are intelligent machines dangerous?
 - Can a machine have a mind, consciousness and mental states in the same sense as humans do?

Responsible and ethical use of AI

- In an attempt to promote human dignity, while minimizing potential risk, a variety of organizations developed recommendations for the responsible and ethical use of AI in society.

Challenges

- Avoiding biased AI systems caused by bias in learning data.
- Data privacy and intellectual property rights problems when learning from data on Internet (e.g., ChatGPT)
- Developing legal framework to regulate use of AI so human rights and data privacy is preserved.
- General Data Protection Regulation (GDPR) in Europe

AI and future workplace

- AI will drive job creation.
- AI worker skills will be highly ranked by companies.
- Some (simpler) tasks will be replaced (automated) by AI.
- More complex tasks will be assisted by AI – skilled human expertise will still be needed (e.g., medical diagnosis)

Challenges - deskilling

- Deskilling is where need for skilled labour within industry is eliminated or diminished by introduction of technologies operated by semiskilled or unskilled workers.
- Deskilling involves deterioration of highly skilled work into low skilled work.
- Example: coffee machine replacing skilled barista, or CNC machine replacing machinist
- Not a new phenomenon – deskilling appeared during the first industry revolution in late 18th century in England.

Conversational AI systems – ChatGPT

- Workers are using ChatGPT to help do their jobs.
- Companies are looking for ChatGPT expertise in their workers.
- Employers are encouraging workers to learn how to use AI
- Job applicants are using AI to write their résumés and improve their applications.
- AI is being used to make hiring decisions.
- Companies are using AI to write their performance reviews.

Potential to transform businesses and contribute to economic growth.

- Most advanced deep learning techniques deploying artificial neural networks could account for as much as USD3.5 trillion to USD5.8 trillion in annual value, or 40 percent of the value created by all analytics techniques
 - Analysis of 400 use cases

About half of the activities carried out by workers could be automated

- More than 2000 work activities across more than 800 occupations shows that certain categories of activities are more easily automatable than others.

- Nearly all occupations will be affected by automation, but only about 5 percent of occupations could be fully automated.
- Many more occupations have portions of their activities that are automatable: about 30 percent of the activities in 60 percent of all occupations could be automated.

Jobs lost: Some occupations will see significant declines by 2030.

- Around 15 percent of the global workforce, or about 400 million workers, could be displaced by automation in the period 2016–2030.

Jobs gained: In the same period, jobs will also be created.

- Introduction of personal computer in 1970s and 1980s created millions of jobs not just for semiconductor makers, but also for software and app developers of all types, customer-service representatives, and information analysts.
- With AI technology, many new occupations that we cannot currently imagine will emerge.

Jobs changed: Many jobs will be changed as machines complement human labour in workplace.

- Example:
 - AI-based methods for medical diagnosis will help doctors diagnose diseases and determine treatment by assisting with analysis of big medical data.
 - Doctor medical expertise will still be required.

Workers will need different skills to thrive in the workplace of the future.

- Demand for advanced technological skills such as programming will grow rapidly.
- Social, emotional, and higher cognitive skills, such as creativity, critical thinking, and complex information processing, will also see growing demand.
- Basic digital skills demand has been increasing and that trend will continue and accelerate.
- Demand for physical and manual skills will decline but will remain the single largest category of workforce skills in 2030 in many countries.

Many workers will likely need to change occupations.

- Occupations made up of physical activities in highly structured environments or in data processing or collection will see declines.
- Growing occupations will include those with difficult to automate activities such as managers, and those in unpredictable physical environments such as plumbers
- Other occupations that will see increasing demand for work include teachers, nursing aides, and tech and other professionals

Conclusions

- Many questions, not so many answers
- AI will change the future workplace
- People do not like changes, but world has been changing and will continue to change
- AI as new technology will bring benefits to society like previous technological revolutions did

Questions from the audience:

Jens T.: Is a final explainability of AI systems possible? Or is a black box remaining?

Sven L.: Information/explainability can be delivered by the AI system itself.

Key take aways

- **Big Data Challenge:** *The world is flooded with data, with predictions of 175 zettabytes by 2025, necessitating the use of data science and AI for analysis.*
- **AI Applications:** *AI has diverse applications in finance, healthcare, and more, with a growing market.*

- **Machine Learning and Neural Networks:** Machine learning improves with large data sets, similar to human learning, while artificial neural networks are inspired by the human brain to determine connection strengths.
- **Desirable AI Properties:** Effective, explainable, accountable, secure, and fair AI systems are crucial for responsible use.
- **AI Philosophy and Ethics:** Questions about AI's limits and risks are considered, with a focus on responsible AI use. Main points are: Avoiding biased AI systems, (GDPR) data privacy and intellectual property rights problems in Europe, developing legal framework to regulate use of AI..
- **AI and the Future Workplace:** AI will create and transform jobs, with a shift in skill demands and the potential for occupational changes.
- Conclusion: Questions remain, but AI will bring benefits to society like previous technological revolutions did.

Presentation: “The impact of AI on the banking workplace in Europe and beyond: Results of qualitative interviews in 10 countries”

- **Martina Keil**, Senior Manager, ARIX Business Intelligence GmbH

Method and Sample of the Qualitative survey

- 20 Webcam interviews by Teams, Zoom
- Schedule 17.-28. April 2023
- 10 European countries: Croatia, France, Germany, Italy, Spain, the Netherlands, Romania, Ireland, Denmark, Sweden.
- Respondents were provided 50/50 by UNI and EBF

1. COVID19 and other crises

Percentage of bank employees working remotely during COVID19

- Remote working divide within Europe. Benelux & Nordic countries, >75% remote working, in Southern & Eastern Europe such as Spain and Romania only around 10-30%.

Benefits and problems of increased work from home

- There are notable benefits such as improved flexibility, work-life balance, and productivity, challenges arise in terms of reduced social interaction, onboarding difficulties, work-life boundaries, and ergonomic considerations.

Programs for remote working employees by banks to prevent isolation.

- Measures focus on hybrid work models, which prove to be rather effective, whereas also online meetings, social events, wellness initiatives including buddy systems for new employees show creative solutions.

Impact of other crises, such as inflation on the banking industry

- In most countries, banking employees' salaries and living standards were affected by inflation. By pay deals, cost-of-living payments and adjustment of salaries negative effects could be partly mitigated.

2. Agile working methods

Agile working methods in the banking industry

- Agile working methods started in all countries several years ago, they are extending beyond IT and software development.

Use of agile working methods in the banking sector

- Agile working methods have been adopted in various areas, with a strong emphasis on project and service development, Human Resources and change and optimization projects.

Perception of agile methods by employees

- Perceptions of agile methods are mixed, with positive aspects such as alignment, communication, and growth opportunities and concerns about increased workload, adaptability challenges, and unrealistic goals.

The future of agile working in the banking sector

- Agile methods are expected to persist and grow within the banking sector, driven by technology with a focus on departmental adoption but it might be also displaced by other solutions in the long run.

3. Artificial intelligence and digitalization

Use of AI in banking by category or area

- Main AI use cases in banking in Europe according to our survey are customer dialogue (chatbots), credit rating of new customers, back-office processes and fraud prevention and detection.

Sample AI/automation projects in the banking sector

- AI projects concern HR systems, customer dialogue, credit rating and back-office processes. HR related speech analytics system and resume screening improve services but have both negative side effects.

AI impact on employment in banking in the next five years

- The supporting role of AI, enhanced productivity and efficiency, the creation of new roles and possible job enhancement and hyper-personalization in customer service are viewed positively, while uncertainties, potential job losses, more freelance jobs, the need for adaptation of employees, regulatory uncertainties and ethical concerns are seen as challenges.

Further regulation on working with AI

- In favour of regulation is: The European AI Act and the GDPR will provide regulations on AI liability to prevent discrimination and avoid risks in AI systems, also to define responsibilities, to regulate high risks and benefits, to increase legal certainty, trust and transparency. Opposing voices remark that there should be a wider focus beyond AI, that sufficient regulation is already in place and an European solution would be better rather than individual.

4. Options for banks and the Social partners

Strategies for banks to stay fit and preserve good jobs for employees:

- Banks need to balance their focus on profitability and customer satisfaction with employee well-being, skill development, flexibility, and adaptability to stay fit for the future and create satisfying jobs for their employees. They should invest in AI, new services, communication, monitor trends and foster innovation while providing an attractive workplace for employees with training, coaching, focus on diversity and inclusion and good working conditions.

The Role of the Social Partners to influence the development of AI positively:

- The social partner's role comprises social dialogue, collective agreements and co-determination, to develop guiding principles and frameworks, to promote learning and skill development and to advocate for Ethical AI.
- Focus should also be on legislative regulation, transparency and to foster industry attractiveness.

Key take aways:

1. COVID19 and Other Crises:

- *Remote work, as the main consequence of COVID19, varied across European countries.*
- *Benefits included increased flexibility and work-life balance, but challenges like social isolation and ergonomic concerns arose.*
- *Banks implemented programs, emphasizing hybrid work models and social initiatives.*

- *Inflation affected bank employees' salaries and living standards, mitigated through pay deals and cost-of-living adjustments.*

2. Agile Working Methods:

- *Agile methods have been adopted in the banking industry, extending beyond IT and software development.*
- *Beside IT and software development, they are used in project and service development, HR, change management, and optimization projects.*
- *Employee perceptions of agile methods were mixed, with positives such as improved communication and growth opportunities, along with concerns about increased workload and adaptability challenges.*
- *Agile methods are expected to persist, with a focus on departmental adoption, but may face displacement by other solutions.*

3. Artificial Intelligence and Digitalization:

- *AI is used in customer dialogue, credit rating, back-office processes, and fraud prevention in banking.*
- *AI projects cover HR systems, customer dialogue, credit rating, and back-office processes, but some have negative side effects.*
- *AI is expected to have a supporting role, enhance productivity, create new roles, and offer hyper-personalization, but challenges include job losses, regulatory uncertainties, and ethical concerns.*
- *Regulation is debated, with some in favour of the European AI Act and GDPR for preventing discrimination and enhancing legal certainty, while others call for a broader focus and a European-wide solution.*

4. Options for Banks and Social Partners:

- *Strategies for banks include balancing profitability with employee well-being, skill development, flexibility, and adaptability.*
- *Banks should invest in AI, foster innovation, and provide an attractive workplace with diversity and inclusion.*
- *Social partners' roles include social dialogue, collective agreements, and advocacy for ethical AI.*
- *Their focus should also be on legislative regulation, transparency, and industry attractiveness.*

Reflections & discussions by the Social Partners on ARIX report

- **Maureen Hick**, Director, UNI Europa Finance
- **Jens Thau**, Chairman, EBF-BCESA & Deputy General Manager, AGV Banken

Maureen H: The last point on “human-in the loop” is crucial for me. Social dialogue is always about humans, AI should facilitate work and not replace it, be digital but stay human.

Jens T: We are trying to give use of AI a sense. Decisions for AI are always about risk assessment (e.g. be redundant in systems, not over rely on AI => Cyberthreats). It is people who run a bank, not systems. Ethical questions of AI are most of the time questions of accountability

Maureen H: We need futureproof and robust positions and regulations. We need training. The environmental impact of AI is important. In client related business: Before making important decisions, clients want to talk with a real person

Jens T: We hope for opening clauses regarding AI regulation for Social Partners as they are closer to the problems. Concerning interaction with clients: first info/education by machine interface/AI before talking to a person will be the future. We are in a competition to recruit, train, retain. Bankers need to have a certain tech affinity.

Maureen H: We need to use people of the existing workforce => therefore training is needed.

Jens T: Skills needs might decrease with the evolution of AI in certain jobs.

Maureen H: Social Dialogue is very important to solve these problems.

Key take aways:

- **Human-Centric AI:** Emphasizes the importance of AI complementing human work, not replacing it.
- **Risk Assessment:** Decisions on AI usage involve risk assessment, focusing on system redundancy and ethical accountability.
- **Regulations:** Calls for robust and futureproof regulations, highlighting the need for ongoing training and consideration of AI's environmental impact.
- **Client Interaction:** Predicts a shift towards initial AI interactions before engaging with humans in client-related businesses.
- **Recruitment and Training:** Acknowledges the need for recruiting and training talent with tech affinity.
- **Social Dialogue:** Underlines the importance of social dialogue in addressing AI's impact on the banking sector as Social Partners are closer to the problem and employees as regulators.

Fireside chat on the projects next steps:

- **Tobias Weber**, Head of Market Intelligence, ARIX Business Intelligence GmbH
- **Sébastien de Brouwer**, Chief Policy Officer, European Banking Federation

Sébastien d. B.: We have seen a lot of interesting results from the interviews. Let's start with the subject of "agile working". From your point of view, is it just a buzzword or is agile here to stay?

Tobias W.: As we have seen in the results of the research, agile working methods are established in IT and are spreading to other functions and sectors.

From my point of view, it heavily depends on the task you are organizing in an agile way. For standardized processes, agile will not add any value. But if it is about complex processes, e.g. product development, there is a lot to learn from an agile approach.

In the end, agile is about efficiency and customer centricity. So, nothing new concerning the aims. But a lot of news for organizational culture and ways of working.

Sébastien d. B.: Coming back to the subject of AI - What do you expect for the next years?

Tobias W.: AI is no longer a niche subject, but a technological game changer that will influence economies and societies. AI applications will change working processes in a way not yet foreseeable.

Even with tools as ChatGPT, we are still at the very beginning of this journey and there will be a continuous need to take care of this subject. An agile way of accompanying and steering this development is needed.

Sébastien d. B.: I'd like to seize the opportunity to look back to what we have achieved so far. What is your view on this?

Tobias W.: The start of the project was in 2022. We have started with an extensive research on facts and figures concerning the subjects of this project: COVID19 and other crises, agile working and especially AI.

This is now the 3rd workshop during this project after Paris and Stockholm. We have heard inspiring lectures about the rise of AI, seen exciting case studies and had countless fruitful discussions.

This all will now serve as an important impact for the final reporting.

Key take aways

- *Tobias W. emphasizes that agile working methods are here to stay, particularly in complex processes like product development. Agile aims to enhance efficiency and customer centricity, marking a cultural shift in organizations.*
- *Regarding AI, he notes that it has moved beyond a niche subject and is becoming a transformative force that will impact economies and societies. AI's influence on working processes is evolving, and there is a need for ongoing adaptation and steering, emphasizing an agile approach to accompany this development.*
- *Looking back at the project, he highlights that it began in 2022 and involved extensive research on topics such as COVID19, crises, agile working, and AI. The project has progressed through workshops, lectures, and discussions, contributing to the final reporting's important impact.*

Conclusions and final remarks by

- **Jens Thau, Chairman, EBF-BCESA & Deputy General Manager, AGV Banken**
- **Michael Bodulfsen, President, UNI Europa Finance**

Michael B.: If we look at 1.5 million finance workers from which 40% will retire soon, we are facing a big challenge. Still, determine the “What/Why” before the “how and don’t jump into AI without a proper strategy. Make banking more attractive again, we need continuously to convince the European Commission of the need for social dialogue.

Jens T.: Most employees in banking are seeing the challenges in the future but they also believe in solutions.

Michael B.: Human needs to stay in control. The aim of the financial sector is to stimulate social & financial growth in societies. The diversification in the financial sector needs to be kept up.

Jens T.: Regulation must be discussed and influenced at European level. If regulation arrives in the countries, it is too late to discuss or influence.

Key takeaways

- *Address the challenges of an aging workforce in finance.*
- *Emphasize the importance of a well-defined strategy before adopting AI.*
- *Maintain human control and focus on stimulating social and financial growth in society.*
- *Advocate for diversification in the financial sector.*
- *Influence regulations at the European level to avoid reacting too late at the national level.*

Summary: Main aspects discussed and stated during the workshop

AI Facts and Figures:

- *An OECD survey warns of job risks with 27% at risk due to AI.*
- *Concerns are widespread with 60% of individuals fearing job loss from AI. Financial workers are more worried than manufacturers.*
- *In the financial industry, 63% enjoy AI at work, with 79% reporting increased productivity.*
- *Limited evidence of AI's significant impact on employment. 50% state no effect, 26% decrease.*
- *Reasons for AI in HR: AI is expected to significantly increase productivity in HR by over 50%.*
- *Challenge posed by the vast amount of data, with predictions of 175 zettabytes by 2025.*

AI and Employment

- *Job changes due to AI, requiring new competencies and affecting HR.*

- *AI should complement human intelligence rather than replace it.*
- *Agile methods may be beneficial, depending on the task.*
- *History suggests that new technologies create more tasks and reduce job loss concerns.*
- *AI can help mitigate the impact of a changing workforce due to retirements.*
- *Workforce adaptation is essential as demographics change.*
- *AI automates tedious tasks, making work more interesting but also more intense. (repetitive tasks are being replaced)*
- *AI tends to replace tasks, not jobs.*
- *Essential role of skills investment to adapt to AI.*
- *Greater risk for workers with fewer skills and sufficiency of basic digital skills for using AI.*
- *Negotiation, creativity, communications will become more relevant.*
- *Unions should help identifying skill gaps and push for training.*

AI and Regulation / the EU AI Act

- *Emphasis on making value-driven decisions for shaping the future.*
- *The European Commission is preparing AI regulations.*
- *The planned EU regulation encompasses three AI risk levels.*
- *Employee-related AI is a high-risk field, manageable by Social Partners.*
- *Regulators should be open to advice by the Social partners.*
- *Both regulators and Social Partners should stay ahead of AI developments.*
- *A European framework is needed for harmonized rules among countries.*

Ethical AI and Transparency

- *It's Europe's role in leading ethically in AI development and regulation.*
- *There is a need in addressing AI's ethical considerations to avoid biased AI systems (algorithms) and address data privacy and intellectual property rights.*
- *AI must not remain a black box, as it can explain answers and decisions (in future.)*

AI Applications in Banking

- *Use of AI in various banking processes, from customer dialogue to fraud prevention.*
- *Overall benefits of AI tools in finance, which include improved efficiency, cost reduction, workload reduction, innovation, enhanced user experience, and attracting new clients.*
- *Importance of a proper AI strategy to assess risks, including diversity between banks.*
- *Necessity for cooperation among stakeholders and AI training.*
- *Growing challenge of handling big data and AI applications in various fields.*
- *Importance of desirable AI properties such as effectiveness, explainability, accountability, security, and fairness.*
- *Anticipating AI's influence on the future workplace, with shifts in skill demands and potential occupational changes.*

AI Applications in HR

- *Generative AI can create content based on learned patterns.*
- *Benefits of AI in HR, including increased productivity and reaction on changes in talent habits.*
- *AI improves efficiency, accuracy, decision-making, personalization, and saves costs.*
- *The application of ChatGPT in talent recruitment, highlighting its human-like conversation quality, speed, and scalability.*
- *Challenges associated with AI tools in HR are the lack of common sense, context understanding, domain knowledge, and creativity.*
- *Clear prompts, answer validation, and staying updated when using AI tools in HR are needed.*
- *Overarching role of education and experimentation with AI*

Strategies for Banks

- *Trust in banks and ethical AI offer a competitive advantage compared to Fintechs.*
- *Need for AI experts on boards who consider employees' perspectives.*

- *AI's impact in financial services and its potential to improve job quality and productivity.*
- *Strategies for banks to balance profitability and stability with employee well-being, skill development, flexibility, and adaptability.*
- *Importance of investing in AI, fostering innovation, and providing an attractive workplace with diversity and inclusion*
- *Focus on industry attractiveness to attract talents.*

AI and the Social Partners

- *Social Dialogue's important role in preserving solid values.*
- *The role of Social Partners in collective agreements, and advocacy for ethical AI.*
- *AI adoption tends to result in better outcomes for workers, concerning performance and mental health, when their representatives are consulted on the matter.*
- *Importance of Social Partners in managing employee-related AI risks with a focus on legislative regulation, transparency, and industry attractiveness to guide future actions.*
- *Emphasizing human in control principle and stimulating social and financial growth in society.*
- *The need to influence regulations at the European level to avoid reacting too late at the national level.*

5.3 Questionnaire

European Social Partners Joint Project

Banking in 2030 - How will the current global trends, especially AI, shape the post COVID19 pandemic future of the European banking industry and its employees?

Questionnaire

This is an EU co-funded research project, initiated by the European Social partners (EBF, ESBG, EACB and UNI Europa Finance), and led by the European Banking Federation, to perform a qualitative analysis on how the development of **Artificial Intelligence** and **automation** and other megatrends such as **agile working**, will affect the banking industry and its employees in the upcoming five years and what will be the effects of the **COVID19** pandemic and banking regulation in this scenario.

This individualized survey will be carried out in co-operation with the research agency ARIX

We contact you, because you have given your consent to EBF. Your participation is of course voluntary, and you can revoke your consent at any time.

Important:

1. Please refer to the attached questionnaire to prepare for the interview.
2. You have been already contacted by email, phone or Teams from a representative of Kantar or one of its partners, to arrange an appointment with you to conduct the **interview by Teams or Zoom.**
3. The interview will take place between: **17.-28. April 2023.** (Please make sure, that you will be available within this week.)
4. If you decided to **complete the questionnaire in writing,** please return the **electronically** completed questionnaire by email to ARIX no later than **April 28, 2023.** In this case, you will be contacted for the recording of the statement only.

We would like to thank you in advance for your kind co-operation and assistance!

If there are any questions or uncertainties, please contact:

Banking in 2030 - How will the current global trends, especially AI, shape the post COVID19 pandemic future of the European banking industry and its employees?

A. General information

In the past, the banking industry and its employees had to cope with a wide variety of crises and trends. At present, global events are dominated by the aftermath of the **COVID19 pandemic** plus new crises such as **the Russian war in Ukraine**, the economic consequences of which are not yet foreseeable, as well as by **Artificial intelligence** and **automation** which is challenging the entire banking sector. Also, new/extended organizational formats, e.g., agile working and remote work, affect the working environment.

We would like to talk with you about the impact of AI / digitalisation and other megatrends on employment and the workplace in the banking sector.

In a first step, we would like to ask for some general information about yourself and your role.

A1 In which country are you currently based? If you are working in multiple countries, please indicate the country where you are most knowledgeable for answering the subsequent questions.

France	Germany	Italy	Spain	Denmark	Netherlands	Sweden	Croatia	Romania	Ireland
<input type="checkbox"/>									

A2 Which bank social partner organisation do you represent?

- National Employers Association (EBF, ESBG, EACB)
- National/sectoral Trade-Union (affiliated to UNI Europa Finance)
- other*

*If other, please specify:

A3 What is your area of responsibility/ title in the organisation you represent?

B. COVID19 and other crises

The pandemic caused by COVID19 has had a massive impact on the economy and labour markets worldwide. For years we have observed a decline in bank jobs and bank branches in the European Union. This pressure increased under COVID19, and job losses continued to intensify.

Furthermore, stress and other indirect effects of COVID19 led to an increase in mental health problems. A COVID19 infection also increases the risk of being diagnosed with other diseases.

On the other hand, COVID19 has accelerated digitalisation. Businesses increased their use of digital platforms, social media, and the internet. They invested in new equipment and software.

Work from home increased to an unprecedented extent in most of the countries. Increased work from home predominantly means more flexibility and autonomy, better conditions for intensive work, better balance between work and private life and less commuting, but it can also lead to increased blurring of boundaries between work and private life, risen workload, increased isolation, and quiet quitting.

1. What percentage of bank employees in your banking environment were able to work remotely during the pandemic? What measures were taken by banks and what was the impact for the “essential” employees who could not work remotely?

Click here to insert your text

2. What are your experiences with the benefits and problems of increased work from home in the banking sector? Please elaborate on this.

Click here to insert your text

3. Please also elaborate on other impacts COVID19 had on banking employees and/or the workplace?

Click here to insert your text

4. Have you or has someone else in your work environment negotiated a collective agreement on remote work or on future workplace developments more generally, including those which cannot be foreseen?

Click here to insert your text

5. In order to ensure integration and prevent any risk of isolation as part occupational health and safety, have you foreseen any programs for employees working remotely?

Click here to insert your text

6. Do you see any impact of the current global crises such as the Russian war in Ukraine, rising inflation, increasing energy cost and cost of living especially on the banking industry and its employees? If yes, please elaborate.

Click here to insert your text

C. Artificial intelligence and automation

[Interviewer: Read paragraph 1 only]

Beside COVID19 especially Artificial intelligence (AI) and digitalisation revolutionized the banking sector. Artificial intelligence (AI) is being used in more and more areas of work (for example for credit scoring, fraud/money laundering detection, text, image and language analysis or for recommendation systems).

AI “Artificial intelligence (AI) according to the European Commission, refers to systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals.

AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications).”

7. In which areas are AI applications already used in your banking environment in the sense described above?

Please tick all the boxes that apply.

<input type="checkbox"/>	Customer dialogue (front office) , e.g., chatbots (digital text or voice assistants to interact with customers), robo-advisors (automated product recommendations).
<input type="checkbox"/>	Credit rating of potential new customers, processes for identity/legitimacy verification (know-your-customer/KYC)
<input type="checkbox"/>	Back-office processes , e.g., needs analyses, risk management, stress tests, reporting
<input type="checkbox"/>	Contract and complaint management , e.g., data collection and management, customer communication support
<input type="checkbox"/>	Fraud prevention and detection , e.g., detection of false information, payment monitoring, anti-money laundering
<input type="checkbox"/>	Compliance/ legal compliance , e.g., regulatory technology (RegTech), macro-prudential monitoring, data quality assurance, supervisory technology (SupTech)
<input type="checkbox"/>	Personnel planning and development , e.g., personnel deployment planning, matching of requirement and competence profiles
<input type="checkbox"/>	Personnel selection and marketing , e.g., robo-recruiting (pre-selection of applicants), AI-based search for potential employees
<input type="checkbox"/>	Cybersecurity
<input type="checkbox"/>	Trading and portfolio management
<input type="checkbox"/>	No use of AI
<input type="checkbox"/>	Other*

*If other, please specify:

Click here to insert your text

8. What kind of self-learning systems have been invented or are about to be developed through AI that will be introduced in / have an impact on the banking sector and its employees? Which AI solutions are currently the most interesting from your point of view?

Klick here to insert your text

9. Could you please describe a sample AI/automation project including the positive and/or negative impact on the employment/workplace situation in your banking environment?

Klick here to insert your text

10. What positive or negative impact on job profiles do you already see or expect from the development of AI/automation?

Klick here to insert your text

11. What are your expectations how the development of AI/automation will affect the employment and workplace in the banking sector in the **upcoming five years**?

Klick here to insert your text

12. Do we need further regulation on working with AI, and if so, how could it help to mitigate any negative effects of AI/ automation on banking employees?

Klick here to insert your text

13. Have you or someone in your work environment negotiated a collective agreement on AI?

Klick here to insert your text

D. Agile working methods

[Interviewer: Start interview at paragraph 4 “Agile working methods are characterized...”]

Advancing globalization and digitalization offer more and more opportunities, increasing complexity and ambiguity in the world. In a constantly changing environment, those who can adapt quickly to change are successful. Agile management of projects helps to respond flexibly to changing markets, conditions and customer wishes.

The agile methodology is a project management framework, used by cross-functional teams to iteratively complete tasks and projects. The approach is characterized by constant cooperation with stakeholders, continuous improvement and a fast delivery of results.

The project team divides a project into several phases called “sprints”. Each sprint has a defined duration (usually in weeks) with a running list of deliverables. Teams go through a cyclical process of planning, executing, and evaluating. The constant collaboration between team members and project stakeholders throughout the process is crucial for informed decisions.

Agile working methods are characterized by flat hierarchies with a moderating leadership that hands over responsibility to employees and autonomous working groups. The methods use agile forms of work and communication (Scrum, Design Thinking, Kanban, etc.). Agile methods have their origins in software development and continue to focus on areas where development is paramount, such as product development and project management.

14. Are agile working methods already used in your business environment, apart from software development, and if so, since approximately when? How much is agile working already common in your business environment, and is the extent constant, increasing or decreasing?

Klick here to insert your text

15. In which areas, apart from software development, does the banking sector in your country mainly use agile working methods?

Klick here to insert your text

16. What does this mean exactly for the banking organizations and their workforce? What are the positive or negative effects on the employees and the workplace?

Klick here to insert your text

17. How do employees perceive the introduction of agile methods? Does it increase or decrease the workload and the satisfaction?

Klick here to insert your text

18. How do you assess the future of agile working methods in the banking sector? Is this an on-going trend that no bank can escape because it has proven successful, or will it disappear again? What are your expectations for the **upcoming five years**?

Klick here to insert your text

19. Are there any other megatrends that are currently affecting employment and the workplace in the banking sector or will impact it during the **upcoming five years** (e.g., demographic changes, sustainability etc.)?

Klick here to insert your text

20. What options and strategies can banks pursue to stay fit for the future while at the same time preserving good and satisfying jobs for their employees?

Klick here to insert your text

21. Do we need further regulation on agile working, and if so, how could it help to mitigate any negative effects on the employees and their workplace?

Klick here to insert your text

22. What can be the role of the Social Partners to influence the development of ethical and responsible AI/digitalization and agile working in a positive way?

Klick here to insert your text

E. Final Statement (for video)

Now we come to the final question, which we would like to combine with other contributions in a short video. Please remember to be as brief as possible and give your answer in one short sentence.

23. "How can the role of Social Partners positively influence the development of ethical and responsible AI/digitalization and agile working? How will this shape the banking employment/workplace in the next five years?"

Klick here to insert your text

Thank you very much for your contribution to this survey!

5.4 About ARIX

About ARIX

With 25 years of experience and offices in Germany, the US and China, ARIX is a leading provider for market and competitive insights. ARIX's employees combine expertise in market intelligence, private equity research and market research with advanced and game changing technologies, contributing to the success and growth of leading companies and organizations.

- First-class generalists and specialists
- State-of-the-art methods - in
 - Market & Competitive intelligence,
 - Market research (B2B, B2C), Qual and Quant
 - PE research incl. analytics and consulting
 - Programming, Automation & AI
- Extensive knowledge base - with global databases and benchmarks
- Proven success - numerous case studies, long-term customers
- Technologically and digitally - state of the art
- Fast and precise– used to short time horizons and deadlines.

Our Expertise and Network

ARIX Business Intelligence is the desk research expert and preferred supplier for APAX and KANTAR and thus part of two of the world's leading consulting and market research companies.

We are experts in providing national and international market, industry and competitive information for Private Equity clients, corporate customers and public contracting authorities.

We have access to a worldwide network of researchers and benefit from their knowledge of local markets, sources and languages around the globe. This guarantees that the data is always validated where it is generated.

Our consultants are experts in researching consumer and market data, industry insights and information on key players. We have access to a large number of exclusive databases.

In case of information gaps or further information needs, we conduct targeted interviews with suppliers, dealers, retailers or industry experts and verify, evaluate and analyse our research findings.

Our market research department supports B2B and B2C full service research projects, including programming and analysing of questionnaires, full execution of projects, creation of final reports in Word, Excel and Powerpoint.

Our Programming and Analytics Team programs online questionnaires, web scraping and analysing tools to automate research tasks and tests and applies AI tools, beyond ChatGPT.

From 2017 to 2020 ARIX Business Intelligence conducted pillar I and pillar II of the European Social Partners project "The Impact of Regulation on Employment in the Banking Industry".

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