#FinAI

Anthropocentric approach to AI to support people and companies.
Developing social dialogue on e-skills of workers
in the European financial sector

Assessment Comparative Research Report

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DISCLAIMER

EXECUTIVE SUMMARY.
FINAI ASSESSMENT COMPARATIVE RESEARCH REPORT

The **FinAI Assessment Comparative Research Report** examines how digitalisation and Artificial Intelligence (AI) are reshaping the European financial sector, its workforce and its governance. According to this research, the ongoing transformation is taking place within a regulatory framework that seeks to balance market efficiency, sustainability and social fairness. It also shows that the challenges and opportunities raised by AI require an **anthropocentric approach** – one that puts people at the centre of innovation, ensuring that digital transitions are socially sustainable as well as technologically sound.

The report situates its analysis in the broader European policy framework, which has gradually evolved from early market integration to more recent legislation on sustainability and digital finance. Measures such as the Sustainable Finance Action Plan, the Corporate Sustainability Reporting Directive and the Digital Finance Strategy illustrate how financial governance now extends beyond stability and competitiveness to include environmental and social objectives. This context is crucial for understanding how AI interacts with regulatory priorities and with the world of work.

European regulatory framework

The report situates its analysis within the evolving **European legal and policy framework for financial services**, which has progressively broadened from market integration to the pursuit of sustainability and digital transformation. According to this research, the EU has built a layered architecture combining treaty provisions (TFEU arts. 49, 56, 63, 114) with successive waves of legislation: from the Financial Services Action Plan and the first Banking and Insurance Directives to MiFID II/MiFIR, CRD/CRR, BRRD, Solvency II and more recent reforms such as MiCAR, DORA, the CSRD and the CSDDD. This evolution has also been accompanied by the rapid development of the fintech ecosystem, prompting the EU to adapt its regulatory approach to ensure that innovation in digital finance remains secure, transparent and consistent with broader policy goals. These measures demonstrate how financial governance now extends well beyond stability and competitiveness to embed social and environmental objectives, thereby shaping the context in which AI is being deployed. This evolution is also reinforced by the role of European Supervisory Authorities (EBA, ESMA, EIOPA, ESRB) and by the case law of the Court of Justice of

the European Union, both of which continue to define the scope and limits of financial regulation.

The impact of AI in finance

Against this background, the report examines the **opportunities and risks of AI in finance**, drawing on the analysis of international reports and scientific literature on the topic. The findings highlight a dual nature: on the one side, AI enhances efficiency, accuracy and innovation, expanding financial inclusion through advanced credit assessment tools and new fintech applications such as robo-advisory, automated lending and digital customer onboarding; on the other side, it raises serious concerns regarding bias, opacity, cybersecurity and market manipulation, with potentially systemic effects.

The rapid uptake of AI in finance, namely in fintech services, has also introduced additional vulnerabilities. Algorithmic trading and automated decision-making can amplify volatility and generate unintentional market distortions, while the increased reliance on large datasets and third-party digital infrastructures exposes financial institutions to heightened cybersecurity and data-governance risks. Furthermore, the opacity of proprietary algorithms complicates accountability, particularly in cross-border contexts where supervisory authorities may have limited oversight.

This research shows that these tensions are mirrored in the workplace: while surveys indicate that workers often experience AI as supportive of performance, skills and decision-making, there are also widespread concerns about algorithmic management, intrusive monitoring, job stability and wage pressure. These risks are not merely technical but legal and societal, as they touch upon fundamental rights such as privacy, non-discrimination and dignity at work.

The study underscores that these risks are not merely technical but legal and societal, as they touch upon **fundamental rights**. For this reason, the new **AI Act (Reg. 2024/1689)** introduces a risk-based regulatory model that directly classifies credit scoring and insurance premium calculation as “high-risk” uses, subject to strict obligations. However, the AI Act appears to prioritise consumer protection more than employee welfare, leaving significant gaps in financial worker safeguards. Comparative insights across national regulatory frameworks (DK, ES, FI, FR, GR, HU, IS, IT, NO, RO, SE, TR) confirm that implementation of regulations concerning AI in the employment context is uneven: some countries (e.g. IT, FR) have already integrated AI and work-related safeguards in labour law, while others (e.g. DK, SE, FI) rely mainly on general data protection and anti-discrimination rules. According to this research, this fragmentation underscores the need for a coherent, human-centred

approach that balances innovation with social protection, particularly in fast-evolving financial and fintech ecosystems.

Labour market trends

The empirical analysis conducted across eleven countries (DK, ES, FI, FR, GR, HU, IS, IT, NO, RO, SE), based on EU Labour Force Survey (EU-LFS) data, shows that while the financial and insurance sector remains stable in overall size (around 2.7% of total employment), its internal composition is changing significantly. The workforce is increasingly well-educated – 70% hold tertiary qualifications – and ageing, with the average age rising from 40.6 to 43.2 years between 2008 and 2022. Jobs are predominantly full-time and permanent, with long tenure and limited mobility, which reduces adaptability to rapid technological shifts.

The occupational structure is concentrated in cognitive roles, many of which are highly exposed to AI-driven transformation. Projections indicate modest growth in analytical and managerial profiles, but a decline in clerical functions such as customer service and administrative processing. This gradual reconfiguration signals that while overall employment levels may remain stable, **the content of work is changing fast**.

According to this research, this creates an urgent need for targeted **reskilling and upskilling strategies**. Lifelong learning, transversal competences and digital literacy emerge as key enablers of sustainable careers. Workers in high-exposure roles will need support to transition into new positions, while younger entrants must be equipped with both technical and soft skills to thrive in an AI-enhanced environment. These findings confirm that skills development is not only an economic imperative but also a cornerstone of an **anthropocentric approach**, ensuring that technological innovation strengthens – rather than weakens – the social dimension of work.

Looking ahead, workforce projections suggest a gradual polarisation of roles. On one side, there will be increasing demand for high-skilled analytical, digital and managerial profiles, particularly in areas such as risk management, compliance and data governance. On the other, routine clerical tasks are expected to decline as automation and AI tools mature. This does not imply large-scale job losses, but rather a **reallocation of tasks** that will require adaptability and continuous learning. If supported by anticipatory policies and inclusive dialogue, these transitions could turn potential disruption into an opportunity for renewal, equipping the financial workforce for the next decade of change.

Social dialogue and governance of transitions

The comparative mapping of initiatives carried out in 12 countries (DK, ES, FI, FR, GR, HU, IS, IT, NO, RO, SE, TR, plus the European level) was made possible through the

active contribution of the Trade Union Organisations associated with the FinAI project, under the guidance of the Project Coordinator and complemented by documentary research conducted by the research team. The analysis shows that **social dialogue and collective bargaining can play a crucial role** in steering AI transitions in finance. **However, their effectiveness largely depends on the institutional context, the strength of industrial relations systems and the concrete implementation of the commitments undertaken. In several cases, the distance between negotiated provisions and their practical enforcement remains significant.**

Across contexts, several consolidated results emerge, although with varying degrees of maturity and impact**:**

- **Skills anticipation and training**: social partners increasingly design joint reskilling and upskilling pathways, often funded through sectoral mechanisms. This enables workers to adapt to changing tasks while maintaining employability. Yet, such initiatives are not uniformly available, and participation rates often remain limited to larger institutions or specific occupational groups.
- **Fair governance of algorithms and data**: agreements have introduced safeguards on data use, monitoring and algorithmic decision-making, ensuring transparency and human oversight. Nevertheless, their application frequently depends on company-level capacity and mutual trust, and enforcement mechanisms are still at an early stage.
- **Managing workforce transitions**: negotiated measures help mitigate the risks of banking desertification, mobility burdens and job obsolescence, for example by combining redeployment schemes with digital literacy programmes. However, these instruments often remain pilot experiences rather than consolidated practices, and their long-term sustainability is still uncertain.
- **New forms of representation**: social partners are adapting to hybrid work arrangements and diverse employment contracts, ensuring inclusiveness and continuity of dialogue. At the same time, fragmented employment patterns and outsourcing can weaken the continuity of representation and make dialogue more complex.

Taken together, these experiences demonstrate that **dialogue is not only reactive but proactive** – it allows institutions and workers to co-shape the digital transformation when supported by strong institutional frameworks and genuine follow-up mechanisms**.** Still, the overall picture remains uneven across countries and sectors, suggesting that the governance of AI transitions requires continuous monitoring, resource allocation and commitment from all parties. This governance model, grounded in the **European Pillar of Social Rights** and aligned with the Industry 5.0 paradigm, represents an important but still evolving component of the anthropocentric approach promoted by the FinAI project.

Key messages

- Digitalisation and AI are reshaping the financial sector – not by reducing jobs overall, but by transforming skills, roles and employment structures.
- The EU's regulatory framework is evolving rapidly, yet current approaches tend to prioritise consumer protection over worker protection – leaving space for stronger employment safeguards.
- The workforce is stable but ageing, highly skilled and highly exposed to AI, making anticipatory reskilling and mobility policies essential.
- Social dialogue and collective bargaining remain essential channels to promote a human-centred transition, although their actual impact varies widely across countries and depends on the effective implementation of negotiated measures.

Conclusion

According to the FinAI Assessment Comparative Research Report, the digital transformation of finance represents both an opportunity and a risk. AI can enhance efficiency and inclusion, but without robust governance it may amplify inequalities and undermine trust. The way forward requires an **anthropocentric approach**, where technology is designed to serve people, organisations and society as a whole.

By combining legal analysis, empirical evidence and a comparative mapping of social dialogue and governance practices, this research shows that Europe's financial sector can become a model of democratic and socially responsible innovation. Realising this potential, however, depends on the effective implementation of existing frameworks, sustained commitment from all actors, and the capacity to translate negotiated principles into practice**. Only through such continuous effort can digital transitions in finance remain genuinely human-centred and socially sustainable.**

INTRODUCTION

Objectives

This report presents the main findings of the research phase of FinAI project coordinated by First-Cisl (Italy) and co-funded by the European Commission. The project – titled *FinAI – Anthropocentric approach to AI to support people and companies*. *Developing social dialogue on e-skills of workers in the European financial sector* – explores the impact of new technologies, namely Artificial Intelligence (AI) and Machine Learning (ML), on the European financial sector. Expanding beyond the mere technological aspects, this research focuses on the consequences on working conditions and labour market aspects, with the additional goal of fostering the exchange of social dialogue practices among national and European-level social partners.

The rationale behind the project stems from the ongoing digital transition that is reshaping the banking and insurance sectors, in line with broader economic transformations across Europe. In the last decade, the financial industry has faced important challenges, compounded by the COVID-19 pandemic, which accelerated workforce reductions and branch closures, a phenomenon described as “banking desertification”. In response, financial institutions have increasingly invested in digital services, both to cut costs and to meet the expectations of digitally savvy customers. Against this backdrop, FinAI was conceived to address the need for a balance: on the one hand, the drive of financial companies for efficiency and innovation; on the other, the protection of jobs, skills, and working conditions. Achieving this balance requires constructive dialogue and exchanges between social partners, whose role is crucial in managing the impact of digitalisation on workers.

The report has been produced by Fondazione ADAPT and its Affiliate Entity ADAPT, in collaboration with HIVA-KU Leuven and CESO-KU Leuven, under the overall coordination of First-Cisl, with Fond. ADAPT serving as task leader.

The research activities carried out for the drafting of the present report focused on providing a comprehensive overview of the current situation in the sector. In particular, they examined: the impact of technological innovation on employment trends; the labour market dynamics within the European financial sector throughout quantitative analysis; the emergence of new skills linked to digitalisation; the adequacy of labour law frameworks for protecting workers impacted by the digital transition; the EU regulatory framework concerning the financial sector; the AI Act and its integration into national legal frameworks, including its relation with pre-existing employment

legislation; the compatibility of algorithmic decision-making with key European social and legal instruments.

A further important dimension of the project was the collection and analysis of practices from the financial sector across Europe. These practices, identified by trade union representatives and later reviewed with the support of the scientific partners, are intended to serve as a valuable resource for strengthening sectoral social dialogue at both European and national levels.

Structure of the report & methodology

The present Report is structured into four main chapters, each addressing a distinct but interconnected aspect of the European financial sector and its evolving regulatory and labour market landscape. In addition, throughout the Report, findings are synthesised into concise summary boxes to facilitate readability and quick reference.

The first chapter offers a detailed state-of-the-art analysis of European legislation relevant to the financial sector. It explores supranational legal and regulatory frameworks, examines the role and responsibilities of supervisory authorities, and highlights the recent reforms and initiatives that shape the sector's governance.

The second chapter focuses on emerging issues associated with the recently approved European regulation on artificial intelligence, known as the AI Act. It analyses the potential impacts of AI on financial services, identifies regulatory challenges, and considers implications for compliance, risk management, and ethical standards, with a specific focus on worker protection. In addition, it highlights how the regulatory frameworks of the countries involved in the project have implemented the provisions set out in the AI Act.

The third chapter presents a quantitative analysis of labour market dynamics within the European financial sector, investigating inflows and outflows of the workforce, forecasts occupational transitions, and identifies new professional profiles that are likely to emerge across the countries under consideration.

Lastly, the Report includes a comparative analysis of social dialogue practices, gathered by the project partners with the support of ADAPT. This chapter illustrates how collective bargaining, joint social dialogue initiatives, and negotiated training pathways can help ensure that digital transitions, particularly the uptake of AI, are managed in a way that safeguards workers' rights, anticipates skills needs, and upholds the principles included in the European Pillar of Social Rights.

In more detail**,** the methodological approach in this Report combines qualitative and quantitative tools, allowing for a comprehensive analysis of the European financial sector, its regulatory environment, labour market dynamics, and social dialogue

practices. The specific tools, data sources, and their limitations are described in detail within each chapter.

For the state-of-the-art analysis of European legislation and supervisory frameworks, this research relied on an extensive review of primary and secondary sources, including EU directives and regulations, national legislation, official reports from supervisory authorities, and academic literature. The examination of emerging issues related to the AI Act was based on a combination of documentary analysis and cross-country comparison. National regulatory frameworks were reviewed to assess how each country has implemented the provisions of the AI Act, illustrating potential impacts on compliance requirements, risk management strategies, workers' rights and ethical standards in the financial sector.

The quantitative analysis of labour market inflows, outflows, and occupational transitions relied on official statistical sources, national labour force surveys, and sectoral employment data. Forecasting models and scenario-based techniques were employed to identify trends and predict the emergence of new professional profiles.

Finally, the analysis of social dialogue best practices focused on social dialogue initiatives and collective agreements supporting AI transitions in the financial sector in a socially sustainable and technologically robust way. All project partners collaborated for the collection of practices. In particular, the breadth and diversity of the consortium, bringing together partners with different backgrounds, expertise, and national perspectives (in particular, the consortium includes a broad and qualified group of organisations from 10 EU Member States, Turkey as a candidate country, and Norway and Iceland as members of the EEA), enabled the collection and comparison of practices from several countries, thereby ensuring a comprehensive and representative overview[1]. A multilingual template, provided by ADAPT, ensured uniform data collection, including the practice title, parties involved, level of social dialogue or bargaining, case summary, key elements, sources, and SWOT analysis. The collected dataset includes one company-level initiative, eleven company-level social dialogue examples, seven national or sectoral-level experiences, and one

[1] In more detail, the project consortium brings together a wide and qualified group of organisations from 10 EU Member States, Turkey as a candidate country, and Norway and Iceland from the EEA. Alongside the coordinator First-Cisl, the partners of the FinAI project are: 2 research institutes, Fondazione Adapt and its Affiliated Entity ADAPT (Italy), KU Leuven (Belgium, represented by HIVA (Research Institute for Work and Society) and CESO (Centre for Sociological Research, Faculty of Social Sciences)); 1 European federation, UNI Europa; 1 national association representing the insurance companies in Italy (ANIA); 8 financial sector trade unions from 12 countries: First-CisL (Italy), Cfdt-BA (Banques et Assurances, France), NFU (Nordic Finance Union: Denmark, Sweden, Norway, Finland and Iceland), Fesmc-Ugt (Spain, finance), OTOE (Greece, finance), Bbdsz (Hungary finance), Sindicatulupa (Romania finance), Basisen (Turkey); 1foundation, Fondazione Fiba (Italy); 1 national trade union confederation: Cisl, the Italian confederation of workers of which First-Cisl is an affiliate.

European-level initiative. Practices are presented according to the level of implementation to facilitate comparison and practical reference.

1. THE EUROPEAN POLICY FRAMEWORK OF THE FINANCIAL SECTOR[1]

1.1. The European policy framework of the financial sector: the early stages

The European policy framework for financial services represents a complex and still-evolving landscape, intricately shaped by the necessity to balance economic interests with social and, recently, environmental interests. In the last decades, numerous critical issues have emerged, including sustainable development, ecological and digital transitions, as well as demographic and social concerns. These factors undeniably influence the ongoing transformation of the financial sector. In this sense, it is not surprising that, as the European Union has expanded and deepened its integration, the regulation of financial services has gained increasing significance, serving to ensure stable, transparent and efficient markets capable of adapting to evolving conditions and addressing both current challenges and emerging opportunities.

In this context, it is not surprising that the establishment of a single market for financial services has been one of the primary objectives of the EU, aimed at fostering economic growth, protecting consumers and enhancing the competitiveness. Over the years, the EU has implemented a series of directives, regulations and frameworks designed to harmonise and regulate financial services across Member States. Among others, it is worth mentioning some landmark initiatives, including the Financial Services Action Plan (FSAP), which laid the groundwork for a more integrated financial market. Additionally, it is worth highlighting some of the subsequent regulations and in particular the Markets in Financial Instruments Directive (MiFID) and subsequent revisions, and more recently the Corporate Sustainability Reporting Directive (CSRD), and the Corporate Sustainability Due Diligence Directive (CSDDD), emphasising the need for greater focus on social and environmental aspects. These measures collectively underscore the EU's commitment to create a resilient and inclusive financial ecosystem, capable of responding to evolving challenges while aligning economic activities with broader societal and environmental goals. This ongoing integration and regulation process reflects the EU's ambition to balance market efficiency with sustainability and social equity, setting a global benchmark for comprehensive financial governance.

[1] This chapter and its synthesis are attributable to the following authors: Diletta Porcheddu (Fondazione ADAPT), Sara Prosdocimi (ADAPT), and Margherita Roiatti (Fondazione ADAPT).

Before delving into the numerous directives and regulations that govern the sector, it is essential to acknowledge the legal basis of the financial sector in the EU. The foundation is established by articles 49, 56, 63, and 114 of the Treaty on the Functioning of the European Union (TFEU), which serve as the cornerstone of the legislative framework governing the financial sector within the EU. In particular, article 49 establishes the freedom of establishment, enabling financial institutions and enterprises to establish branches or subsidiaries across Member States without facing restrictive barriers. Complementing this, article 56 ensures the freedom to provide services, an essential principle for financial institutions offering cross-border services such as banking, insurance and investment. Together, these provisions promote easier business operations within the single market, fostering competition and enhancing consumer choice across the EU.

Additionally, article 63 enshrines the free movement of capital, within Member States and between the EU and third countries, which is central to support the transfer of investments and to foster the development of a unified European financial market. Furthermore, article 114 provides the legal basis for the approximation of laws, playing a critical role in the effective operation of the internal market. In particular, it grants the EU the authority to harmonise national regulations, thereby establishing uniform standards for financial supervision, consumer protection and risk management.

Even before the inclusion of these articles in the TFEU in 2009, the path towards an integrated EU financial market has been defined by several other key milestones, starting with early efforts to unify the financial systems of Member States based on the core principles of freedom of establishment and the freedom to provide services. The origins of these principles can be traced back to the Treaty of Rome, signed in 1957, which established the foundation for the creation of the common market by abolishing barriers to the free movement of persons, services and capital among Member States. In line with this ambitious vision, the Council adopted general programmes in 1962 aimed at eliminating restrictions on these freedoms, thus setting the stage for greater economic integration[2].

Once removed the barriers for creating a common market, the EU focused on harmonising national laws, regulations and administrative provisions, which have been pivotal in shaping the financial landscape of the EU. Among these initiatives, it is worth recalling the First Non-Life Insurance Directive, adopted in 1973, which sought to create a single market for non-life insurance by requiring Member States to adopt

[2] Concerning the freedom to provide services, it is worth mentioning the General Programme for the abolition of restrictions on freedom to provide services. COUNCIL OF THE EUROPEAN ECONOMIC COMMUNITY, *General Programme for the abolition of restrictions on freedom to provide services*, 15 January, 1962; similarly on the issue of the freedom of establishment, the reference is to COUNCIL OF THE EUROPEAN ECONOMIC COMMUNITY, *General Programme for the abolition of restrictions on freedom of establishment*, 15 January, 1962.

minimum standards of solvency and conduct. This initiative ensured that insurers could operate across borders within a consistent regulatory framework, thus laying the groundwork for increased competition within the insurance sector. Similarly, the First Banking Directive, enacted in 1977, aimed to facilitate the establishment and operation of banks throughout the EU by harmonising national banking regulations. This directive introduced the concept of a "single banking license", allowing banks licensed in one Member State to operate in others without the need for additional authorisations, therefore significantly enhancing the mobility of banking services and contributing to the development of a more interconnected banking system across Europe.

The integration efforts reached a pivotal moment with the enactment of the 1987 Single European Act, which codified into primary EU law the ambitious objectives outlined in the 1985 White Paper. This act established a definitive deadline of 31 December 1992 for the completion of the internal market. Building upon this, the European Commission unveiled a comprehensive Financial Services Action Plan in May 1999, comprising 42 legislative and non-legislative measures, all designed to be implemented by 2004. This extensive plan aimed to address various facets of the financial sector, including securities markets, banking and insurance, with a focus on promoting greater transparency, enhancing consumer protection and fostering competition.

The Action Plan included critical initiatives such as the already recalled Markets in Financial Instruments Directive (MiFID), to establish a more competitive and transparent trading environment in financial markets by setting standards for investment services and ensuring investor protection. Additionally, the Capital Requirements Directive (CRD) was introduced in 2013 to create a unified regulatory framework for the prudential supervision of banks and investment firms, thereby enhancing financial stability across the EU.

Through these directives and regulations, the EU has made significant strides towards the establishment of a cohesive and integrated financial market, promoting competition and enhancing consumer protection, ultimately contributing to the stability and resilience of the European financial system as a whole.

1.2. EU financial sector legislation

Since the early 2000s, therefore, the European Union has increasingly advocated for a regulatory approach to govern the financial sector. By implementing comprehensive regulations, directives and standards, the EU sought to harmonise financial practices across Member States, to mitigate systemic risks and promote fair competition. This regulatory strategy reflects the EU's commitment to fostering a secure and efficient financial market that can adapt to evolving economic challenges and opportunities.

It is evident that the financial sector is particularly extensive and composed of numerous sub-sectors. Consequently, the European Union has addressed this

complexity by meticulously regulating and specifying the operational rules for each sub-sector. The EU's comprehensive approach ensures that all aspects of the financial market are governed by clear and detailed regulations, aiming to maintain stability, foster transparency and protect market participants across various financial domains.

1.2.1. The banking sector

The European banking sector operates under a comprehensive legal framework developed over the years by European institutions. The EU has implemented a series of directives and regulations aimed at harmonising banking practices, enhancing prudential supervision and safeguarding depositors, all while fostering a competitive and integrated financial market.

The European framework for the banking sector is primarily based on the two pivotal "Banking Directives": Directive 77/780/EEC of 1977 and Directive 89/646/EEC of 1989, establishing a first comprehensive regulation for the authorisation and supervision of credit institutions. They are further complemented in the following years by other legislative provisions concerning the own funds and solvency ratios of these institutions (Directive 89/299/EEC), as well as regulations governing their financial statements (Directive 86/635/EEC), and provisions confirming supervisory authorities and procedures (Directive 92/30/EEC). Under this initial set of legislative provisions, a credit institution authorised in one Member State has been generally allowed to establish branches or provide services in another Member State. This framework promoted cross-border operations within the EU, fostering a more integrated and unified financial market.

EU legislative framework has also been significantly influenced by international standards and guidelines, such as those established under the Basel framework. This globally recognised set of banking regulations, developed by the Basel Committee on Banking Supervision (BCBS), provides principles for risk management, capital adequacy, and liquidity to enhance the stability and resilience of the financial system. In particular, the successive iterations of this framework – namely Basel I, II and III – have progressively introduced stricter rules to ensure financial system stability and reduce the risk of banking crises.

Within the European Union, this framework has been reflected in a series of directives and regulations. Among these, the Capital Requirements Directive (CRD IV) (2013/36/EU) and its associate regulation, the Capital Requirements Regulation (CRR) (2013/575/EU), have been central components of the EU's implementation of Basel III, establishing the framework for prudential supervision of banks and investment firms within the EU and enhancing the global banking sector's resilience against financial shocks. In particular, the CRD set out rules governing the access to credit and investment activities, as well as requirements for the corporate governance and

supervisory practices applied to these institutions. Meanwhile, the CRR specified minimum prudential standards, including capital requirements, liquidity buffers and leverage ratios, to ensure the financial stability and soundness of banks.

Following the financial crisis, safeguarding depositors became a critical priority for EU regulators. Building on this foundation of prudential supervision, the Bank Recovery and Resolution Directive (BRRD) (Directive 2014/59/EU), adopted in 2014, introduced a comprehensive mechanism to manage failing banks while minimising risks to public funds. This directive complemented the CRD and CRR by addressing the need for effective mechanisms to prevent and resolve banking crises. In particular, the BRRD established a framework for early intervention, resolution planning and a *bail-in* mechanism, ensuring that shareholders and creditors bear the financial burden of a bank's failure, thereby safeguarding taxpayers and preserving financial stability.

In the same year, the EU also issued the Single Resolution Mechanism Regulation (SRMR) (Regulation 2014/806/EU) establishing a unified framework for the resolution of failing banks within the euro area and participating Member States. The objective was to ensure an effective resolution process and a consistent application of rules, minimising the impact on financial stability and taxpayers. It also established the Single Resolution Fund (SRF), funded by contributions from the banking sector, to support resolution actions.

In addition, always in 2014, the EU enacted the Deposit Guarantee Schemes Directive (DGSD) (Directive 2014/49/EU) to harmonise and strengthen deposit protection across Member States. Under this directive, bank deposits up to €100,000 are guaranteed in the event of a bank failure, offering enhanced security to citizens and contributing to financial stability.

More recently, in April 2023, the European Commission introduced a legislative package aimed at reforming the Crisis Management and Deposit Insurance (CMDI) framework. These reforms focused on enhancing the mechanism available for managing the failure of medium-sized and smaller banks, which have traditionally received less attention under existing EU crisis measures. The package included amendments to key legislative instruments, such as the Bank Recovery and Resolution Directive (Directive 2014/59/EU), the Single Resolution Mechanism Regulation (Regulation 2014/806/EU), and the Deposit Guarantee Schemes Directive (Directive 2014/49/EU). Additionally, it featured a separate legislative initiative known as the *daisy chain proposal*, which addressed interdependencies within banking groups aiming to strengthen their overall resilience.

If the CMDI reform represented a significant step toward strengthening the EU's capacity to manage banking crises while ensuring robust depositor protection, in April 2023 the European Commission adopted a proposal to adjust and further enhance the existing EU framework for bank crisis management and deposit insurance. The

proposal aimed to empower authorities to organise the orderly market exit of failing banks, regardless of their size or business model, including smaller institutions.

Drawing on lessons learned from the framework's initial application, the proposal introduces improvements to equip resolution authorities with even more effective tools. These tools will ensure that, in times of crisis and when financial stability is at risk, depositors (whether individuals, businesses, or public entities) retain access to their accounts. In particular, the proposal facilitates the use of industry-funded safety nets, such as transferring assets and liabilities from a failing bank to a sound institution, to protect depositors.

1.2.2. Financial markets and market infrastructure

The European Union has progressively developed also a robust regulatory framework to govern investment services and trading venues, aiming to enhance competition, transparency and investor protection within the financial markets.

The cornerstone of this framework is the adoption of the 2004 Markets in Financial Instruments Directive (MiFID I) (Directive 2004/39/EC). MiFID I introduced uniform standards for financial instruments trading across Member States, promoting market integration while fostering a competitive environment. It established key principles to ensure fair and efficient trading and enhance investor confidence.

Recognising the need for updates in light of evolving market practices and challenges, the EU progressively introduced a comprehensive revision of this initial framework with the adoption of MiFID II (Directive 2014/65/EU) and the accompanying Markets in Financial Instruments Regulation (MiFIR) (Regulation 2014/600/EU) of 2014. This legislative package significantly modernised the existing framework, addressing gaps and aligning regulations with technological advancements and emerging risks.

In particular, MiFID II introduced stricter requirements for trading transparency, including pre and post-trade reporting obligations to enhance market integrity. It also expanded the scope of investor protection by ensuring better disclosure of risks, costs and fees associated with investment products and services. Additionally, the directive established the regulatory perimeter for new trading venues, such as Organised Trading Facilities (OTFs), to address the growing diversity of market platforms.

MiFIR complemented MiFID II by laying down rules to ensure non-discriminatory access to trading venues and clearing systems, fostering fair competition. It also mandated standardised reporting requirements for all trading activities, thereby increasing market transparency and enabling regulators to better monitor financial stability. Both MiFID II and MiFIR have undergone periodic revisions to adapt to the dynamic nature of financial markets, ensuring that the regulatory framework remains effective and resilient.

In particular, Directive 2021/338/EU amended MiFID II as part of the Capital Markets Recovery Package, aiming to alleviate administrative burdens on investment activities to support the post-COVID-19 economic recovery. This initiative has been reinforced through the MiFID II and MiFIR review, which introduced significant updates to the regulatory framework. The final consolidated text of the Review was published in the EU Official Journal on 8 March 2024, requiring Member States to transpose the MiFID II amendments into their national laws by 29 September 2025. These revisions align with broader efforts to enhance market transparency, investor protection and the competitiveness of EU financial markets. Specifically, the Review's primary objectives include improving market data transparency, empowering investors and intermediaries with easier access to consolidated data and enhancing overall market integrity. Specific reforms involve the establishment of a consolidated market database and a ban on Payment for Order Flow (PFOF) to promote fairness and prevent market manipulation. Also, changes to dark trading rules, such as the single volume cap, aim to increase the competitiveness of EU capital markets, addressing declining trading volumes and stock listings. In addition, pre and post-trade transparency updates are intended to improve liquidity in OTC derivatives markets and to align the regulatory framework with market needs.

During the implementation phase of MiFID II/MiFIR review, ESMA will be responsible of developing technical standards to guide implementation. In particular, these include order execution policies, trading halt parameters and clock synchronisation to enable real-time consolidated tape systems. Necessarily, financial institutions will need to adapt to these updates, which seek to strengthen transparency, investor protection, and financial market efficiency.

Following the adoption of MiFID II and the related MiFIR Regulation, several additional legislative measures have also been introduced to refine and expand the EU financial markets framework. In particular, the Investment Firms Directive (Directive 2019/2034/EU) and its corresponding Regulation (Regulation 2019/2033/EU) established tailored prudential requirements for investment firms based on their risk profiles, providing a simpler regime for smaller firms. Additionally, the EU adopted Regulation 2022/858/EU on distributed ledger technology (DLT), which set rules for trading financial instruments on blockchain-based platforms, promoting innovation while ensuring security and transparency. This marks the EU's initial steps toward addressing the challenges and opportunities presented by emerging technologies and digital tools. In this context it is worth also recalling the NIS2 Directive (Directive 2022/2555/EU) which strengthened digital infrastructure resilience, including systems used in financial markets, to address evolving cybersecurity challenges.

If these policies can be referenced within the sphere of investment services and trading venues, also engaging with the new digital challenge, it is also possible to include, within the political framework related to financial markets and market infrastructure, a

range of directives and regulations concerning the topics of derivatives contracts and clearing houses, as well as access to capital market funding.

Concerning the first issue, it is notable that the regulation of derivatives contracts and the entities managing them, such as central counterparties (CCPs) and trade repositories, have been a critical area of focus for the EU, given the role of derivatives in global financial markets and their potential to propagate systemic risk. The adoption of the European Market Infrastructure Regulation (EMIR) (Regulation 2012/648/EU) in 2012 marked a significant milestone in addressing these challenges. EMIR has been introduced to enhance transparency in the over-the-counter (OTC) derivatives market, reduce counterparty risk and strengthen financial stability. By increasing transparency and promoting robust risk management practices, EMIR aimed to mitigate the contagion risks that could arise from the interconnectedness of market participants.

Also, given the critical role of CCPs as intermediaries in the clearing process and considering that their failure could pose severe risks to the financial system, the EU adopted the CCP Recovery and Resolution Regulation (Regulation 2021/23/EU) in December 2020. This regulation provided a framework to ensure the orderly resolution of CCPs in the event of a crisis, safeguarding financial stability while minimising the impact on taxpayers and the broader economy. The regulation established tools and procedures for authorities to intervene effectively during times of distress, ensuring that CCPs continue to fulfil their clearing functions without disrupting the markets.

Both EMIR and the CCP Recovery and Resolution Regulation are subject to regular review and updates to ensure they remain responsive to market developments and emerging risks. In particular, in August 2023, two delegated regulations were published in the EU Official Journal to further refine the regulatory framework for CCPs. Regulation 2023/1616 outlines the requirements for independent valuers, methodologies for assessing the value of CCP assets and liabilities and the process for applying the *no creditor worse off* principle, ensuring proper valuation procedures in case of resolution. Regulation 2023/1615 specifies the regulatory technical standards for the distribution of compensation or its cash equivalent to clients and indirect clients, establishing when such distributions should be considered proportionate.

As per the second issue, the access to capital market funding, it is worth mentioning the flagship initiative of building a Capital Markets Union (CMU), which envisioned a comprehensive review of the EU framework for public offerings. The Prospectus Directive (Directive 2003/71/EC), adopted in 2003, aimed at harmonising the requirements for prospectuses throughout the EU to improve access to capital markets. In this sense, it facilitated cross-border investments and enhanced investor protection by mandating uniform disclosure standards. However, to address emerging needs and streamline the framework, the directive has been replaced by the Prospectus Regulation 2017/1129/EU. This regulation introduced a simplified

prospectus for smaller companies to make capital raising easier and less costly. It also aimed to improve transparency by standardising the information provided to retail and institutional investors, thereby enhancing their ability to make informed decisions.

Finally, with regard to the topic of consumer credit, following the pandemic and driven by concerns over the growing digitalisation, the Proposal for a Consumer Credit Directive of 2021 emphasised that the assessment of a borrower's creditworthiness needs to be conducted in the consumer's interest, to prevent irresponsible lending practices and over indebtedness.

In this sense, on October 30, 2023, the new Consumer Credit Directive 2023/2225/EU of October 18, 2023, was published in the Official Journal of the European Union, which repeals Directive 2008/48/EC (the "Consumer Credit Directive" or "CCD"). The deadline for the national transposition of CCD II is set for November 20, 2025. Directive 2008/48/EC, amended in 2011, 2014, 2016, and 2019, established a harmonised framework at the European Union level for consumer credit in order to facilitate the creation of a well-functioning internal market and provide a high level of consumer protection to ensure consumer confidence. The partial achievement of these objectives has led to the need to modernise the CCD rules, also to adapt them to the evolution of the consumer credit sector. In this sense, CCD II aimed to create a harmonised regulatory framework that ensures all consumers in the Union benefit from a high and equivalent level of protection of their interests and contributes to creating a well-functioning internal market.

The new Directive on consumer credit addressed several important issues. It focused on improving transparency by requiring clearer, more accessible information for consumers before entering credit agreements. It also strengthened creditworthiness assessments to prevent over-indebtedness and ensures responsible lending. In addition, the Directive standardised credit advertising rules to protect consumers from misleading claims and introduces measures to safeguard vulnerable consumers, preventing aggressive marketing and unfair practices. Lastly, it updated the regulatory framework to account for the digitalisation of consumer credit services, ensuring protection in online and remote transactions.

1.2.3. Insurance

The regulation of insurance in the European Union is a vital component of the broader EU financial framework, designed to ensure market stability, protect consumers and foster cross-border activity. Insurance plays a key role in the EU's financial system, as it provides risk management, supports investment flows, and protects policyholders.

As such, the EU has established a comprehensive legal framework to regulate and supervise the insurance sector, with the Solvency II Directive (Directive 2009/138/EC)

serving as its cornerstone. Adopted in 2009, the Solvency II Directive harmonised fragmented rules governing the non-life insurance, life insurance, and reinsurance sectors across Member States. Its objective was to create a single market for insurance services while ensuring the soundness and resilience of insurance companies. The directive established clear conditions for insurers to operate in the EU, requiring them to obtain authorisation from their national supervisory authority, allowing them to conduct business across the EU under the principle of mutual recognition. A central feature of the framework is its risk-based approach to capital requirements, defining two thresholds: the Solvency Capital Requirement (SCR), which ensures sufficient capital to cover risks under normal circumstances, and the Minimum Capital Requirement (MCR), which acts as a critical safeguard for policyholders. Insurers were also mandated to implement robust risk management systems to effectively identify, measure, and manage potential risks, alongside governance standards for board oversight, actuarial functions, and internal audits.

The directive further imposed stringent supervision and reporting obligations on insurers. National supervisory authorities have been recognised responsible for ensuring compliance, while insurers must report regularly on their financial position, solvency, and risk exposures, enhancing transparency and trust within the market.

Since its adoption, Solvency II has undergone several revisions to adapt to changing market conditions and regulatory demands. Notably, the 2021 Solvency II Review introduced measures to strengthen proportionality, align the sector with the EU's sustainability objectives also addressing systemic risks such as climate change, enhancing the sector's resilience to new challenges.

1.2.4. Sustainable finance

«Achieving climate goals requires a far-reaching economic transformation that entails extensive employment and socioeconomic implications. Ensuring a just transition is a crucial enabler of ambitious climate action and an engine of sustainable development. (...) Financial systems and their actors have a key role to play in a just transition. They complement conducive policy measures, and in turn these policy measures facilitate the efforts of financial systems and their actors towards a just transition»[3].

The European financial system is central to advancing the EU's ambitions for a greener, fairer and more inclusive economy. Recognising this pivotal role, the EU has developed a robust framework to align financial markets with sustainability objectives. The Sustainable Finance Action Plan, launched in March 2018, represents a comprehensive strategy to integrate environmental, social and governance (ESG)

[3] ILO, *ILO Input Paper G20 Sustainable Finance Working Group Input Paper*, 2022, https://g20sfwg.org/wp-content/uploads/2022/07/Finance-for-aJust-Transition-and-the-Role-of-Transition-Finance-ILO.pdf.

considerations into investment and financial decision-making. This plan sought to reorient capital flows towards sustainable investments, manage financial risks stemming from climate change and social inequality and enhance transparency within the market. In the action plan, it is therefore emphasised that «the financial sector is called upon to play a leading role. The financial system is in the process of reforming itself to incorporate what has been learned from the experience of the financial crisis and in this context can be part of the solution towards a greener and more sustainable economy».

A cornerstone of this framework is the EU Taxonomy Regulation (Regulation 2020/852/EU), which established a classification system for sustainable economic activities. This regulation provided criteria to determine whether an economic activity substantially contributes to environmental objectives such as climate change mitigation, adaptation and the sustainable use of natural resources. The regulation set out three core obligations: requiring EU Member States and institutions to apply the taxonomy when regulating the provision of environmentally sustainable financial products or corporate bonds; mandating financial market participants to disclose how their investments align with the taxonomy for financial products marketed as environmentally sustainable; and obligating large public-interest entities to include information on the alignment of their activities with the taxonomy in the non-financial sections of their financial statements. These obligations aimed to bridge data gaps for investors, who in turn must disclose the alignment of their financial products with taxonomy goals.

Complementing the taxonomy is the Sustainability-Related Disclosures Regulation (Regulation 2019/2088/EU), which applies to financial market participants and advisers. It mandates the disclosure of information on how ESG factors are integrated into investment decisions and the impact of these investments on sustainability objectives. This regulation ensures that investors are equipped with reliable information, enabling informed decisions and fostering accountability within the financial sector.

Subsequently, the Regulation on Sustainability-Related Disclosures for Benchmarks (Regulation 2019/2089/EU) further advances transparency by setting out disclosure obligations for benchmark administrators. It requires benchmarks, especially climate benchmarks, to specify how they align with the goals of the Paris Agreement, promoting consistency in measuring and reporting sustainable investments.

To complement the taxonomy framework, the European Commission adopted key delegated acts in 2021. In particular, it is worth mentioning the Delegated Regulation 2021/2139/EU, adopted in June 2021, that further details technical criteria to ensure that economic activities do not significantly harm other environmental objectives. In addition, the Delegated Regulation 2021/2178/EU clarifies reporting obligations for

financial and non-financial companies, enhancing transparency regarding taxonomy-aligned activities.

Beyond these regulations, additional initiatives under the Sustainable Finance Action Plan aim to deepen the integration of ESG principles. In particular, in 2021 the plan has been further implemented with the Renewed Strategy for Sustainable Finance. The strategy aims to support the goals of the European Green Deal by fostering an environment that enables both private investors and the public sector to facilitate sustainable investments, with a focus on incorporating social risks where relevant. It outlines six key action areas: enhancing existing sustainable finance tools to improve access to transition finance; increasing inclusiveness by equipping SMEs and consumers with appropriate tools and incentives for transition finance; bolstering the economic and financial system's resilience to sustainability risks; increasing the financial sector's contribution to sustainability objectives; ensuring the integrity of the EU financial system while monitoring its transition to sustainability; and advancing international sustainable finance standards and initiatives, while supporting partner countries in their sustainability efforts.

Even more recently, the EU introduced Directive 2022/2464 on Corporate Sustainability Reporting (CSRD), which has been in force since January 5, 2023. This directive focuses on corporate sustainability reporting and aims to modernise and strengthen the rules governing the social and environmental information that companies are required to disclose. As part of the European Commission's Sustainable Finance Package, the CSRD significantly broadens the scope, disclosure obligations, and reporting requirements compared to the previous Non-Financial Reporting Directive (NFRD). The primary goal of the European Commission is to enhance sustainability reporting to fully capitalise on the economic opportunities of the Single Market while promoting a transition to a sustainable and inclusive economic and financial system. This initiative seeks to ensure greater transparency, enabling investors, analysts, consumers, and other stakeholders to more accurately evaluate the sustainability performance of EU companies, along with their related impacts and risks. Certainly, financial institutions must also adhere to CSRD requirements. In particular, sector-specific standards for banks were anticipated by the end of 2024; however, the European Financial Reporting Advisory Group, EFRAG, recently announced a delay and intends to proceed with these standards under a "revised timeline". In this sense, it is expected that bank-specific standards will introduce additional particular KPIs for those financial institutions and possibly offer further guidance on the existing frameworks.

On April 2024, the EU also formally adopts the Corporate Sustainability Due Diligence Directive (CSDDD), Directive 2024/1760/EU, introducing a legal obligation for large companies with substantial activities in the EU to conduct due diligence on human rights and environmental impacts within their operations and across their value chains.

This milestone marks a significant step toward embedding corporate responsible business conduct into due diligence policies and processes.

The CSDDD seeks to harmonise due diligence requirements across EU Member States, ensuring a level playing field for companies operating in the European market. It establishes minimum due diligence standards that Member States must incorporate into national legislation. While Member States are required to align their legal frameworks with the directive's objectives and scope, they are also permitted to adopt stricter requirements or include activities beyond those currently covered by the directive.

The inclusion of the financial sector in the CSDDD was subject of significant debate during negotiations and became a contentious issue among EU Member States. Despite intense lobbying, the financial sector remains within the scope of the CSDDD, although downstream due diligence, monitoring the activities of entities receiving their services and products like loans or financing, has been excluded. However, this exemption comes with important caveats. Financial institutions might still be indirectly affected if their business partners, who are required to perform due diligence, request information about their practices. Additionally, large financial institutions must develop transition plans aligned with the 1.5°C global warming limit, accordingly to the provisions included in the Paris Agreement, which effectively necessitates some level of downstream due diligence, such as tracking the use of funds provided through transition or sustainability-linked financing.

In any case, the European Commission is tasked with reviewing whether to broaden due diligence obligations for the financial sector within two years and, moreover, as a directive, the CSDDD allows individual EU Member States to adopt stricter measures if they choose.

Even more recently, the European Commission's Omnibus Package, presented on 26 February 2025, represents a comprehensive legislative initiative aimed at simplifying and harmonising EU sustainability regulations. This package encompasses amendments to several key directives: the CSRD, the CSDDD, the EU Taxonomy Regulation, and the Carbon Border Adjustment Mechanism (CBAM), aiming to reduce administrative burdens on businesses, enhance legal clarity, and ensure a more consistent application of sustainability requirements across Member States.

These amendments are currently under discussion by the European Parliament and the Council of the European Union. If adopted, they are expected to make compliance with EU sustainability legislation more manageable for businesses, allowing for a smoother transition to sustainable practices while still ensuring accountability and high standards across member states.

In addition, the Omnibus Package introduces a “stop-the-clock” mechanism, Directive 2025/794/EU, which delays the application of certain reporting and due diligence obligations. This is intended to give companies more time to prepare for compliance while maintaining the overall objectives of the EU’s sustainability agenda.

1.2.5. The fintech sector

Fintech, short for financial technology, represents a transformative wave in the financial sector, characterised by the use of technology to deliver innovative, efficient and cost-effective financial services. From cashless payments to peer-to-peer (P2P) lending, algorithmic trading, robo-advice, crowdfunding and virtual currencies, fintech has reshaped the way businesses and individuals engage with financial services.

Recognising its importance, the European Commission launched the Digital Finance Strategy in September 2020. Based on broad public consultations and the *Digital Finance Outreach* – a series of events focusing on fintech and digital innovation in the financial sector – the strategy comprises a set of legislative initiatives aimed at creating a robust and secure framework for digital financial services. It sets out four main priorities: removing fragmentation in the Digital Single Market, adapting the EU regulatory framework to facilitate digital innovation, promoting data-driven finance, and addressing the challenges and risks associated with digital transformation, including enhancing the digital operational resilience of the financial system.

The European Union does not have a single piece of legislation governing all aspects of fintech. Instead, fintech companies offering financial services, such as lending, financial advice, insurance, or payments, are required to adhere to the same legal framework as traditional firms providing similar services. Consequently, the regulatory landscape for fintech depends on the specific activity, with key directives including Directive 2000/31/EC (e-commerce), Directive 2002/65/EC (distance marketing of consumer financial services), Directive 2009/110/EC (electronic money), and Directive 2015/2366/EU (payment services).

Considering the issue of the payment services, the first important directive is the Payment Services Directive I (PSD I) (Directive 2007/64/EC), implemented in 2007, which established the Single European Payments Area (SEPA), successfully harmonising card and bank-to-bank payments across the EU. However, challenges remain, particularly in the fragmentation of online payment systems. To address these issues, the European Commission introduced the Payment Services Directive II (PSD II) (Directive 2015/2366/EU), which replaced PSD I.

PSD II entered into force on 12 January 2016, with a deadline for transposition into national law set for 13 January 2018. The updated directive reflects technological progress and expands the definition of payment services, notably by introducing new categories of service providers: Account Information Service Providers (AISPs) and

Payment Initiation Service Providers (PISPs). These third-party service providers (TPPs) are now subject to the same regulatory requirements as traditional payment institutions.

Furthermore, banks are required to grant TPPs access to customer account data via Application Programming Interfaces (APIs), provided that the customer has given explicit consent. A key element of PSD II is the introduction of Regulatory Technical Standards (RTS), which define secure communication procedures and data-exchange protocols. Developed by the European Banking Authority (EBA) in cooperation with the European Central Bank (ECB), the RTS were adopted by the European Commission in November 2017 and became applicable in September 2019. These rules require banks to establish secure communication channels for data sharing with TPPs, either by adapting existing online-banking interfaces or by creating new dedicated interfaces. Any such interfaces must provide the same level of performance and availability as those used by the banks' customers and include appropriate contingency arrangements.

Additionally, crypto-assets represent a key area of attention when examining the legislative framework governing the fintech sector. These are digital assets recorded on a distributed ledger. On 9 January 2019, both ESMA and the EBA published reports analysing the current state and potential evolution of the EU regulatory framework for crypto-assets. According to ESMA, many crypto-assets meet the definition of financial instruments under the Markets in Financial Instruments Directive (MiFID II). However, national competent authorities face challenges in interpreting and adapting existing legislation to the distinctive characteristics of crypto-assets. At the same time, certain types of crypto-assets remain outside the scope of the current financial regulatory framework. The EBA report, for its part, examines the applicability of the Electronic Money Directive and the Payment Services Directive (PSD II) to crypto-assets, highlighting specific concerns related to wallet providers and trading platforms. Among crypto-assets, cryptocurrencies are the earliest and most widely recognised category, functioning as a particular form of virtual currency. While the EU has not yet introduced a comprehensive regulatory regime for cryptocurrencies, significant legislative progress has been made. Following a June 2017 Commission report, the Council and the European Parliament decided in December 2017 to extend the scope of the Anti-Money Laundering Directive (AMLD5) to cover virtual currency exchanges and wallet providers.

Since then, the regulatory landscape has advanced significantly. The Markets in Crypto-Assets Regulation (MiCA) (Regulation 2023/1114/UE), adopted in June 2023, creates a harmonised framework for crypto-asset issuers and service providers, introducing licensing, disclosure, governance, and market abuse rules. In parallel, the Transfer of Funds Regulation (TFR) (Regulation 2023/1113/EU), also known as the "EU Crypto travel rule", entered into force on December 30, 2024, requiring crypto

service providers to collect and transmit identifying data on both sender and recipient of crypto transfers. In parallel, AML rules continue to apply: both AMLD5 (Directive 2018/843/EU) and AMLD6 (Directive 2018/1673/EU) extended due diligence, transaction monitoring, and reporting obligations to fiat-to-crypto exchanges and custodial wallets.

From January 2025, crypto firms licensed under MiCA must also comply with the Digital Operational Resilience Act (DORA) (Regulation 2022/2554/EU), which establishes ICT risk management, incident reporting, and resilience obligations. For fiat-pegged tokens (E-Money Tokens), dual licensing requirements may arise under both MiCA and the Electronic Money Directive. In certain cases, functionalities resembling payment services could also fall within the scope of PSD2 (Directive 2015/2366/EU). Moreover, under the Crypto-Asset Reporting Framework (CARF), crypto-asset service providers are obliged to report customer holdings and transactions to national tax authorities.

Nevertheless, several grey areas remain: decentralised finance (DeFi) protocols operating without intermediaries, standalone non-fungible tokens (NFTs), and tokenised securities – already covered under MiFID II – still fall partly outside the scope of MiCA.

Among the other key issues concerning the fintech sector, data and consumer protection stands out as a significant concern. The cornerstone of EU personal data protection was Directive 95/46/EC, which governed the processing and free movement of personal data. This directive was replaced by the General Data Protection Regulation (GDPR) (Regulation 2016/679/EU), which entered into force in 2016 and became applicable on May 25, 2018.

Even more recently it should be recalled the Regulation on Digital Operational Resilience for the Financial Sector (DORA) (Regulation 2022/2554/EU), which establishes a comprehensive framework for financial institutions to manage and withstand cyber and ICT-related risks. In parallel, the Regulation on Markets in Crypto-assets (MiCAR) provides clarity on standards for issuing crypto-assets and delivering associated services, marking a significant step in regulating the rapidly growing crypto industry. Furthermore, the Regulation on a Pilot Regime for Market Infrastructures Based on Distributed Ledger Technology (Regulation 2022/858/EU) functions as a regulatory sandbox, enabling a controlled and flexible environment for testing blockchain-based innovations. Together, these initiatives underscore the EU's commitment to fostering innovation while maintaining stability and security in the financial ecosystem.

1.3. The role of EU supervisory authorities

As highlighted in the previous paragraphs, the European Union has established a comprehensive supervisory framework to oversee and regulate the financial sector, including the evolving fintech landscape. This framework, known as the European System of Financial Supervision (ESFS), was introduced in 2010 through a series of legislative measures to ensure financial stability, market integrity, and consumer protection in the EU.

The European System of Financial Supervision includes several key components, each playing a specific role in overseeing and regulating the EU's financial sector. The European Systemic Risk Board (ESRB), established under Regulation 2010/1092/EU, is tasked with macroprudential oversight of the EU financial system. Its primary goal is to identify, prevent, and mitigate systemic risks that could endanger the stability of the Union's financial framework. To achieve this, the ESRB collaborates closely with the European Supervisory Authorities (ESAs), national supervisory bodies, and the European Central Bank (ECB).

The European Supervisory Authorities (ESAs) were established under Regulations 2010/1093/EU, 2010/1094/EU, 2010/1095/EU, with the objective of ensuring a robust regulatory framework for the financial sector within the European Union. These authorities are tasked with micro prudential supervision, which refers to the oversight of individual financial institutions to ensure their soundness and stability. They are also responsible for ensuring the harmonised application of EU financial rules across the Member States, promoting regulatory consistency, and reducing risks of regulatory arbitrage. By providing guidelines, technical standards, and coordination among national regulators, the ESAs ensure that EU financial rules are implemented uniformly, thereby maintaining stability across the European financial system.

The three key authorities that make up the ESAs include the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA), and the European Insurance and Occupational Pensions Authority (EIOPA), each of which has distinct responsibilities within their respective domains.

In particular, the European Banking Authority (EBA) plays a pivotal role in overseeing the stability and integrity of the EU banking sector. As part of its mandate, the EBA is responsible for developing technical standards, issuing regulatory guidelines, and establishing frameworks for conducting stress tests on banks to assess their ability to withstand economic shocks. These stress tests are crucial for ensuring the resilience of financial institutions in times of financial turmoil. Furthermore, the EBA's responsibilities extend beyond traditional banking supervision. It is actively involved in the implementation of critical EU directives such as the Payment Services Directive (PSD II), which regulates payment services and providers, and the Electronic Money Directive (EMD2), which governs the issuance of electronic money. In light of the rise

of financial technologies (fintech), the EBA has also had to address emerging challenges in the fintech sector, particularly with regard to the regulation of crypto-assets.

Also, the evolving landscape of digital currencies and blockchain-based technologies has prompted the EBA to provide guidance on how these assets fit within the EU's regulatory framework, ensuring that they are subject to adequate supervision to protect investors and maintain financial stability.

Differently, the European Securities and Markets Authority (ESMA) is responsible for overseeing the securities markets and market infrastructures within the EU. ESMA's role includes ensuring that these markets operate in a transparent, orderly, and efficient manner, with the primary goal of protecting investors. ESMA's supervision extends to the implementation of the Markets in Financial Instruments Directive (MiFID II) and the Markets in Financial Instruments Regulation (MiFIR), which together regulate the trading of financial instruments across the EU. One of ESMA's key tasks is to provide guidance on the classification of crypto-assets as financial instruments. This is crucial because many crypto-assets exhibit characteristics that overlap with traditional financial instruments, such as investment funds or securities, yet their legal status has been ambiguous. ESMA's guidance ensures that these assets are treated in accordance with EU financial regulations, including the Market Abuse Regulation (MAR), which prevents market manipulation and insider trading in financial markets.

In addition, the European Insurance and Occupational Pensions Authority (EIOPA) oversees the EU insurance and pension markets. EIOPA's primary objective is to safeguard the rights of policyholders and pension scheme beneficiaries, ensuring that insurance companies and pension funds are adequately capitalised and capable of meeting their obligations. EIOPA has a critical role in maintaining the stability of the insurance sector, particularly in managing risks that arise from long-term obligations and demographic changes. However, the remit of EIOPA has expanded to address emerging risks associated with innovative insurance products and the incorporation of fintech into the sector. With the rise of big data, insurance companies are increasingly using advanced algorithms and machine learning to price policies, assess risks, and manage claims. EIOPA's role has thus evolved to ensure that these technological advancements do not compromise consumer protection or market stability. The authority provides guidance on the application of data protection laws, ethical considerations in the use of big data, and the regulation of insurtech, which blends insurance with innovative technology solutions. EIOPA also monitors the impact of digitalisation on pension schemes and insurance products to ensure that they remain sustainable and provide adequate protection for consumers.

Together, these authorities form a comprehensive supervisory framework for the EU financial system, each focusing on their respective sectors but collaborating closely to address cross-sectoral challenges, such as fintech and crypto-assets. The increasing

integration of technology into financial services has significantly altered the regulatory landscape, necessitating a coordinated approach to address new risks and opportunities. Through the actions of the ESAs, the EU seeks to foster a stable and secure financial environment that can adapt to the fast-paced changes driven by digital innovation.

The European Supervisory Authorities (ESAs) function within a clearly defined regulatory framework that outlines their specific powers and responsibilities. One of the key pieces of legislation in this context is Regulation 2013/1024/EU, which established the Single Supervisory Mechanism (SSM). This regulation details the cooperation between the ESAs and the European Central Bank, providing a structure for joint efforts in maintaining financial stability across the EU.

Another crucial regulation is Directive 2015/849/EU, also known as the Anti-Money Laundering Directive (AMLD), which extended the scope of ESA oversight to include virtual asset service providers and wallet providers. This expansion of responsibilities reflects the growing significance of fintech and digital assets in the financial landscape. Additionally, the GDPR plays a critical role in ensuring that fintech companies comply with stringent data protection standards. The ESAs are tasked with evaluating how fintech businesses meet these standards, safeguarding consumers' personal data while encouraging innovation.

To further enhance the regulatory framework and adapt to the evolving challenges of fintech, the European Commission regularly issues communications that clarify and refine the responsibilities of the ESAs. A notable example is the Communication on FinTech: A More Competitive and Innovative European Financial Sector of 2018. This document emphasised the need for the ESAs to carefully examine both the risks and opportunities associated with new technologies, such as distributed ledger technology and artificial intelligence. By addressing these emerging technologies, the ESAs ensure that financial regulation keeps pace with innovation, striking a balance between encouraging technological progress and protecting financial stability and consumers.

Even more recently, the Single Resolution Board promoted the Single Resolution Mechanism (SRM) Vision 2028. Launched in 2024, it aims to strengthen the EU's ability to effectively manage banking crises and enhance financial stability. This new strategy focuses on ensuring that the resolution of failing banks is more efficient and predictable, minimising risks to depositors and the financial system. A key component is the development of an automated and rapid response system, allowing swift intervention when banks face difficulties, thus preserving market confidence. The strategy also emphasises greater coordination between resolution authorities at the EU and national levels, enabling more synchronised actions. Another significant area is improving the availability of financial tools to maintain the continuity of essential banking services during a crisis, mitigating its economic and social impact. Additionally, SRM Vision 2028 calls for the strengthening of the resolution fund to better address

more complex scenarios with greater uncertainty. This comprehensive approach seeks to make the EU's banking system more resilient and reduce the need for taxpayer bailouts.

Through these legislative tools and political frameworks, the European System of Financial Supervision maintains a robust and integrated approach to overseeing the EU's financial sector.

1.4. The Court of Justice of the European Union decisions on the financial sector and the role of the competent European Union supervisory authorities

The Court of Justice of the European Union plays a fundamental role in interpreting and ensuring the uniform application of EU law within the financial sector. Through its rulings, the Court not only resolves disputes but also clarifies the scope and application of EU legislation, thereby influencing the operations of European supervisory authorities and shaping the legal landscape of the financial and fintech sector.

Also, the European supervisory authorities, namely the European Banking Authority, the European Securities and Markets Authority, and the European Insurance and Occupational Pensions Authority, alongside the European Systemic Risk Board, are tasked with safeguarding financial stability, market integrity, and consumer protection across the EU. The CJEU's case law often intersects with their regulatory mandates, providing guidance on critical legal and operational questions.

One landmark decision highlighting the interaction between EU institutions and supervisory authorities is the United Kingdom v. European Parliament and Council (C-270/12) case. This case examined the powers granted to ESMA under the Short Selling Regulation (Regulation 2012/236/EC). The UK argued that certain powers conferred upon ESMA, such as the ability to prohibit or restrict short selling in exceptional circumstances, breached the principle of conferral and violated EU constitutional limits. The Court ruled that ESMA's powers were consistent with the Treaties, emphasising that the delegation of specific tasks to supervisory authorities must remain within a clearly defined framework and be subject to strict conditions. This decision reinforced the legitimacy of the ESAs' role and clarified the legal boundaries within which they operate.

In particular, this judgment highlights the importance of ESMA's function in facilitating consistency in financial regulations throughout the EU. This is particularly relevant when it comes to cross-border enforcement and the prevention of regulatory arbitrage among Member States. The ruling also touches upon the principle of proportionality, suggesting that any national restrictions must be necessary and respectful of fundamental rights.

The judgment further emphasises the tension between national measures and EU-wide harmonisation, with the Court reinforcing the importance of regulatory uniformity in the context of EU financial markets, reflecting a broader goal of maintaining a level playing field, especially in areas like market supervision, where divergences between Member States could undermine the integrity of the EU's financial system.

Another significant case is Landeskreditbank Baden-Württemberg v ECB (C-450/17). The case involved a German bank's request to be supervised by national authorities rather than the European Central Bank (ECB). In principle, the 2014 Single Supervisory Mechanism Regulation, states that «significant» banks (namely the ones with more than € 30bln in total assets) should be supervised by the ECB and the rest by national authorities. Significant banks should, though, be subject to national authorities, only if «particular circumstances» exist.

The case is important because the ECJ did not restrict itself to establishing the inexistence of such circumstances, but it ruled that the ECB has competence over the supervision of all banks within the Euro area, including those considered "less significant" and that national authorities are only involved in the decentralised implementation of ECB decisions. This decision reinforced the hierarchical structure of the European banking supervision system, placing the ECB at the top.

Similarly, it has been stated in the Crédit agricole v. ECB case (T-576/18). Specifically, the General Court addressed the challenge by Crédit Agricole regarding the ECB's decision to designate certain of its subsidiaries as "significant" for supervision under the Single Supervisory Mechanism (SSM). Crédit Agricole argued that the decision was unjustified. The court ultimately upheld the ECB's decision, emphasising that the ECB has broad discretion in determining which entities are subject to its direct supervision, in line with the SSM Regulation, thus reinforcing the ECB's authority in the supervisory process.

In December 2018, the ECJ ruled also on the case Finanziaria d'Investimento Fininvest SpA (Fininvest), Silvio Berlusconi v. ECB (T-913/16), concerning Berlusconi's eligibility as a qualifying shareholder of Banca Mediolanum. In particular, the ECJ decided that Berlusconi could not appeal against the draft decision issued by the Bank of Italy, which had advised the ECB against his eligibility. The Court ruled that only the final decision made by the ECB is relevant and subject to judicial review by the ECJ, thereby dismissing the possibility of an appeal before the Italian courts. This judgment reinforces the exclusive authority of the ECB in matters concerning the assessment of significant shareholders in EU banks.

Regarding the role of EBA, it is worth recalling the case Fédération bancaire française (FBF) v. Autorité de contrôle prudentiel et de résolution (ACPR) (C-911/19). In November 2017, the FBF brought an action before the French Conseil d'État, seeking to annul a statement from the French banking regulator, the Autorité de Contrôle

Prudentiel et de Résolution (ACPR). This statement indicated the ACPR's compliance with the European Banking Authority's (EBA) Guidelines on Product Oversight and Governance. As the case involved EBA guidelines, the Conseil d'État referred several questions to the ECJ.

The EBA Guidelines aim to align financial products and services with the interests and needs of their intended target customers. They impose obligations on financial institutions to ensure that processes such as pre-launch product testing, ongoing performance monitoring, and remedial actions are in place to safeguard consumer interests. Developed in response to lessons from the financial crisis, these guidelines focus on organisational and internal control standards for manufacturers and distributors of retail banking products, without addressing individual product suitability for specific consumers. On September 8, 2017, the ACPR issued an opinion formally adopting these guidelines for the financial institutions it supervises. This led the FBF to contest the ACPR's decision, claiming that it exceeded both the EBA's and the ACPR's legal powers.

The ECJ clarified several key points in its judgment that confirm the role and scope of EBA. In particular, the Court confirmed that the EBA's Guidelines fell within the agency's mandate under Regulation 2010/1095/EU. It emphasised that the guidelines aim to ensure that financial institutions implement effective risk management processes and internal controls tailored to their target markets, particularly retail customers. These principles enhance the efficiency of risk detection and management, as well as internal oversight systems, and align with the EBA's supervisory functions.

Therefore, this judgment highlights the advisory yet impactful role of EBA's soft law instruments, which influence national regulatory frameworks.

Chapter #1-at-a-Glance

This chapter examines the evolution of the EU financial policy and regulatory framework, tracing its development from the early foundations of the Single Market to the most recent reforms. It maps the sector's legislative milestones across banking, markets, insurance, sustainable finance and fintech, and highlights the role of supervisory authorities and the Court of Justice of the European Union (CJEU).

Key findings

- **Foundations and evolution:** The EU framework for financial services stems from the TFEU principles of establishment, services, capital and legal harmonisation. Over time, successive milestones (from the Treaty of Rome to the first banking and insurance directives in the 1970s, the Single European Act in 1987 and the Financial Services Action Plan of 1999) progressively built the foundations of an integrated financial market.
- **Banking sector:** Early banking directives in 1977 and 1989 paved the way for greater integration, later consolidated through the CRD/CRR package implementing Basel III standards. After the financial crisis, reforms such as the BRRD, SRMR and DGSD, and most recently the CMDI package, strengthened depositor protection, introduced bail-in mechanisms and reinforced EU-level crisis management.
- **Financial markets & infrastructure**: MiFID I (2004) and its successors (MiFID II/MiFIR, updated in 2024) deepened transparency, investor protection and data governance. EMIR (2012) and CCP recovery rules (2020) targeted systemic risks in derivatives, while the Capital Markets Union agenda brought in the Prospectus Regulation (2017) and the updated Consumer Credit Directive (2023).
- **Insurance**: The Solvency II regime (2009) harmonised prudential supervision across Member States, with the 2021 review introducing more proportionality and stronger sustainability dimensions.
- **Sustainable finance**: The 2018 Action Plan and the 2021 Renewed Strategy mainstreamed ESG principles into finance. Core instruments include the Taxonomy Regulation (2020), SFDR (2019), CSRD (2022), CSDDD (2024), and revisions proposed through the Omnibus package (2025), binding financial institutions more closely to climate targets, due diligence and transition planning.
- **Fintech & digitalisation**: The Digital Finance Strategy (2020) set the policy direction. PSD II enabled open banking and new service providers, while DORA (2022) and MiCAR (2023) reinforced operational resilience and crypto regulation. The DLT pilot regime (2022) functions as a sandbox for blockchain innovation.
- **Supervision & enforcement**: The European System of Financial Supervision (2010) established the ESRB and the ESAs (EBA, ESMA, EIOPA). In banking, the ECB's Single Supervisory Mechanism reinforced central oversight. The SRM Vision 2028 seeks more efficient and predictable crisis resolution.
- **CJEU Case Law**: Case law has confirmed ESMA's competences, reinforced the ECB's primacy in supervision, and clarified both the limits of shareholder appeals and the scope of soft law instruments, strengthening the overall regulatory architecture.

In sum, the EU financial policy framework has evolved from fragmented national rules into a dense, multi-level architecture integrating prudential supervision, market transparency, sustainability, and

digital resilience. Its trajectory shows a steady deepening of harmonisation and a growing embedding of digital, environmental and social goals.

Policy implications:

- Continued alignment of financial law with sustainability objectives.
- Enhanced supervisory coordination across banking, markets, insurance, and fintech.
- Need for balance between innovation (fintech/crypto) and stability/consumer protection and workers' protection.
- Importance of CJEU in clarifying competences and securing uniform application of EU law.

2. AI REGULATION IN FINANCE: CHALLENGES AND GAPS ACROSS EUROPE[1]

2.1. The potential impact of AI in the European financial sector

When analysing the impact of artificial intelligence in finance, it is worth considering how tools powered by this technology have been deployed in the sector for several years.

According to a survey on the impact of AI tools on European businesses conducted by the European Commission, financial intermediaries, along with companies in the IT and telecommunications sectors, are the primary users of automated tools for both their external business activities and internal organisational and governance arrangements (European Commission (2021). According to OECD data, 95% of banks in the EU use or develop AI/Machine Learning applications for various uses. Asset management and securities firms are reported to often make use of AI tools as well, together with fintech firms (OECD, 2024).

The main reason for the growing AI adoption in finance appears to be the abundance of available data (consumer data, account movements, market trading data etc.), whose collection, sorting and interpretation can be facilitated by AI (Langenbucher, 2025): AI systems' recent increased and more accessible computing capacity namely allows for the development/improvement of several different financial services (OECD, 2021).

According to the OECD, the use of AI in finance appears to be used for two main purposes: improving the firms' efficiency through cost reduction and productivity enhancement (e.g., through process automation and support for back-office operations) and enhancing the quality of financial services and products offered to consumers (OECD, 2024).

In relation to the different kinds of AI systems currently in use in the financial sector, scientific research proposed a classification in three main categories, depending on the potential impact of AI of individuals' fundamental rights.

The first category relates to AI systems that impact the accessibility of financial services for end customers – directly impacting on some of their fundamental rights such as housing or health; the second category is that of AI systems employed to provide personalised financial services to individuals, such as investment advisory

[1] This chapter and its synthesis are attributable to the following authors: Diletta Porcheddu (Fondazione ADAPT), Sara Prosdocimi (ADAPT), and Margherita Roiatti (Fondazione ADAPT).

services; the third category pertains to AI systems that relate to economic interests of the customers/operator (e.g., systems for high-frequency trading, for the conduction of stress tests and management of capital requirements or for the orientation of pricing strategies) (Mazzini and Bagno, 2023).

Among AI systems which pertain to the first of the abovementioned categories, credit risk assessment systems (i.e., credit scoring) acquire a significant importance, being one of the most widespread kinds of AI tools used in the financial sector on a global scale (OECD, 2024).

In comparison with more traditional approaches, the use of AI in credit risk assessment allows for a more accurate forecast of defaults in comparison with that of “traditional” econometric models. Moreover, AI has the ability to manage and process larger amounts of data in terms of volume and number of variables, thus allowing the exploitation of alternative or complementary information to that used in traditional statistical models (e.g. preferred shopping places, social media activity, daily workout times etc.).

Other than perfecting credit institutions’ ability to assess a prospective borrowers’ creditworthiness, according to several experts, the use of alternative data may enable access to loans to prospective borrowers otherwise excluded because of lack of standard financial data or limited credit history (thin-file applicants) (Bonaccorsi di Patti et al., 2022, Langenbucher, 2025), thus promoting financial inclusion (OECD, 2021)

However, the advantages connected to the use of AI for credit scoring are to be weighed in the balance with its potential risks.

One of the most sensible risks related to credit scoring AI-based models is their use of personal data for the assessment of a person’s creditworthiness. The use of this kind of data, which can relate to sensitive aspects such as gender, race, sexual orientation, political party affiliation, can lead to disparate impact in credit outcomes potentially causing biased, discriminatory, or unfair lending. To this end, it is worth noting that, according to recent decisions of the CJEU (SCHUFA case – C-634/21), the use of automated decision-making tools to perform credit scoring activities is subject to the limitations outlined in art. 22 of the GDPR (Falletti, 2024).

In addition to generating or perpetuating biases, given their low explainability, AI-driven models make discrimination in credit allocation hard to identify, interpret and communicate to competent authorities (OECD, 2021). Moreover, the presence of such discriminatory mechanisms tends to generate a feedback cycle in which bias is confirmed and reinforced: for example, the systematic rejection of credit applications of specific social groups caused by an incorrect model can contribute to create historical bias in the data and perpetuate it indefinitely (Bonaccorsi di Patti et al., 2022).

The mentioned risks concerning the use of AI in credit scoring have been taken into consideration by the European legislator, which explicitly classified this kind of tool among those considered as “high-risk” by the AI Act (see par. 2.2).

The risks identified for the use of AI in credit scoring mechanisms are however only some of the potential dangers of the use of AI in finance.

An OECD survey from 2024 identified cybersecurity and market manipulation as the two main risks areas linked to the use of AI in the sector, closely followed by the already mentioned bias and discrimination risks, together with data privacy and quality. Cybersecurity risks appear to be linked to the vulnerability of AI systems to cyberattacks targeting decision-making processes, made more dangerous by AI-generated phishing messages or deep-fakes. Market manipulation, discrimination and data protection are instead strongly impacted by the difficulty to ensure that AI models work on reliable and adequate data (OECD, 2024).

Another relevant risk area identified by the OECD survey is the “Explainability & Interpretability” of AI tools. These tools are often characterised by their “black-box nature”, which hinders the ability to track the logic governing the AI algorithms’ behaviour and to formulate qualitative assessments of the results obtained, thus increasing the opacity of processes and mechanisms (Bonaccorsi di Patti et al., 2022).

The lack of transparency in the use of AI is further enhanced by the fact that European and national authorities do not have extensive and detailed knowledge of the use of AI by financial sector actors, which are generally not subjected to legal requirements to inform authorities about the use or experimentation with AI mechanisms (OECD, 2024).

2.1.1. A much-needed focus on financial sector workers

When listing the potential risk areas connected to the use of Artificial Intelligence in finance, the OECD survey mentioned in the previous paragraph focuses strongly on consumer protection and technical exposures which financial institutions may be subject to – not considering, however, the potential dangers of AI impacting financial sector workers.

In order to understand the perspective of financial sector workers and employers on AI, it is necessary to turn to other surveys on the topic. According to a survey issued in 2023 in OECD countries, both employers and workers active in the financial sector report an improvement in performance levels following the introduction of AI in the organisational model of their company. Moreover, a large share of financial workers using AI reported that AI had improved their performance (79%), enjoyment (63%) and mental health (54%), had complemented their skills (70%) and effectively assisted their decision-making (84%). The same survey, however, also showed financial workers’

concerns regarding the use of AI systems for recruitment, decision-making concerning disciplinary actions and extensive data collection. Moreover, several financial sector workers subject to the use of AI report worries concerning job stability and wage decreases (Lane, Williams, Broecke, 2023).

Generally speaking, the potential impact of AI on financial sector workers appears to be scarcely covered both by scientific and grey literature. The highlighted literature gap is partially filled by the vast scientific research concerning the potential risks for workers – in a general sense – stemming from the introduction of AI in the workplace (e.g., discrimination during the recruitment process, excessive increase in work pace, invasive monitoring, improper processing of personal data, automated decision-making resulting in unfair disciplinary actions, detrimental effects on physical and mental health etc.).

However, the consequences of the adoption of AI tools on workers active in finance appear to be largely underexplored – thus confirming the relevance of the projects adopting a sectorial approach, such as FinAI.

In order to gather a more targeted perspective on the topic, it is therefore necessary to turn to different kinds of sources – in this case, documents issued by sectoral social partners. A relevant example in this sense is the Joint Declaration on Employment Aspects of Artificial Intelligence, signed by European-level social partners of the financial sector (EBA, ESBG, EACB, UniEuropa Finance) on May 14, 2024,[2] a few days after the publishing of the official text of the Artificial Intelligence Act (see par. 2.1).

The signatory parties of the Joint Declaration immediately point out that their main focus is on “current and future Human Resources related use cases, including personnel planning and development […], personnel selection and marketing […], and people analytics.” (article II).

In this sense, they point out the work organisation and employment aspects of artificial intelligence, especially with regard to workers’ health and safety, training and digital competence development (article V). For what concerns OSH, European social partners recommend “regularly performing joint Occupational Safety and Health risk assessments that include the effects of algorithmic management due to its embedded unpredictability” (let. a); in terms of training and digital competence development, the provision of training aimed at adapting to new technologies (both in terms of upskilling/reskilling and career guidance) is instead deemed necessary (let. b).

[2] For a general overview, please refer to D. IODICE, *La Joint Declaration sulla “intelligenza artificiale” per il settore finanziario europeo: la primazia dell’”intelligenza collettiva” delle parti sociali*, in *DRI*, 2024, n. 3, pp. 867-877.

Apart from “traditional” collective rights, which are to be respected also in workplaces interested by the use of Artificial Intelligence (article IV), the Joint Declaration also provides a list of individual and collective “digital rights” endowed to workers whose employment relationship is impacted by AI systems (article VI). These include: the right to a limited, transparent, proportional and rightful use of AI in surveillance and monitoring (let. a); the right not to be subject to decisions concerning their working relationship and conditions based exclusively on automated variables (let. b); the right for their personal data to be processed only in compliance with relevant European and national legislation (let. c).

In the conclusive section of the Declaration, the European social partners commit to promoting the document at the European, national, sectoral and (multinational) company levels, all while encouraging national level social partners to take up the principles included in the document (article VIII).

2.2. The AI Act: approval process and key elements

2.2.1. General framework

On July 12, 2024, the Artificial Intelligence Act (AI Act – Reg. (EU) 2024/1689) was published in the Official Journal (OJ) of the European Union, thus entering into force in all Member States. Its text, which is the result of years of intense negotiations with the European Parliament, the Council of the European Union and other EU institutions, underwent significant changes from the European Commission’s initial proposal, published on April 21, 2021.

The approval of the EU Regulation takes place within a dynamic and evolving international context concerning Artificial Intelligence regulation. Particular mention can be made of the Convention on Artificial Intelligence, Human Rights, Democracy and the Rule of Law, which was signed in March 2024 by the Council of Europe, and the Hiroshima Process, which was participated by G7 leaders on October 30, 2023, and resulted in the adoption of international Guiding Principles and a Code of Conduct for organisations developing advanced AI.

As for what concerns the European context, the European Union started developing the regulatory framework on artificial intelligence through non-binding acts,[3] the most

[3] Communication on Digitising European Industry – Reaping the full benefits of a Digital Single Market (COM(2016) 180 final); Communication on Artificial Intelligence for Europe (COM(2018) 237 final); Coordinated Plan on Artificial Intelligence (COM(2021) 205 final); Resolution on a Comprehensive European Industrial Policy on Artificial Intelligence and Robotics (2018/2088(INI)); Communication on Building Trust in Human-Centric Artificial Intelligence (COM(2019) 168 final).

important of which is the White Paper on Artificial Intelligence, published on February 19, 2020.

In the White Paper, the European Commission emphasised the potential benefits of AI on health care, green transportation, productivity boosts, improvement in working conditions etc., but also acknowledged the need to address the associated risks (lack of transparency in decision-making, potential discriminatory outcomes etc.) through the building of a human-centred and trustworthy AI.

These necessities are enshrined in the AI Act itself: article 1(1) of the Regulation states that its purpose is "to improve the functioning of the internal market" and "ensure a high level of protection of health, safety, fundamental rights […] including democracy, the rule of law and environmental protection" – two principles which have been defined as the basis of EU "digital constitutionalism" (De Gregorio, 2021), together with the principle of transparency, at the centre of the European human-centred approach to AI (Zappalà, 2024, Ciucciovino, 2024).

The principle of transparency connected to the use of AI emerges also from the relationship between the provider and the deployer of AI systems, as defined by the AI Act.

The use of AI systems is subject to an assessment of compliance with the requirements of the Regulation to be performed by the system provider, who must then also provide the deployer (which in the labour context corresponds to the employer) with appropriate information on the system. This information should enable him or her to understand the system's rationale, its level of accuracy, including metrics, robustness and cybersecurity, any known or foreseeable circumstances that may pose risks to health and safety or fundamental rights, the specifications of the input data or any other relevant information in terms of the training, validation and testing datasets used (Article 13(1) AI Act). On the deployer's side lies instead the obligation to use high-risk AI systems in accordance with the instructions received from the provider (including purpose) and take appropriate technical and organisational measures (Article 26(1) AI Act).

The regulatory model adopted by the European Union shows several differences in comparison to that adopted by other countries.

For example, the U.S. approach to AI is based on co-regulatory mechanisms, sharing of principles with big-tech firms, adoption of guidelines and promotion of self-regulatory processes: the EU approach, on the contrary, includes detailed and binding prescriptions, as is also evident from the chosen legal source, namely a Regulation – directly applicable within Member States without the need of transposition through national legislation.

One of the reasons for this choice might be found in the EU economic landscape concerning AI: the EU is not a major global player in technology, nor does it possess major digital communication platforms or systems, and this marks a profound difference from the biggest global competitors on the topic, namely China and the United States. It can be guessed that, through the adoption of the AI Act, the EU wants to put itself forward as a "regulatory soft power," inspiring other nations around the world to raise their standards related to the regulation of artificial intelligence, similarly to what happened on the topic of personal data with the GDPR (Peruzzi, 2024). This is further enhanced by the AI Act extra-territorial scope – i.e., the applicability of some specific provisions to AI providers located in third countries which place AI products on the EU market or put them into service within the EU, and to providers and deployers of AI systems located in a third country, where the output produced by the AI system is used in the Union (Article 2 (a) (c)).

However, it is to be noted how the AI Act sets up a system of rules avowedly intended to complement other EU and/or domestic sources, without undermining their application.

In fact, the text of the Act specifies how its standards serve as a minimum level of protection, and do not prevent Member States or the Union from maintaining or introducing laws, regulations or administrative provisions that are more favourable to workers in terms of protecting their rights in relation to employers' use of AI systems, or from encouraging or allowing the application of more favourable collective agreements (Recital 9, art. 2, par. 11). As a result, from a labour perspective, the EU AI Act remains intrinsically linked with other provisions directly impacting the working relationship, especially those regarding the processing of personal data, occupational health and safety, equal treatment, and non-discrimination (Cristofolini, 2024, Zappalà, 2024).

Through the AI Act, the EU chose to outline a system of rules building not from a strict definition of AI, but allowing the type and content of legal protections to be tailored to the intensity and characteristics of the risks that the algorithmic system under consideration may pose in each context. Identifying the level of risk as a parameter for the interpretation of legislative provisions ensures their adaptability to rapid technological developments and allows them to cover a wide range of technologies (Zappalà, 2024).

In fact, the AI Act follows a "risk-based approach", providing a categorisation of AI systems between those involving unacceptable, high, limited, and minimal risk. Connected to these distinctions are, respectively, the prohibition of placing on the market, the putting into service and/or use of the system, the provision of a set of requirements and obligations to be met, or the modulated and merely voluntary adoption of safeguards through codes of conduct.

Regarding the category of unacceptable risk, from the labour perspective it is necessary to point out the prohibition of emotion recognition systems in the workplace – and during the recruiting process (Ciucciovino, 2024) – except those that are used for medical or safety reasons, or the prohibition of biometric categorisation systems of individuals aimed at inferring sensitive characteristics such as ethnicity, political opinions, union affiliation, sexual orientation and religious beliefs (Article 5 (f) (g)). It is to be noted, however, that a much wider range of unacceptable uses of AI is listed in the Commission Guidelines on prohibited artificial intelligence practices established by Regulation (EU) 2024/1689 (AI Act)[4] – several of which could have had an indirect impact on labour contexts. Moreover, given the "minimum standard" nature of the AI Act, other examples of unacceptable uses of AI in the workplace might be inferred from national and European-level legislation.

Many of AI's uses in the workplace that do not fall within the "unacceptable risk" classification are however likely to form part of the 'high-risk' category (Article 6). In fact, the Regulation explicitly classifies the AI systems used in the area of "employment, workers management and access to self-employment" as high-risk if they pose a significant risk of harm to health, safety or fundamental rights (Annex III, point 4). It needs to be pointed out that the evaluation of whether an AI system might cause harm to health, safety or fundamental rights relies largely on the provider's self-assessment, while the deployer/employer has only a passive role on the matter (Ciucciovino, 2024). Prominent commentators from the trade union side have underlined that employers should nonetheless be held accountable for any kind of significant harm caused artificial intelligence systems in the workplace (Iodice, 2024).

However, according to Article 6(3)(d) of the Regulation, an AI system must always be considered high-risk where it performs profiling of individuals: and this is most likely to be the case when using automated monitoring or decision-making processes at work. Therefore, it can be considered that a classification as "limited" or "minimal" risk of systems intended for use in the exercise of employer and employee powers, can be excluded or restricted to extremely residual circumstances (Peruzzi, 2024, Cristofolini, 2024).

Despite this, some authors highlighted some uncertainties concerning the interpretation of the mentioned provisions. For example, it can be challenging to properly classify and determine the "significance of the risk of harm" in the development phase of an AI system, given that harm, for instance, may not appear immediately or can be the result of gradual damaging processes, as for example AI physiological effects on workers (e.g., stress due to constant monitoring) (Cristofolini, 2024). Moreover, the severity of the harm is to be evaluated in light of the AI system's intended purpose, which Article 3(12) EU AI Act defines as "the use for which an AI system is

[4] The Guidelines can be consulted here: https://ec.europa.eu/newsroom/dae/redirection/document/112367.

intended by the provider". However, AI systems which are not used for their intended purpose might nevertheless have harmful effects on workers: for instance, tools developed to improve remote communication (e.g. videoconference tools) might also be used for monitoring purposes once implemented (e.g., through AI-generated periodic reports) (Cefaliello and Kullman, 2022).

Lastly, in terms of collective rights provision, the AI Act requires employers who use high-risk AI systems affecting workers to inform them and their representatives that they are subject to the use of such systems (Art. 26(7). In recital n. 92, however, it is recalled that this obligation is without prejudice to the obligations of employers to inform and consult workers or their representatives regarding the use AI systems, arising from other Union or national laws and practices, thus confirming the AI Act complimentary nature towards pre-existing legislation (Cristofolini, 2024).

2.2.2. Provisions applicable to the financial sector

As previously outlined, the use of AI in finance is already widespread, and it will likely spread even further in the next few years.

The European legislator, when tasked with drafting the AI Act, took this phenomenon into consideration by including some provisions directly related to the financial sector.

Firstly, it needs to be noted how, according to Recital 58 of the AI Act, AI systems intended to be used to evaluate the creditworthiness of natural persons or establish their credit score (with the exception of AI systems used for the purpose of detecting financial fraud) are to be considered as high-risk. The European legislator further stresses this point by explicitly including "credit scoring" systems in the list of high-risk AI systems included in Annex III of the AI Act (Art. 5, let. b).

Moreover, when mentioning the obligations of the deployer when employing high-risk AI systems, the AI Act states that deployers that are bodies governed by public law, or are private entities providing public services, and deployers of high-risk AI systems referred to in points 5 (b) and (c) of Annex III (i.e., credit scoring systems and tools used to calculate life insurance premiums), shall perform an assessment of the impact on fundamental rights that the use of such system may produce (Article 27 AI Act).

This Fundamental Rights Impact Assessment (FRIA) is also to be found in other relevant EU Regulations, such as Reg. no. 679/2016 (General Data Protection Regulation – GDPR) and Reg. no. 2065/2022 on a single market for digital Services (Digital Services Act). However, in the case of AI Act, the FRIA is mandatory only for a small range of deployers, among which financial services actors are invariably included – both for the referral to "private entities providing public services" and to the use of "credit scoring systems".

According to labour law experts, the type of deployers listed in Article 27 indicates that its legal protection is primarily intended to address individuals as citizens and consumers, rather than as employees: for example, financial services actors are listed not because of their use of AI in the workplace, but because of the potential for discrimination against their clients stemming from the use of AI systems to assess their creditworthiness (Cristofolini, 2024).

Lastly, the AI Act foresees that, when credit institutions are providers or deployers of high-risk AI systems, some of its provisions are either considered to be fulfilled when those institutions comply with EU sectorial legislation (e.g., if they need to put in place a quality management system or monitor the operation of the high-risk AI systems on the basis of the instructions of use) or may otherwise be complied jointly or as part of the compliance with relevant provisions of that same sectorial legislation (e.g., in relation to risk management, or record-keeping of technical documentation and logs) (Mazzini and Bagno, 2023).

The AI Act explicitly (and/or implicitly) mentions the use of AI in finance only with regard to high-risk AI systems. However, the banking sector could also be interested by the use of AI systems characterised by inferior levels of risk, which – given the "complementary" nature of the AI Act – will be dealt with in accordance with pre-existing European legislation, applicable irrespective of technology used. This is specified by the AI Act itself, when it explicitly states that "Union financial services law includes internal governance and risk-management rules and requirements which are applicable to regulated financial institutions in the course of provision of those services, including when they make use of AI systems", and identifies existing national authorities competent for the enforcement of this legislation as generally competent for the purpose of supervising the implementation of the AI Act (Article 74, n. 6, Recital 158).

Therefore, in the EU, AI systems in the banking sector will be subject to the provisions of MiFID II (Markets in Financial Instruments Directive II – 2014/65/UE) and linked Commission delegated regulations, which include requirements for investments firms and trading venues engaged in algorithmic trading.

Given the importance of digital infrastructure for the use of AI, AI systems used in finance will also be subject to current EU operational resilience ICT management rules, such as the Digital Operational Resilience Act (DORA) (Reg. 2022/2554) and the European Banking Authority Guidelines on ICT and security risk management (EBA/GL/2019/04).

AI systems used in finance are also going to be subject to European data protection (Reg. 679/2016 – GDPR) and consumer protection legislation. In relation to the latter, it needs to be highlighted how art. 5 of the Unfair commercial practices Directive (Directive 2005/29/EC) states that practices that materially distort or are likely to

materially distort the economic behaviour of an average consumer, highlighting the need to pay special attention to vulnerable consumers are to be considered unfair (OECD, 2024).

In relation to national legislation, it is to be noted how almost all EU Member States lack an explicit sectoral regulation for AI in finance. According to the OECD, this could be explained by the fact that existing financial regulation, laws and guidance – referencing a vast range of topics such as discrimination, risk management, consumer protection, cybersecurity etc. – is applicable regardless of the kind of technology used (i.e. even if AI is not specifically referenced) (OECD, 2024).

2.3. The impact of the AI Act on national legislation of selected EU Member States, candidate and EEA countries

As mentioned in par. 2.1., the AI Act does not need transposition into national legislation: as a European Regulation, it is directly applicable in all Member States following its entry into force (art. 288 TFEU). Moreover, seeing that one of the legal bases under which the AI Act was adopted – i.e., art. 116 TFEU – relates to the conditions of competition in the EU's internal market, the Regulation is also directly applicable in European Economic Area (EEA) countries (Iceland, Lichtenstein, and Norway).

The AI Act will therefore be integrated into Member States' national legislative frameworks, which may already include laws and regulations which have an indirect impact on the regulation of the use of AI in the workplace – such as data protection, intellectual property, anti-discrimination, consumer protection and cybersecurity legislation. In addition, some EU and EEA countries are currently developing additional comprehensive legislation concerning AI, thus leading to the co-existence of different legislative sources regulating the same topic.

Considering this scenario, the present paragraph outlines the current national legislative sources directly and/or indirectly regulating the employment aspects of AI in the countries which the FinAI project focuses on (i.e., Denmark, Finland, France, Greece, Hungary, Iceland, Italy, Norway, Romania, Spain, Sweden and Turkey), analysing them in the context of governmental AI strategies and policies, whenever present. Despite not belonging neither to the EU, nor to the EEA, Turkey is included among the countries of interest due to its consolidated tendency to harmonise the structure and contents of its national legislation to that of European Directives and Regulations on the same topic.

2.3.1. Denmark

The current Danish national digitalisation strategy for 2024-2027, approved by the Danish Parliament in February 2024, consists of 29 initiatives, several of which focus on AI.

In addition, the Danish Data Protection Agency and the Agency for Digital Government have created a regulatory sandbox aiming at providing companies and public authorities with guidance on data protection legislation when developing or using AI solutions – e.g., by providing free relevant expertise.

In relation to legislation, it is to be noted that currently, there are no specific laws or regulations in Denmark that directly regulate AI, with the AI Act being the principal source for AI regulation[5]. However, AI is subject to national Danish law, such as the Danish Data Protection Act (Lovbekendtgørelse 2024-03-08 nr. 289), the Danish Copyright Act (Lovbekendtgørelse 2023-08-20 nr. 1093) and Danish Trade Secrets Act (Lov 2018-04-25 nr. 309 om forretningshemmeligheder). In the employment context, if AI tools are utilised in the recruiting process, they are required by the Danish Employment Non-discrimination Act and the Danish Act on Equal Treatment between Men and Women (Ligebehandlingsloven) not to discriminate workers based on unlawful criteria.

The Danish Agency for Digital Government has been designated as coordinating market surveillance authority for AI.

Focusing on the financial sector, it is to be noted how the Danish Financial Supervisory Authority (DFSA) has issued a White Paper focused on providing tools for companies within the financial sector regarding data ethics when applying AI.

2.3.2. Finland

During the past years, the Finnish government has been quite active in the regulation of Artificial Intelligence. For instance, in 2017, Finland launched one of the first national AI strategies in the European Union, titled “Finland’s age of artificial intelligence”, which, after a series of complementary programs and policies, has been updated in 2020.

In 2021, the Finnish government also adopted the Avoiding AI Biases project which identified risks related discrimination in existing and planned AI systems.

Moreover, in spring 2024 (in parallel to the last stages of adoption of the AI Act) the Finnish Government instituted a Working Group tasked with evaluating if (and which) national legislation might be needed for the implementation of the AI Act. The Group

[5] Exception made for areas which form part of Denmark’s opt-out on EU law (justice and home affairs).

was also in charge of regulating the test environments for the regulation of artificial intelligence (sandboxes) and the designation of competent supervisory authorities.

In relation to this last task, it is to be noted how a draft implementing act from October 2024 appoints 10 already existing market surveillance authorities (product safety, road traffic, digital infrastructure, medical devices, financial services, etc.) as responsible for the supervision of the AI Act in each of their specific fields.

Currently, however, there are no specific national legislations regulating artificial intelligence, which however would need to be compliant with the provisions of the Data Protection Act (Tietosuojalaki, 2019) and other relevant legislation concerning data privacy and protection such as the Protection of Privacy in Working Life 759/2004 ('Working Life Act') (Laki yksityisyyden suojasta työelämässä), plus cybersecurity (e.g., the new draft law concerning the implementation of the NIS2 Directive) and intellectual property legislation (the Copyright Act, the Registered Designs Act and the Patents Act).

2.3.3. France

In 2017, the French government launched the National AI Strategy, which was divided into two phases. The first phase aimed to provide France with competitive AI research capacities (2018-2022); the second aimed to disseminate AI within the economy, and to support development in priority areas (2021-2025).

Despite these initiatives, currently France does not have any legislation explicitly dedicated to the direct regulation of artificial intelligence – leaving therefore the AI Act to be the only source for its general discipline.

The French legislator has already taken some steps in adapting its regulatory framework to the digital transition. A relevant example of this is the Law for a Digital Republic (LOI n° 2016-1321), which updated several existing legislations with provisions directed at regulating the introduction of new digital technologies in several different fields (e.g., code of relations between the citizens and the public administration, code of administrative justice, code of justice organisation, code of consumer protection, code of mail and communications, code of employment, intellectual property legislation).

Therefore, several national-level legislations have the potential to indirectly impact the regulation of AI in France (antitrust and competition law, the Public Health Code, laws relating to data protection, civil and product liability laws, and security and cybersecurity legislation). However, currently only one legislative proposal is directed at amending national legislation to face AI – and namely, copyright provisions of the French Intellectual Property Code (IPC) (Proposition de loi N° 1630/2023).

In relation to the employment context, the French Labour Code (Code du Travail) presents several provisions which are applicable to the application of AI. Examples of these provisions are those imposing employer the respect of the principles of purpose, confidentiality, pertinence, transparency during the recruitment phase (L. 1211-6 and following) and when controlling his workers. Moreover, the employer cannot use AI systems which create direct or indirect discriminations among the workforce (L. 1131-1) and needs to take into account their potential harmful effects on workers' health and safety (L. 4121-1).

Regarding social partners' involvement, it needs to be noted how the introduction of new technologies (including AI) in the workplace is necessarily object of consultation with the Social and Economic Committee – a workplace organ composed of workers' and employer's representatives (L2312-26). In more detail, French law foresees workers' representatives' formal right to be informed about "automated data processing systems used to manage staff and any modifications thereof" (L2312-38) and consulted where technologies involve employee monitoring or influence hiring processes or affect "health and safety or working conditions" (L. 2312-8) (Dagnino, 2025). It is also to be noted that, when exercising information and consultation rights on specific matters, the Social and Economic Committee can ask to be assisted by an expert (L. 2315-94) (Sereno, 2025). Furthermore, the CSE has the right to a sufficient period of time and precise, written information to formulate its opinion on matters of consultation (L2312-15): if the consultation procedure is not followed, the law foresees the suspension of the use of software and the right to external expert support (R2312-6).

2.3.4. Greece

The Greek government has been developing its strategy concerning AI through a multi-stakeholder approach. The first Hellenic national strategy for artificial intelligence, published in 2021, has been developed through the collaboration of a Working Group composed of major stakeholders in the AI ecosystem, which had the task of providing feedback and recommendations on the structure and content of the strategy itself. The most recent initiative, focused on Generative AI, was instead developed in collaboration with National Centres for Social and Scientific Research.

In terms of legislation, in 2022 a new law (4961/2022) aimed at dealing with new technologies, such as artificial intelligence, the Internet of Things, smart contracts etc. has been adopted by the Greek Parliament. Law 4961/2022 also includes provisions directed at regulating AI in the employment context: namely, the law states that prior to the initial use of an AI system, which affects the decision-making process concerning employees, existing or prospective, and has an impact on their conditions of employment, selection, recruitment or evaluation, each entity shall provide relevant information to the employee.

Moreover, existing national legislation concerning data protection (L. 4624/2019), intellectual property (L.1733/1987) and consumer protection (L. 2251/1994) may indirectly impact the use of AI in the country.

2.3.5. Hungary

The Hungarian government has issued a National AI strategy in 2020. However, currently the Hungarian legislative framework lacks national-level legislation concerning the use of AI, and therefore the AI Act will serve as primary source in terms of regulation.

In order to comply with its provisions, the Hungarian government recently issued a resolution concerning the appointment of a new enforcement body established under the Minister of National Economy with the purpose of fulfilling the task of market surveillance authority.

Several national-level laws might indirectly impact the use of AI in Hungary, such as the Hungarian Data Protection Act (CXII/2011 on the Right of Informational Self-Determination and on Freedom of Information), consumer protection and intellectual property legislation.

Lastly, with regard to the financial sector, the Hungarian National Bank has deployed a regulatory sandbox for fintech companies in order to provide a safe harbour for testing and impact assessment.

2.3.6. Iceland

The Icelandic government has issued a national strategy concerning AI in 2021 (Stefna Íslands um gervigreind).

Iceland does not have any national legislation explicitly dedicated to the general regulation of artificial intelligence: however, some legislation has been recently proposed to update existing regulations to the challenges posed by AI.

An example of this can be found in the intellectual property field, regulated by Icelandic Patents Act No. 17/1991, Icelandic Copyright Act No. 73/1972, and Icelandic Act on Trade Secrets No. 131/2020. A draft law has been proposed to amend the Icelandic Copyright Act, No. 73/1972, aimed at fighting the issue of “deep fakes”. The General Penal Code (No. 19/1940) has also been amended for this purpose, including a provision against deep fakes displaying sexual content.

Several other existing Icelandic legislations might impact the use of AI in various fields. These include the Icelandic Act on Data Protection and the Processing of Personal Data No. 90/2018, the Non-discrimination: Act No. 150/2020 on Equal Status and

Equal Rights Irrespective of Gender; Act No. 85/2018 on Equal Treatment of individuals, and the Cybersecurity Act No. 78/2019 (implementing the NIS Directive).

2.3.7. Italy

The Italian legislative framework is already equipped with several pieces of legislation aimed at regulating algorithmic management, which constitutes one of the most relevant potential uses of AI in the workplace. In fact, during the course of the European-level debate concerning the Platform Work Directive (Directive (EU) 2024/2831), the Italian Parliament approved two laws whose contents anticipated some of the provisions of the Directive itself.

The first one (Leg. Decree n. 101/2019) was issued in 2019 and was exclusively directed towards a particular kind of platform workers – i.e., delivery workers. Its provisions (art. 47bis-47octies, Leg. Decree n. 81/2015), other than ensuring essential safeguards concerning delivery workers' working conditions (e.g., non-discrimination and data protection rights, insurance in case of work-related accidents) impose employers to provide them with adequate information concerning the essential elements of their contract (wage, working time and place, OSH requirements etc.).

This includes information outlined in art. 1bis of Leg. Decree n. 152/1997, i.e., the presence of fully automated decision-making or monitoring systems in the workplace. Art. 1bis was included in Leg. Decree n. 152/1997 following the transposition of Directive 2019/1152 on transparent and predictable working conditions in the European Union in national legislation (Leg. Decree n. 104/2022) and provides information rights concerning fully automated decision-making systems to all employees interested by these kinds of technologies and to their trade union representatives.

Another piece of Italian legislation applicable to the use of AI in the workplace is art. 4 of the Workers' Statute (Law n. 300/1970), regulating employees' monitoring through technology. This article in fact imposes the stipulation of a company-level collective agreement (or, in alternative, the authorisation of the National Labour Inspectorate) whenever a tool which might be used for workers' remote monitoring is introduced in the workplace. Art. 4 also states that data collected through these kinds of instruments can be used only in compliance with European and national-level data protection legislation (Leg. Decree n. 196/2003 – Italian Personal Data Protection Code).

The use of AI in Italian workplaces would also need to be compliant with OSH (Art. 2087 Civil Code and Leg. Decree n. 81/2008) and anti-discrimination legislation (Art. 15 Workers' Statute, Leg. Decree n. 198/2006, 215/2003, 216/2003). To this end, it is worth noting how the employer cannot, for the entire course of the employment relationship, make inquiries on facts not relevant to the assessment of the employee's

professional aptitude (Art. 8, Workers' Statute) – a provision which might be used against AI-based recruitment or management models.

Lastly, it is to be noted how a new law (n. 132/2025) aimed at integrating the provisions of the Artificial Intelligence Act into the Italian legislative framework has been recently approved by the Italian Parliament. Article 11 of Law n. 132/2025 is especially dedicated to the regulation of employment aspects of AI, underlining how this technology should safeguard employees' data protection rights and human dignity, avoiding discriminations based on sex, race, age, sexual orientation, religion and political opinions. Moreover, the Law states how the employer needs to inform workers regarding the use of artificial intelligence systems in the workplace in accordance with art. 1bis of Leg. Decree n. 152/1997.

2.3.8. Norway

Currently, there are no specific laws or regulations in Norway that directly regulate AI. In fact, Norwegian regulations are largely technology-neutral, implying their applicability irrespective of the technology in use (also encompassing AI). The AI Act will be therefore the main source for the direct regulation of AI in Norway.

However, the Norwegian government has put in place initiatives concerning AI for a few years now. In November 2020, the National AI strategy was launched, and in 2021, when the Commission proposal for the AI Act was first issued, the Norwegian government published a Position Paper setting out the government's approach on AI.

Moreover, the Norwegian Data Protection Authority (Datatilsynet) created a Regulatory Sandbox in 2020, aimed at allowing testing, developing and monitoring AI tools in a protected environment, and promoting the development of ethical and responsible AI solutions. The Norwegian DPA issued its first call for projects in 2020. At the beginning of 2024, the Datatilsynet started the fifth round of the Sandbox.

In terms of national-level legislation which could indirectly affect the use of AI in Norway, the following may be listed: the Norwegian constitution, especially Chapter E (human rights); the Equality and Discrimination Act; the Working Environment Act; the Transparency Act; the Personal Data Act (transposition of the GDPR); the Marketing Control Act, Consumer Purchase Act and Digital Services Act; the Norwegian Copyright Act and many others.

2.3.9. Romania

Recently, Romania has developed a number of policy initiatives concerning AI regulation.

Firstly, the Authority for Digitalisation of Romania issued its first National AI strategy in July 2024, following the publication of the AI Act.

In addition, a draft law (BP209/18.03.2024) aimed at creating a comprehensive legal framework at a national level for the implementation, use, development and protection of AI in Romania is currently being discussed in the Romanian Parliament.

It is to be noted, though, that the issue of deep fakes had already been addressed in 2023, through PL-X No 471/2023, aimed at regulating the dissemination of visual and/or audio content generated or manipulated using technology.

Previous national legislation might also play an important role in regulating AI – though indirectly. Examples of this are Law No 190/2018 (data protection), Law No 202/2002 (equality of opportunity between women and men), Law No 48/2002 (prohibition of organisations and symbols with a racist character), Law No 202/2002 (equality of opportunity between women and men), Ordinance No 137/2000 (prevention and punishment of all forms of discrimination).

2.3.10. Spain

Currently, Spain does not have any legislation explicitly dedicated to the direct regulation of artificial intelligence – leaving therefore the AI Act to be the only source for the general discipline of this kind of phenomenon.

However, during the last years, the Spanish government has proven to be quite active concerning the topic of the digital transition – following the National AI Strategy published in December 2020.

Firstly, the “Charter of Digital Rights” was approved, entailing a series of provisions dedicated to the protection of citizens’ fundamental rights (e.g., freedom, equality). The Charter also includes an article (art. 19) dedicated to the protection of workers’ rights, among which are listed information rights to workers’ representatives concerning the introduction of new technologies in the workplace – including artificial intelligence. The information provided by the employer must entail the data used to feed the algorithms and their operating and evaluation of the results’ logic.

In 2023, Royal Decree n. 817 has been enacted, establishing a safe and controlled test environment aimed at facilitating the development and testing of for high-risk AI systems (“Sandbox”), in compliance with art. 57 (and following) of the AI Act. The results of Sandbox experimentations, duly anonymised, should lead to the development of a report containing best practices, as well as technical guidelines for execution and supervision of AI systems.

The Spanish government has also already established the supervisory authority on Artificial Intelligence (Agencia Española de Supervisión de Inteligencia Artificial –

AESIA), through Royal Decree 729/2023. AESIA will be responsible for the enforcement of the AI Act and as a market surveillance authority.

Spain has also several national-level laws which might indirectly impact AI, which are focused on the following topics: data protection (Law 3/2018, Law 1/1982); fair competition (Law 3/1991, Law 15/2007); non-discrimination (Law 15/2022); intellectual property (Leg. Decree 1/1996); workers' rights (Royal Legislative Decree 2/2015).

2.3.11. Sweden

The Swedish Government released its national approach for artificial intelligence in 2018, aimed at creating a basis for future policy actions and priorities. This strategy was complemented by a policy report drafted by the Swedish innovation agency (Vinnova).

In terms of AI-relevant legislation, it is to be noted how the legislative approach in Sweden has been that of passing legislation that does not need to be changed with every advance in technology. As a result, AI-specific legislation is not currently present in the Swedish framework: however, existing legislation can, in many cases, be applied to AI or machine learning systems.

For example, intellectual property law (the Copyright Act (Upphovsrättslagen), the Patent Act (Patentlagen) and the Trade Secrets Act (Lag om företagshemligheter)) can become of relevance in relation to AI. In terms of data protection legislation, the GDPR is complemented by the Swedish Data Protection Act (Lag med kompletterande bestämmelser till EU:s dataskyddsförordning) and sector-specific regulations, such as the Patient Data Act (Patientdatalagen).

2.3.12. Turkey

The Turkish government has been fairly active in the field of AI for quite a few years now.

In 2018, the Digital Transformation Office of the Presidency of Turkey was created, with the aim of dealing with the challenges linked to digital and technological developments in the country. In 2021, the Digital Transformation Office published the National AI Strategy, which currently is the main source of policy concerning AI in Turkey.

The National Turkish Data Protection Authority (KVKK) has also acquired a relevant policy-making role in relation to AI. In fact, other than publishing the "Recommendations on the Protection of Personal Data in the Field of Artificial Intelligence" (the "AI Recommendations") it has issued a series of privacy-focused

guidelines concerning the implementation of AI solutions in different sectors, including the banking one.

In terms of legislation, it needs to be underlined how, being a candidate country, the AI Act is not directly applicable in Turkey. However, on June 25, 2024, a bill for the regulation of AI in Turkey (the “AI Bill”) was presented before parliament. Considering how Turkey always closely follows the legal development in the European Union, the contents of the Turkish AI Bill will probably be consistent with the provisions of the AI Act.

Nevertheless, the Turkish legislative framework is already equipped with several legislations which could indirectly impact the use of AI in the country.

For example, the issue of consumer protection from false advertisements through AI is regulated through the Law on Consumer Protection (No. 6502) and the Law on Regulating Electronic Commerce Law (No. 6563).

In terms of criminal law, the Turkish Criminal Code (No. 5237) criminalises “misinformation” and “fake news” on the internet, which may have implications on AI-generated content, together with the Law on Regulation of Broadcasts through Internet and Combatting of Crimes Committed Through Such Publications (No. 5651).

Also, intellectual property rights are protected through the Law on Industrial Property (No. 6769) which may have implications on AI-generated content.

Lastly, the Law on Protection of Personal Data (No. 6698), which regulates the processing of personal information in similar terms to the GDPR, may have implications over several uses of AI that relying on personal data.

2.4. Key takeaways

The analysis reveals that national frameworks for regulating AI adopt a variety of approaches, with many countries favouring technology-neutral frameworks that build upon existing legislation. For example, data protection laws, anti-discrimination regulations, and general legal principles are frequently applied to address the risks and challenges posed by AI. Alongside these established laws, numerous national initiatives have emerged to support the ethical development and deployment of AI. Such initiatives include the formulation of strategic frameworks to guide AI implementation, the establishment of innovation sandboxes for testing AI technologies in controlled environments, and the creation of supervisory authorities tasked with ensuring adherence to ethical standards by AI systems.

However, there is a marked disparity in readiness among different states. While some countries are proactively amending their legislation to confront AI-related challenges, others predominantly rely on existing regulations, notably the EU AI Act, which serves

as a comprehensive governance framework for AI. Furthermore, it remains relatively uncommon for countries to enact entirely new legislation through multi-stakeholder processes involving employers, trade unions, policymakers, and other key social partners. This suggests that, despite growing awareness of AI's impact, the processes of legislative adaptation and the engagement of various stakeholders remain limited in scope across many jurisdictions.

Regarding the involvement of social partners, it is noteworthy that only a small proportion of the analysed legal frameworks grant specific prerogatives to workers' representatives concerning the implementation of AI in the workplace. The most progressive frameworks restrict such prerogatives primarily to rights of information about the nature and functioning of AI systems, thereby underscoring a general absence of advanced participatory mechanisms on this matter. It is to be noted, however, that all EU Member States encompassed in the present overview are interested by the provisions of Directive 2002/14/CE, which establishes a general framework for employee information and consultation in the EU. Further analysis might be therefore dedicated to the applicability of the Directive's provisions on AI-powered tools in the various Member States, together with its intersection with art. 26(7) of the AI Act. Experts have underlined how information and consultation procedures foreseen by art. 4, par. 2, let. c) of the Directive (related to decisions which are likely to lead to substantial changes in work organization) shall be activated in case of the introduction of AI-powered tools in the workplace. Furthermore, according to art. 4, according to par. 4, let. e) of the Directive, the abovementioned consultation should have the aim of reaching an agreement on decisions within the scope of the employer's powers (Corti, 2024).

Finally, only a limited number of countries have placed particular emphasis on the impact of AI within the financial sector, providing specific guidance on issues such as data ethics and establishing test environments where AI technologies can be trialled in real-world financial contexts. These measures aim to ensure that AI applications in finance are developed and deployed responsibly, thereby safeguarding both consumers and the integrity of the financial system.

Chapter #2-at-a-Glance

This chapter explores how the rapid digital transition and the adoption of artificial intelligence (AI) are reshaping the financial sector. It examines both the **opportunities and risks** that AI creates for institutions, clients, and workers. Special attention is given to the **EU's AI Act**, which sets a risk-based framework for AI regulation, and its implications for financial services such as credit scoring and insurance. The chapter also compares **national regulatory approaches** across several European countries, highlighting gaps in worker protection, limited stakeholder involvement, and the need for more cohesive, forward-looking policies at both EU and national levels.

Key findings

- **AI adoption in finance** boosts efficiency but risks undermining access to essential services (loans, insurance), with implications for fundamental rights.
- **AI Act (EU 2024/1689)** introduces a **risk-based framework**, with strict obligations for high-risk systems (employment, credit scoring, insurance pricing).
- **Credit scoring and insurance premium calculators** are classified as high-risk and require **Fundamental Rights Impact Assessments (FRIAs)**.
- The AI Act prioritises **consumer protection** more than **employee welfare**, leaving gaps in worker safeguards.
- Employers must **inform employees and their representatives** when deploying high-risk AI in workplaces (Art. 26, para. 7).
- Existing worker protection is often indirect, relying on general laws (employment, GDPR, anti-discrimination, IP), not AI-specific rules.
- Comparative analysis of 12 European countries shows:
  - **No technology- or sector-specific AI employment legislation**.
  - **Divergent national approaches**: some proactive, others dependent on EU standards.
  - **Weak multi-stakeholder involvement**, with limited role of social partners in shaping AI rules.

Policy Recommendations

- **Strengthen worker protections** in parallel with consumer safeguards under the AI Act.
- Encourage **national authorities** to go beyond EU minimum standards by:
  - Enacting stronger employment-focused AI legislation.
  - Supporting negotiation of collective agreements on AI use.
- Promote **greater involvement of social partners** (trade unions, employer groups) in policymaking.
- Foster a **cohesive, proactive regulatory framework** across Europe to reduce fragmentation.
- Balance **innovation with social responsibility**, ensuring AI deployment respects fundamental rights and fair labour relations.

In conclusion, this chapter underscores that, while AI creates significant opportunities for innovation in the financial sector, it also presents serious challenges for labour relations, particularly with regard to worker protection. The research findings stress the need for a more cohesive and proactive regulatory approach, at both European and national levels, to address the evolving role of AI in the workplace.

3. DIGITALISATION, AI AND WORKFORCE TRANSFORMATIONS IN EU FINANCIAL SERVICES[1]

3.1. Introduction

The European financial services sector is undergoing a digital transformation. Over the past decade, banks and insurance firms have adopted new technologies in response to competitive pressures, shifting customer expectations, and cost challenges. Since 2008, traditional brick-and-mortar banking models have been giving way to online and mobile platforms, accompanied by a widespread decline in branch closures (ECB, 2024). This trend – described in Italy as "banking desertification" due to the mass closure of bank branches – has been observed across many EU countries (Baldassarre et al., 2025).

Concurrently, Europe has experienced a proliferation of fintech start-ups and "challenger banks" that leverage digital platforms to offer innovative financial services. Digital-only banks – operating entirely via apps and websites, with no branch infrastructure – have rapidly gained traction. By the end of 2024, about 60 digital banks were active in the euro area, up from virtually none a decade prior (ECB, 2025). These developments signal how digitalisation, from mobile banking apps to platform-based lending, is changing the provision of financial services in Europe.

Moreover, the COVID-19 crisis acted as a catalyst for digital transformation – pushing both consumers and financial institutions in Europe to more rapidly embrace online banking, mobile apps, and platform-based lending (Hakkarainen, 2022; Kitsios et al., 2021). These developments underscore how digitalisation is reshaping financial services in Europe.

At the same time, artificial intelligence (AI) is becoming increasingly entrenched in financial-sector workflows, bringing both significant efficiency gains and potentially disrupting the workforce (Ewin et al., 2021; Moşteanu and Fathi, 2020; Kuchciak and Warwas, 2021). Banks have long utilised automation to handle routine tasks (e.g., ATMs and algorithmic transaction processing), freeing employees from repetitive duties and enhancing customer service. In recent years, this has evolved into more advanced AI and machine learning applications, including robo-advisors, automated fraud detection, AI-driven credit scoring, and customer chatbots. A 2022 survey by Italy's central bank found a significant share of financial institutions plan to reduce

[1] This chapter and its synthesis are attributable to the following authors: Mikkel Barslund (HIVA-KU Leuven), Ilse Tobback (HIVA-KU Leuven), Anne Guisset (HIVA-KU Leuven), Karolien Lenaerts (HIVA-KU Leuven) and Valeria Pulignano (CESO-KU Leuven).

human intervention in processes that can be digitised or automated. The new frontier in this transition is generative AI systems, such as large language models, capable of producing human-like content. Generative AI tools rose to prominence in 2023-2024 and are now rapidly being piloted in finance for tasks such as coding, report writing, and customer interaction (Cipollone, 2024).

This has boosted AI adoption across business functions. Early assessments suggest that generative AI could impact a broad range of jobs across a range of businesses. According to a recent International Labour Organisation (ILO) report, about one-quarter of jobs worldwide are in occupations with at least some exposure to generative AI technologies (Gmyrek et al., 2025). However, the analysis emphasises transformation rather than wholesale automation: even among the few occupations deemed highly exposed, most tasks are not fully automatable and human input remains essential. In knowledge-intensive industries like finance, the rise of AI is expected to change the nature of roles and skill requirements more than it eliminates jobs (Albanesi et al., 2023). These parallel trends of automation and AI augmentation underscore the need to prepare the workforce for continuous adaptation.

In light of these developments, this report sets out to empirically examine how digitalisation and AI are impacting employment dynamics in the European financial services sector. Our primary objective is to quantify labour market inflows and outflows in the financial services sector, thereby shedding light on who is entering and leaving the sector amid this technological change. Understanding these labour movements is important for anticipating occupational transitions and designing timely interventions, for example, policies on reskilling or social protection.

To accomplish this, we draw on microdata from the European Union Labour Force Survey (EU-LFS) covering the period 2008-2023. This large household survey provides harmonised data on employment across countries and over time. Our analysis focuses on nine EU Member States – Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland – along with two European Economic Area countries, Iceland and Norway. Together, these countries (hereafter “EU9+2”) offer a diverse sample of the European financial services workforce. We restrict the data to the financial and insurance sector (NACE Rev. 2 category K), using 2008 as a start date since the introduction of NACE Rev. 2 that year ensures consistent sector definitions. The EU-LFS provides rich information on individual worker characteristics, which we exploit to examine workforce composition and changes. Key variables include age, sex, and education level of workers, as well as job attributes such as tenure with the current employer, contract type (permanent versus fixed-term), and working time (full-time versus part-time). These variables allow us to profile the workforce and disaggregate inflow/outflow patterns by demographic group and job type – for instance, distinguishing whether younger or older employees are driving most exits, or whether new hires tend to be on temporary contracts.

Beyond flow measures, our analysis incorporates a task-based perspective to better understand the qualitative shifts in job content associated with digitalisation. In particular, we use the routine/manual/cognitive task typology (Lewandowski et al., 2020). This framework classifies occupations along two dimensions – manual versus cognitive work, and routine versus non-routine tasks – which yields categories such as routine manual, routine cognitive, non-routine manual, and non-routine cognitive jobs. Such categorisation is valuable in assessing automation risks: jobs heavy in routine tasks (whether manual clerical work or routine cognitive processing) are generally easier to automate, whereas non-routine cognitive roles (involving abstract thinking or interpersonal skills) are more resilient.

We apply the task taxonomy of Lewandowski et al. (2020) to EU-LFS occupation data (ISCO-08 codes) to examine how the mix of job types in finance has changed – for instance, whether routine task-intensive roles are declining as technology advances. This also allows cross-sector comparison with the broader economy. Additionally, we incorporate a quantitative AI exposure measure to assess the susceptibility of current financial sector roles to the latest AI technologies. In line with emerging literature, we utilise the generative AI exposure index from Gmyrek et al. (2025), which estimates the share of tasks in each occupation that could be performed by generative AI. Using this measure, we can identify occupations in banking and insurance that are most exposed to AI-driven automation and consider whether inflows or outflows are concentrated in those roles.

The remainder of this report is structured as follows. Section 2 details data sources and the methodology. Section 3 provides an overview of the financial sector workforce stock, describing its demographic makeup and working conditions. We highlight key characteristics and trends in the sector's employment structure – for example, the rising educational attainment and gender composition of finance employees. Section 4 then presents a descriptive analysis of labour market flows, quantifying tenure and exit shares to unemployment, retirement, or other destinations over the 2008-2022 period. 2022 period. In Section 5, we delve into occupational transitions within the sector, looking at how the occupational profile is shifting. Specifically, we explore routine/non-routine task typology and AI exposure metrics. Section 6 provides a forward-looking perspective: we combine our findings with external forecasts to project possible future workforce scenarios in financial services. Drawing on sources like Cedefop's skills forecasts, we outline projected employment growth for the most prominent occupations in the sector over the next decade. These projections offer insight into whether current patterns may persist or, maybe, intensify. Finally, Section 7 provides an overall conclusion and discusses policy implications. We consider how policymakers, employers, and worker representatives can respond to the identified trends, emphasising the importance of continuous skills development and social dialogue in managing the transition. Measures to support workers – from retraining programs to career transition assistance – are discussed, along with initiatives to

leverage digital and AI tools in a human-centred way. In sum, the analysis aims to inform a balanced approach where technological innovation in finance can be harnessed while safeguarding employment and ensuring the workforce is equipped for the jobs of the future.

3.2. Data methodology

3.2.1. Data

The analysis relies on microdata from the European Union Labour Force Survey (EU-LFS), which is Europe's largest household labour market survey. The EU-LFS is a quarterly survey covering all EU Member States (along with select EFTA countries) and provides detailed, comparable information on employment, unemployment, and labour force participation. It collects data on individuals' work status and job characteristics, making it well-suited for sectoral analysis over time. Importantly, the EU-LFS's ample sample size allows us to isolate and study a relatively small sector like financial services with reasonable precision, an important advantage given that financial and insurance activities account for under 5% of total employment in most countries.

Coverage and scope

We use EU-LFS data from 2008-2023 for nine EU countries – Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden, and Finland – plus two EFTA countries (Iceland and Norway). The year 2008 is chosen as the start because it marks the introduction of the NACE Rev. 2 industrial classification, ensuring consistent sector definitions going forward. The pooled dataset represents roughly 33 million person-observations over this period, of which about 13 million are classified as employed. Within this sample of employed persons, we identify approximately 313,000 observations in the Financial and Insurance Activities sector (NACE Rev. 2 Section K), and about 74,000 cases of individuals who exited employment in this sector ("leavers"). These large sample numbers underline the robustness of EU-LFS for our purposes, as they provide enough observations to analyse employment flows in the financial sector annually and across countries.

Sector and occupation classification

In the EU-LFS microdata, industry is recorded at the one-digit level of NACE Rev. 2, and occupation at the three-digit level of ISCO-08. We exploit these classifications to define our sector of interest and to examine job roles within it. Specifically, we delineate the financial sector by NACE Rev. 2 Section K, which encompasses financial and insurance activities (including banking, insurance, reinsurance, pension funding, and

related services). For worker occupations, we use the ISCO-08 classification at the three-digit group level – the most detailed occupational breakdown available in the EU-LFS public-use files. This granularity enables a nuanced view of job functions and is useful for linking to task-based analyses (e.g. distinguishing roles by their degree of routine or cognitive tasks). All classifications are harmonised across countries and years by Eurostat, ensuring consistency in definitions.

Key variables and definitions

We draw on a range of EU-LFS variables capturing personal and job characteristics. Important demographic variables include age (in years), sex, and education level (ISCED). Key job variables include employment status (with full-time or part-time indicator), job tenure (years with the current employer), type of employment contract (permanent vs. fixed-term), and indicators of shift work and overtime hours. These variables enable us to profile workers in the financial sector and compare different subgroups (for example, new hires versus long-tenured workers, or those leaving the sector versus those remaining).

In measuring inflows and outflows, we make use of tenure and a retrospective question on the time since leaving the last job. In particular, we define “new hires” in the sector as employed individuals with <1 year of tenure at their current employer, which serves as a proxy for recent hires into financial services. We note that “new hires” so defined will include both hires from outside the labour force and those who moved from another job (job-to-job moves), although the EU-LFS cannot distinguish the two cases. Conversely, we identify sector “leavers” as individuals who left a finance job within the past 12 months and who have not yet re-entered employment (i.e. they are currently unemployed or inactive). We note that “new hires” so defined will include both hires from outside the labour force and those who moved from another job (job-to-job moves), although the EU-LFS cannot distinguish the two cases. Conversely, we identify sector “leavers” as individuals who left a finance job within the past 12 months and who have not yet re-entered employment (i.e. they are currently unemployed or inactive).

EU-LFS versus EU-SILC

An alternative source for analysing worker flows is the EU Statistics on Income and Living Conditions (EU-SILC), which has a longitudinal survey component. EU-SILC can directly observe transitions (for example, tracking individuals’ employment status year-to-year, including job changes and movements into or out of work). EU-SILC offers more detailed flow information on inflows/outflows than the cross-sectional LFS. However, the sample size in EU-SILC is much smaller – on the order of one-quarter to one-tenth the size of the EU-LFS sample for the same countries. This poses a significant drawback for a study of a niche sector: a smaller sample would yield too few

financial-sector observations (especially in smaller countries or when disaggregating by year or subgroup) to draw robust conclusions. Moreover, the EU-LFS provides greater temporal and cross-country coverage (annual data for all selected countries since 2008, whereas SILC's consistent flow data start later and may require pooling years). For these reasons, we rely primarily on the EU-LFS as the main dataset.

Data limitations

While the EU-LFS data is the best source for our analysis, it is important to acknowledge several limitations for this analysis:

- No direct observation of job transitions: The EU-LFS public use-file does not track the same individuals over time (households are rotated, and anonymisation prevents linking records longitudinally). As a result, we cannot directly observe job-to-job moves or hires from unemployment. Information on previous job and industry is only collected for respondents who are not currently employed (e.g. unemployed or retired individuals, who report their last job). This means inflows and outflows are inferred indirectly – for example, using tenure <1 year as an indicator of recent hiring, as noted above, or identifying those currently unemployed who left their last job in finance within a year to gauge recent exits. However, we cannot capture workers who leave the financial sector for another job in a different sector, nor those who enter from unemployment, unless they have a very short tenure in the new job. These flow measures, therefore, exclude some transitions (particularly direct job-to-job changes).
- Patchy industry coding in early years: The introduction of NACE Rev. 2 in 2008 came with some initial data gaps. Around 6-7% of respondents lack an industry code in the late-2000s EU-LFS data. This missing sector information is mostly in the earliest years of our sample (e.g. 2008-2010). While this is a small fraction, it could slightly undercount financial sector employment in those years or bias inflow/outflow counts. We mitigate this by focusing on trends and by noting that data quality improves over time.
- Small country sub-samples (Iceland and Norway): The two non-EU countries in our study, Iceland and Norway, have relatively small LFS samples compared to the larger EU countries. For instance, Norway's yearly LFS sample is around 20,000 individuals, and Iceland's is around 10,000. Given that only roughly 4% of workers are in financial services, this translates to only ~400-800 finance-sector observations per year in those countries' data. The number of annual leavers from the sector in these countries is even smaller (often just a few dozen cases). Consequently, estimates for Iceland and Norway are subject to high sampling uncertainty, and we exercise caution when interpreting country-specific results for these cases.

3.2.2. Measuring exposure to automation and AI

This section explains how we operationalise two complementary lenses on technology-related change in the European financial sector:

1. Automation risk, proxied by the task content of occupations and summarised in a routine-task intensity (RTI) measure.
2. Generative-AI exposure, proxied by the 2025 ILO Global Index of Occupational Exposure to Generative AI (Gmyrek et al., 2025).

Both indicators are merged with EU-LFS micro-data at the 3-digit ISCO-08 level and then aggregated to the sector-country-year cells required for our flow analysis.

Task-based automation risk

Following the task approach of Lewandowski et al. (2020), every occupation is viewed as a bundle of tasks that fall along two orthogonal dimensions, manual versus cognitive and routine versus non-routine. Combining the axes yields four groups: routine-manual, routine-cognitive, non-routine-manual and non-routine-cognitive. The first two groups are generally easier to automate because their tasks are repetitive or codifiable, whereas the latter two rely on dexterity, social interaction or abstract reasoning and are therefore more resilient to classic computerisation.

Descriptive tables in Section 4 classify each occupation by its dominant task type. The strength of this approach is its direct link to observable task content rather than historical employment declines, although it remains anchored in expert mappings based on 2014 O*NET data and therefore does not capture the latest AI capabilities.

Exposure to generative AI

Whereas the previous measure reflects vulnerability to *routine* automation, generative AI threatens to automate cognitive functions such as text generation, pattern discovery and conversational interaction that were previously considered secure. We therefore complement the first measure with the refined ILO Generative-AI Exposure Index (Gmyrek et al., 2025). The index combines a large-scale worker survey, Delphi-style expert validation and GPT-4o-assisted scoring of nearly 30,000 tasks to assign each 4-digit ISCO occupation both a continuous exposure score (0-1) and one of four ordered “exposure gradients”. Globally, 3.3 % of employment falls into Gradient 4 – the group with the highest share of tasks that can already be executed, or at least transformed, by generative AI tools – and clerical as well as specialised digital roles dominate this category. Customer-facing finance occupations cluster in Gradient 3, indicating moderate but rising transformation potential.

For our purposes, the gradient and the underlying continuous score are linked to the EU-LFS records by ISCO code. Generative-AI exposure matters to finance because

many sectoral tasks – document drafting, compliance checks, client interaction and routine data analytics – are precisely those that large language models have begun to emulate.

Why do we need both measures?

The two indicators capture different facets of technological change. Classical back-office clerks in the financial sector are both non-cognitive routine and have high AI exposure, confirming their vulnerability to both automation channels. By contrast, emerging fintech developers exhibit *low* routine intensity but *high* exposure to generative AI, illustrating that risk does not lie along a single dimension. Interacting both indices with worker characteristics then shows *who* is most likely to benefit or lose under different scenarios.

Data caveats and robustness

Three caveats deserve mention. First, EU-LFS public-use files reveal only the 1-digit NACE sector code, so within-finance heterogeneity, particularly the rise of fintech start-ups, is underestimated. Second, the Nordic micro-states feature fewer than 30 finance leavers per year; we therefore pool years to reduce sampling noise. Third, task mappings inevitably contain measurement error however, the dual-indicator framework provides a parsimonious yet powerful lens through which to analyse how *routine automation* and *generative-AI adoption* are reshaping employment dynamics in European finance.

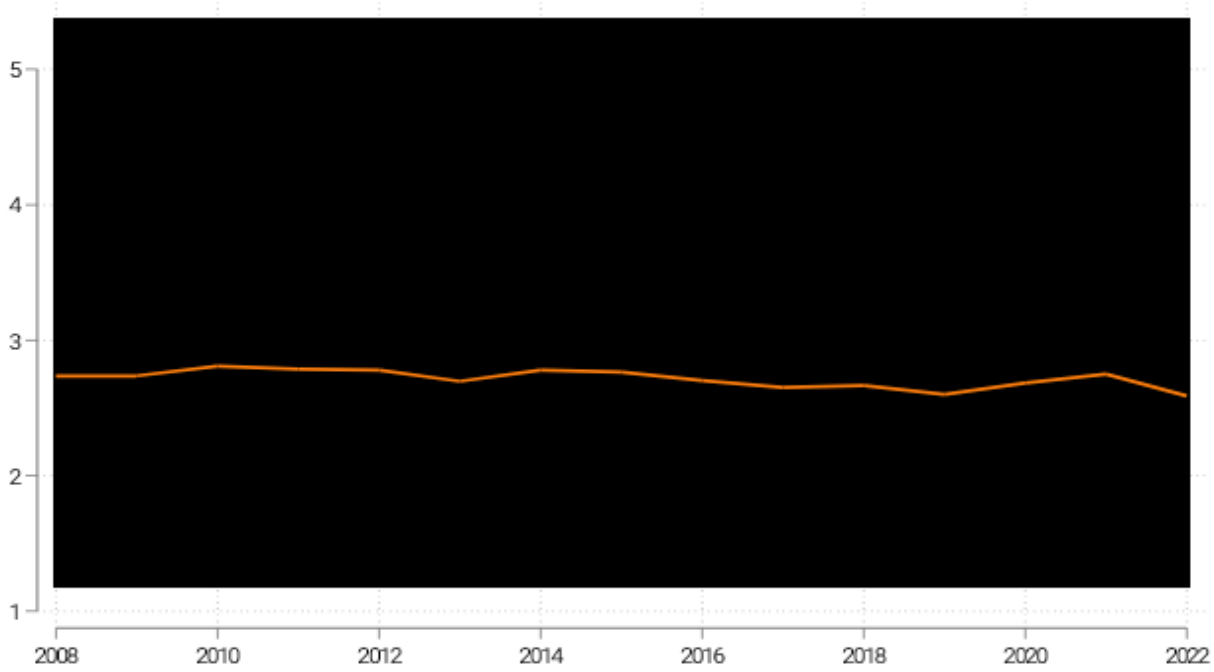
3.3. Labour Market Stock Characteristics

This section profiles the current workforce in Europe's financial and insurance sector to set the stage for our flow analysis. We document how the sector's employment share has inched down while its composition has shifted: the workforce is ageing, markedly more tertiary-educated, and still relatively gender-balanced. Contractual forms remain dominated by permanent, full-time positions, with limited use of temporary arrangements. Cross-country dispersion has narrowed, but important structural differences persist.

The European financial and insurance sector (NACE K) employs a stable but slowly shrinking share of total employment in the EU9+2 sample over 2008-2022. As shown in Figure 1, the aggregate share hovers around 2.7%, with a mild downward drift after the Great Recession and again post-2019. Cross-country dispersion has narrowed markedly: the range across countries fell from just over four percentage points in 2008 to around 1.7 percentage points in 2022 (between 1.5 and 3.2%). This convergence suggests a common structural adjustment, e.g. branch consolidation and digitalisation, across EU countries.

In the Annex Figure A 1, we also report the share of total employment for each of the EU9+2 countries. While almost all countries report a rather stable share over time, in line with the overall results, Iceland exhibits a substantial shrinking of the share of the financial sector in employment.

Figure 1. Financial sector employment share (%), EU9+2, 2008-2022



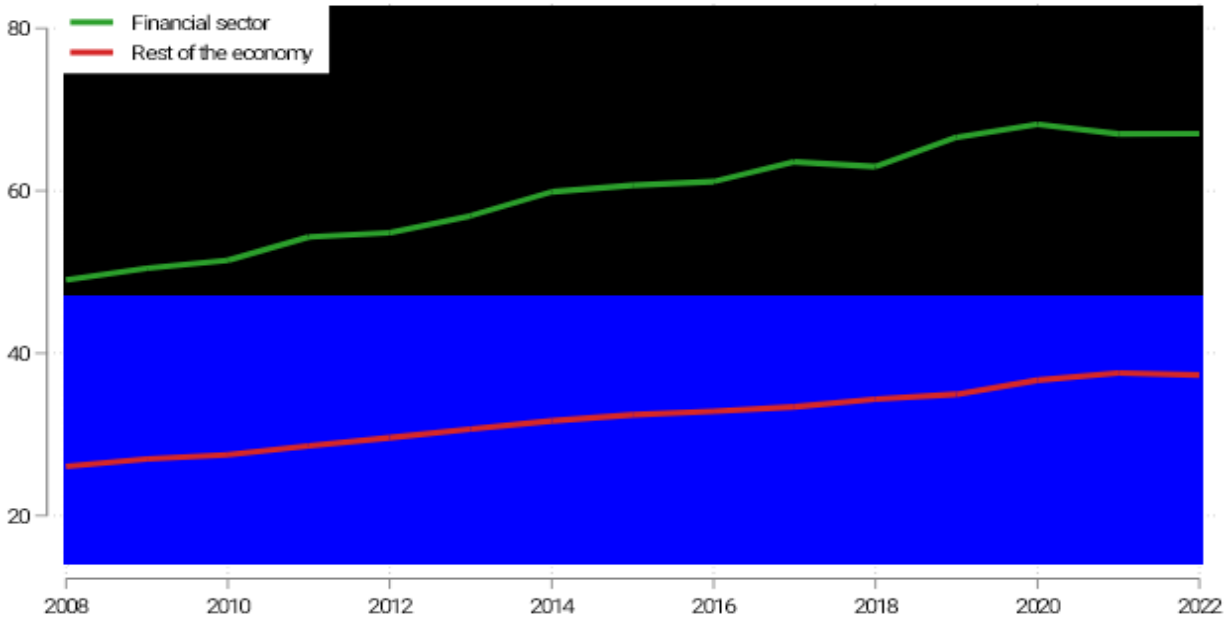
Source: LFS, 2008-2022, EU9+2, data are weighted.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway.

The financial and insurance sector has seen substantial educational upgrading. Figure 2 shows a pronounced rise in tertiary-educated employment within finance, from around 40% in 2008 to nearly 60% in 2022. A trend that both started from a higher initial level than the rest of the economy, and where the increase has outpaced that of other sectors. Two mechanisms have likely driven this trend: (i) automation of routine clerical roles that historically required medium qualifications in combination with branch closures, and (ii) growing demand for advanced analytical, IT, and compliance skills. The shrinking shaded band indicates convergence in educational attainment across countries.

When examining individual countries (Annex 2, Figure A 2), we find that the overall pattern holds across the EU9+2. However, the extent of the difference between the financial sector and the rest of the economy varies by country. For instance, Romania

shows a pronounced gap in the share of highly educated individuals in total employment, whereas Denmark, Sweden, and Italy exhibit a more modest difference.

Figure 2. Share of highly educated persons in total employment (%), EU9+2, 2008-2022

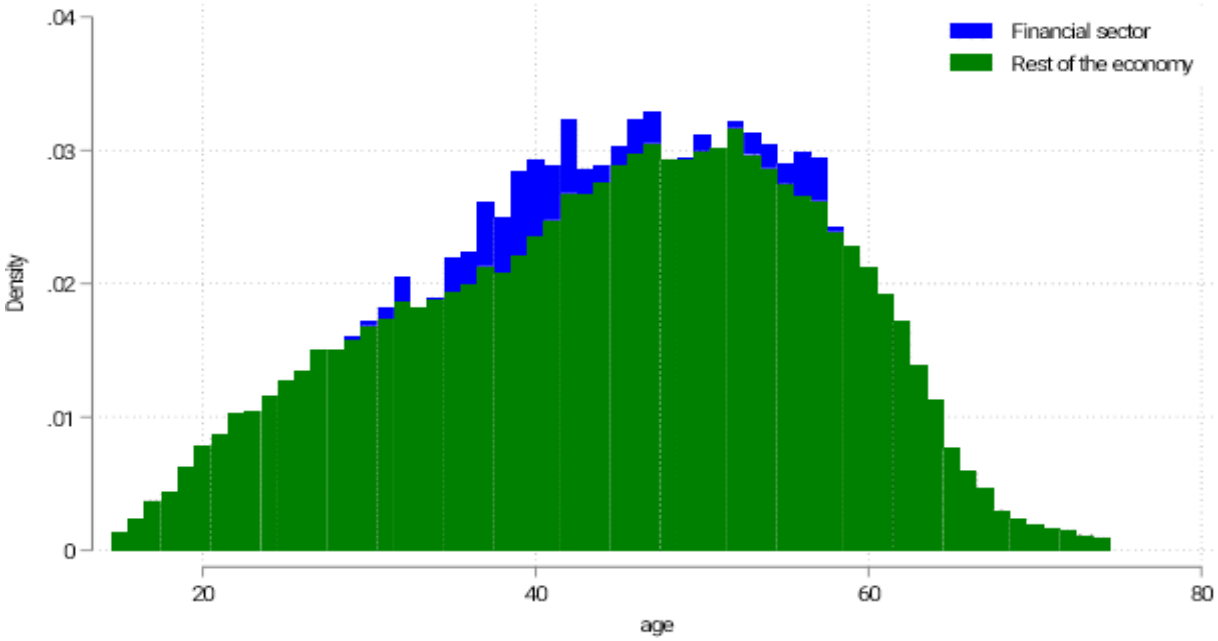


Source: LFS, 2008-2022, EU9+2, data are weighted.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway.

The workforce in the financial sector has been ageing along with the workforce in the rest of the economy. The average age in finance rose from 40.6 to 43.2 years between 2008 and 2022 (Table 1), mirroring the rest of the economy (from 40.5 to 43.2) but starting from a slightly higher base. The age distribution in Figure 3 confirms a shift towards the 45-54 cohort and a thinning of the under-30 group in 2020-2022. This implies fewer young entrants relative to stock size and may foreshadow replacement pressures as older cohorts retire.

When examining individual countries within the EU9+2 (Annexe 2, Figure A 3), we find that the potential replacement pressure due to an ageing workforce is less pronounced in a few cases. Specifically, Hungary, Romania (and to some extent Finland) appear to employ a relatively younger workforce in the financial sector compared to the rest of the economy.

Figure 3. Age distribution of employees, EU9+2, 2020-2022



Source: LFS, 2008-2022, EU9+2.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. Age is restricted to age 74. For Iceland, only age categories are available. For this country, age has been approximated as the midpoint of each 4-year age bracket.

The gender balance in the financial sector has been maintained during the period of educational upgrading (Table 1). Men constitute 48% of the finance workforce throughout the period – considerably more gender-balanced than the rest of the economy (54-56% men). The near constancy indicates that digitalisation and restructuring have not materially altered gender composition so far.

Finance sector jobs remain predominantly full-time and permanent. Full-time shares declined only marginally (from 91 to 90%), still above the rest of the economy (decline from 85 to 84%). Temporary contracts are rare and stable at around 10%, whereas the number is 16% for the “rest of the economy” (Table 1). Overtime incidence fell modestly (from 14 to 12%) and remains slightly above the economy-wide average. Shift work is negligible in finance (around 2-3%).

Average tenure equals 13 years, two years longer than the economy average (11 years). High tenure underscores internal labour markets and career ladders in established banks/insurers, but also hints at limited external mobility (see section 4).

Table 1. Characteristics of employees and working conditions: average in the financial services sector and the rest of the economy, EU9+2, 2008 & 2022.

	Financial sector		Rest of Economy	
	2008	2022	2008	2022
Sex (% men)	48	48	56	54
Age (average)	40.6	43.2	40.5	43.2
Fulltime (%)	91	90	85	84
Temporary contract (%)	9	10	15	16
Overtime (%)	14	12	11	10
Shift work (%)[£]	2	3	16	18
Tenure (current employer), years	13	13	10	11

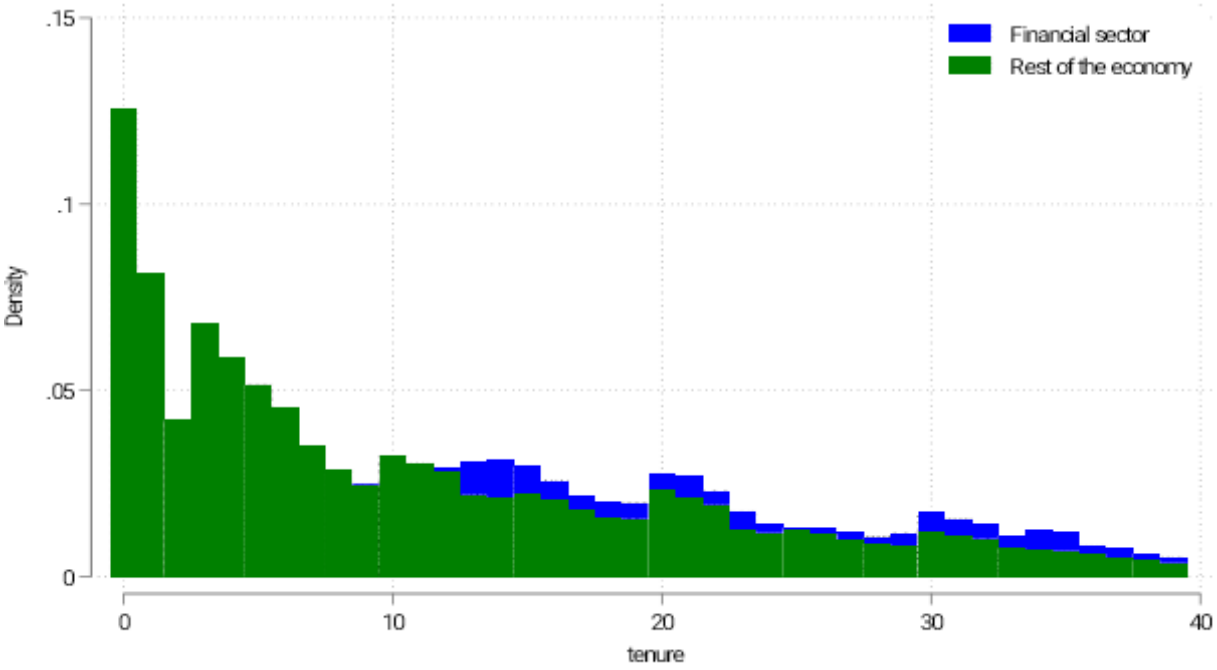
Source: LFS, 2008-2022, EU9+2, data are weighted.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. The variable shift work refers to 2021, as this variable is not included in the 2022 survey.

3.4. Labour Market Flows

This section examines labour market dynamics in the financial sector, with a focus on employee tenure and exit shares. Exit shares are defined as the proportion of workers who left the sector within the past year (to unemployment or inactivity), relative to the total workforce in that year.

An analysis of tenure patterns shows that employees in the financial and insurance sector tend to stay in their jobs for longer periods relative to the rest of the economy (Figure 4), which aligns with the data presented in Table 1. As a result, the sector has a relatively low share of “new hires”, defined as workers with one year or less of tenure. This trend is consistently observed across all EU9+2 countries (Annex 2, Figure A 1).

Figure 4. Tenure distribution of employees, EU9+2, 2020-2022

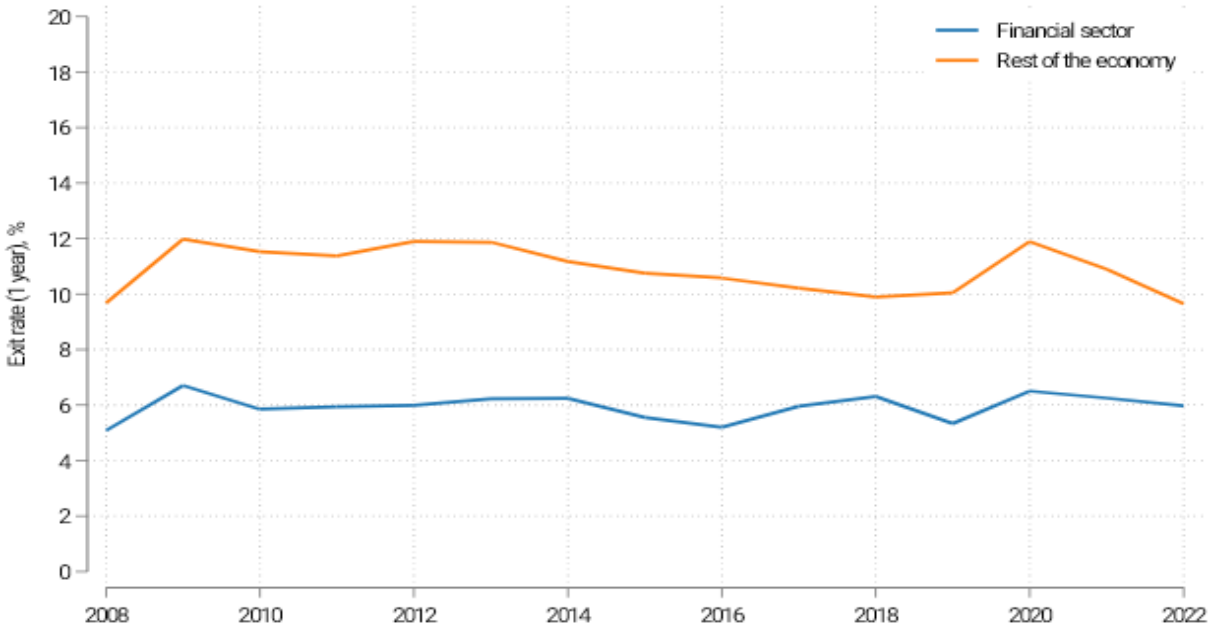


Source: LFS, 2008-2022, EU9+2.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. Tenure is expressed in years and is restricted to 40 years.

Furthermore, the exit rates confirm this finding (Figure 5). The financial sector consistently exhibits structurally lower exit shares compared to the rest of the economy. Business cycle effects are visible to some extent, particularly within the "Rest of the economy" category. Specifically, exit rates were relatively high up until 2014, followed by a noticeable increase during the COVID-19 period, and a sharp decline thereafter.

This structurally lower exit rate is observed consistently across all individual EU9+2 countries (Annex 2, Figure A 5). Nevertheless, there are notable differences in the magnitude of the gap between exit shares in the financial sector and those in the rest of the economy. In particular, the disparity is quite pronounced in countries such as Spain and Finland, and to a lesser extent in Italy.

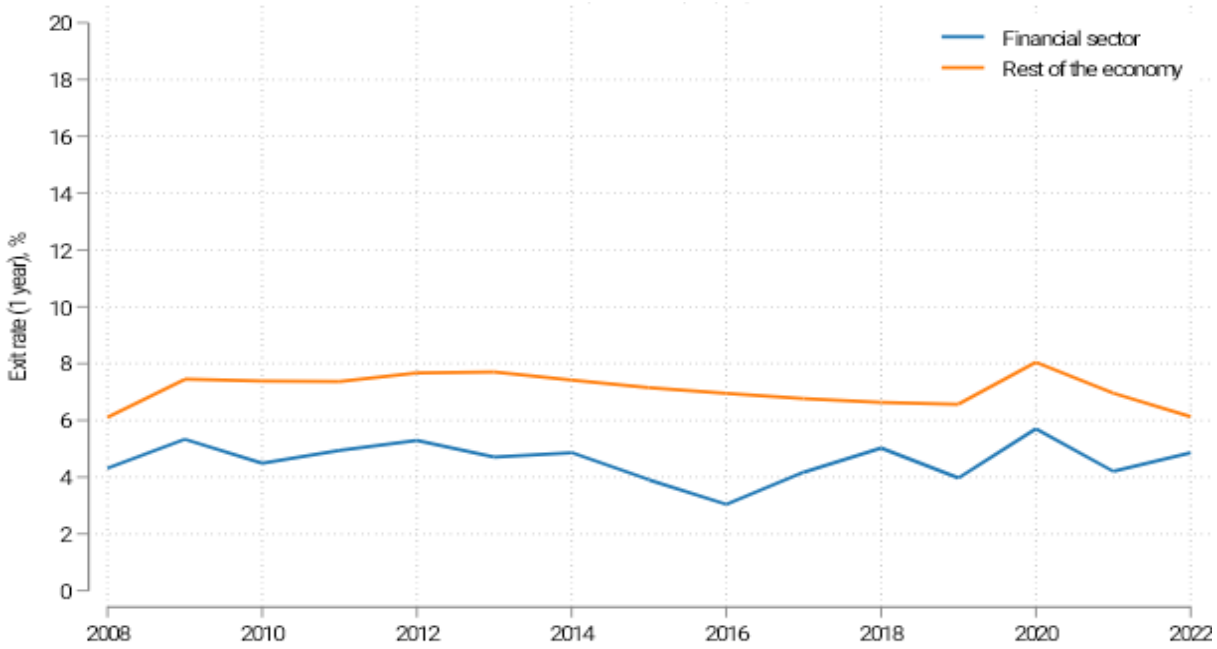
Figure 5. Exit share (1 year), all workers (%), EU9+2, 2008-2022



Source: LFS, 2008-2022, EU9+2, data are weighted.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. The exit share represents the ratio between the number of individuals who left a sector (either financial or the rest of the economy) within the past year, based on the time since they last worked, and the number of high educated individuals currently employed in that sector during that year.

Part of the observed difference in exit shares between the financial sector and the rest of the economy could be attributed to the relatively high educational attainment of employees in the financial and insurance sector. However, even when focusing only on highly educated workers (Figure 6), the financial sector still tends to exhibit lower exit rates (albeit with a smaller difference compared to the rest of the workforce).

Figure 6. Exit share (1 year) among high educated workers (%), EU9+2, 2008-2022



Source: LFS, 2008-2022, EU9+2, data are weighted.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. The exit share represents the ratio between the number of high educated individuals who left a sector (either financial or the rest of the economy) within the past year, based on the time since they last worked, and the number of high educated individuals currently employed in that sector during that year.

3.5. Occupational Transitions and Exposure to AI

Jobs in the financial sector are predominantly cognitive (Figure 7). In 2022, routine cognitive jobs made up a stable majority, accounting for 60.2% of all jobs. Non-routine cognitive jobs comprised 36.5%, while non-routine manual jobs represented a small minority of 2.4%. Routine manual jobs are virtually absent from the sector (0.7%). This dominance of cognitive jobs in the financial sector is consistent across all countries within the EU9+2 group (Annex 2, Figure A 6).[2]

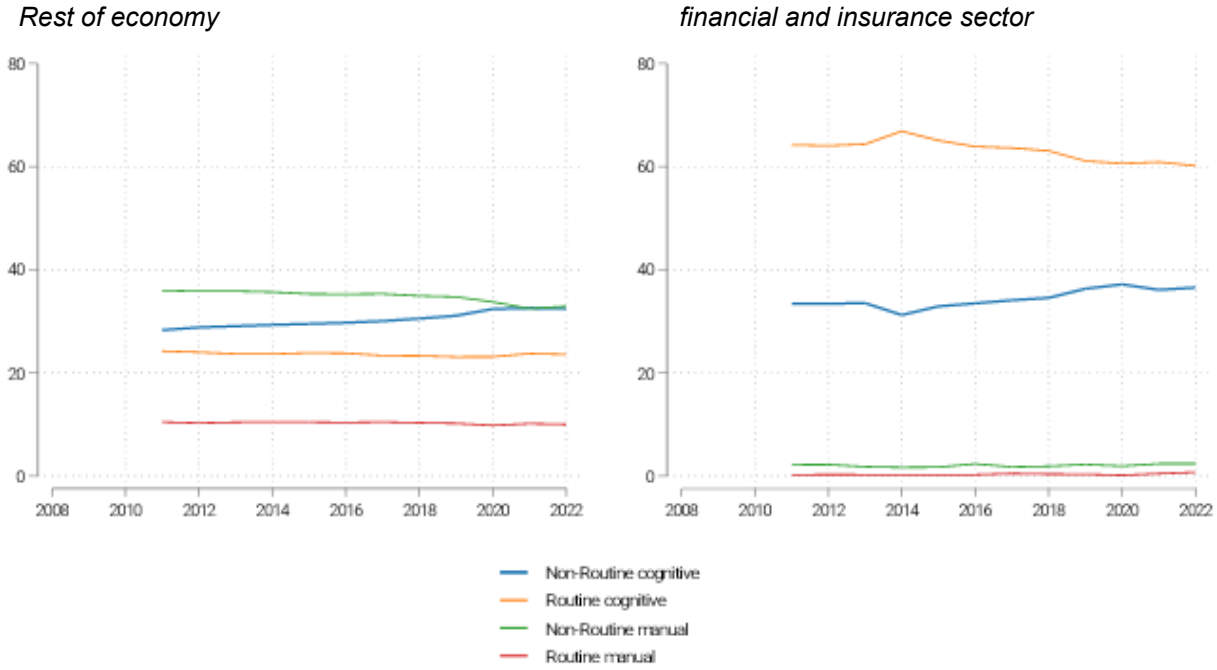
Although there has been some shift in the relative shares of routine and non-routine cognitive jobs over time, with routine cognitive jobs slightly declining and non-routine cognitive jobs gaining importance, the overall distribution has remained relatively stable.

In contrast, the broader economy shows a different composition of job types. While the distribution of job types has also remained fairly stable between 2011 and 2022, the largest share of employment has consistently been in non-routine manual jobs.

[2] Figures by country for the overall economy are available in Annex 2, Figure A 7.

However, this share has slightly declined over time. By 2022, non-routine manual and non-routine cognitive jobs each accounted for 32-33% of total employment in the broader economy.

Figure 7. Share of employment by task-type, %, EU9+2, 2011-2022



Source: LFS, 2008-2022, EU9+2, data are weighted.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. The share of employment by task-type represents the ratio between the number of employees with a certain task-type within a sector (either financial or the rest of the economy) and the total number of workers employed in that sector.

In contrast, the broader economy shows a different composition of job types. While the distribution of job types has also remained fairly stable between 2011 and 2022, the largest share of employment has consistently been in non-routine manual jobs. However, this share has slightly declined over time. By 2022, non-routine manual and non-routine cognitive jobs each accounted for 32-33% of total employment in the broader economy.

An analysis of the most prominent occupations in the financial and insurance sector confirms a strong concentration of cognitive jobs. The two largest occupational groups are Financial and mathematical associate professionals, accounting for 20% of total employment in the sector, and Sales and purchasing agents and brokers, representing 14% (Table 2). Together, they make up approximately one-third (34%) of the sector's workforce. Furthermore, the ten most prominent occupations combined account for

nearly 80% of total employment in the sector across the EU9+2 countries between 2008 and 2022, indicating a relatively concentrated occupational structure.

Table 2. Top 10 Occupations in the financial and insurance sector, EU9+2, 2008-2022

	Occupation (3-digit ISCO-08 code)	Share of employment (financial sector) (%)
1.	Financial and mathematical associate professionals (331)	19.7
2.	Sales and purchasing agents and brokers (332)	13.8
3.	Finance professionals (241)	9.4
4.	Numerical clerks (431)	9.2
5.	Tellers, money collectors and related clerks (421)	8.5
6.	Professional services managers (134)	7.8
7.	General office clerks (411)	2.8
8.	Software and applications developers and analysts (251)	2.5
9.	Administrative and specialised secretaries (334)	2.4
10.	Business services and administration managers (121)	2.3
	Total	**78.4**

Source: LFS, 2008-2022, EU9+2, data are weighted.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. The share of employment represents the ratio between the number of employees with a certain occupation within the financial sector and the total number of workers employed in that sector.

To further investigate the nature of occupations in the financial and insurance sector, we draw on the AI Occupational Exposure (AIOE) Index developed by Felten et al. (2021)[3] and the 2025 ILO Global Index of Occupational Exposure to Generative AI by Gmyrek et al. (2025).[4] The index of Felten and colleagues assigns each occupation an

[3] The AIOE index is provided for Standard Occupational Classification (SOC) occupations. Using a validated SOC-ISCO crosswalk, we translate these SOC codes to ISCO codes. The index is available at the detailed occupation level (ISCO 4-digit, post-crosswalk). To enable its use with LFS data, we aggregated the index values to the ISCO 3-digit level by calculating the average of the corresponding 4-digit values.

[4] The ILO GenAI index is available at the detailed ISCO-08 4-digit occupation level. To enable its use with LFS data, we aggregated the index values to the ISCO 3-digit level by calculating the average of the corresponding 4-digit classifications. The index ranges from -1 (no exposure) to 4 (highest

AIOE score ranging from -2.7 to +1.5, where higher positive values indicate greater exposure to advances in AI technologies. Occupations with negative scores tend to be physically demanding and non-office-based, whereas positive scores are almost exclusively associated with white-collar roles that typically require advanced educational qualifications. The ILO Global Index assigns each occupation a gradient score that reflects both the extent to which the occupation is exposed to Generative AI (GenAI) and the number of tasks within that occupation likely to be affected (Gmyrek et al., 2025). The index ranges from no exposure to minimal exposure, and then to gradient levels 1 through 4. A gradient of 4 indicates that the occupation is significantly impacted across many of its tasks.

Using these indices, we find that all top ten occupations identified are linked to greater exposure to advances in AI technologies and generative AI (Table 3).

Table 3. Occupational AI exposure in the top 10 occupations in the financial and insurance sector

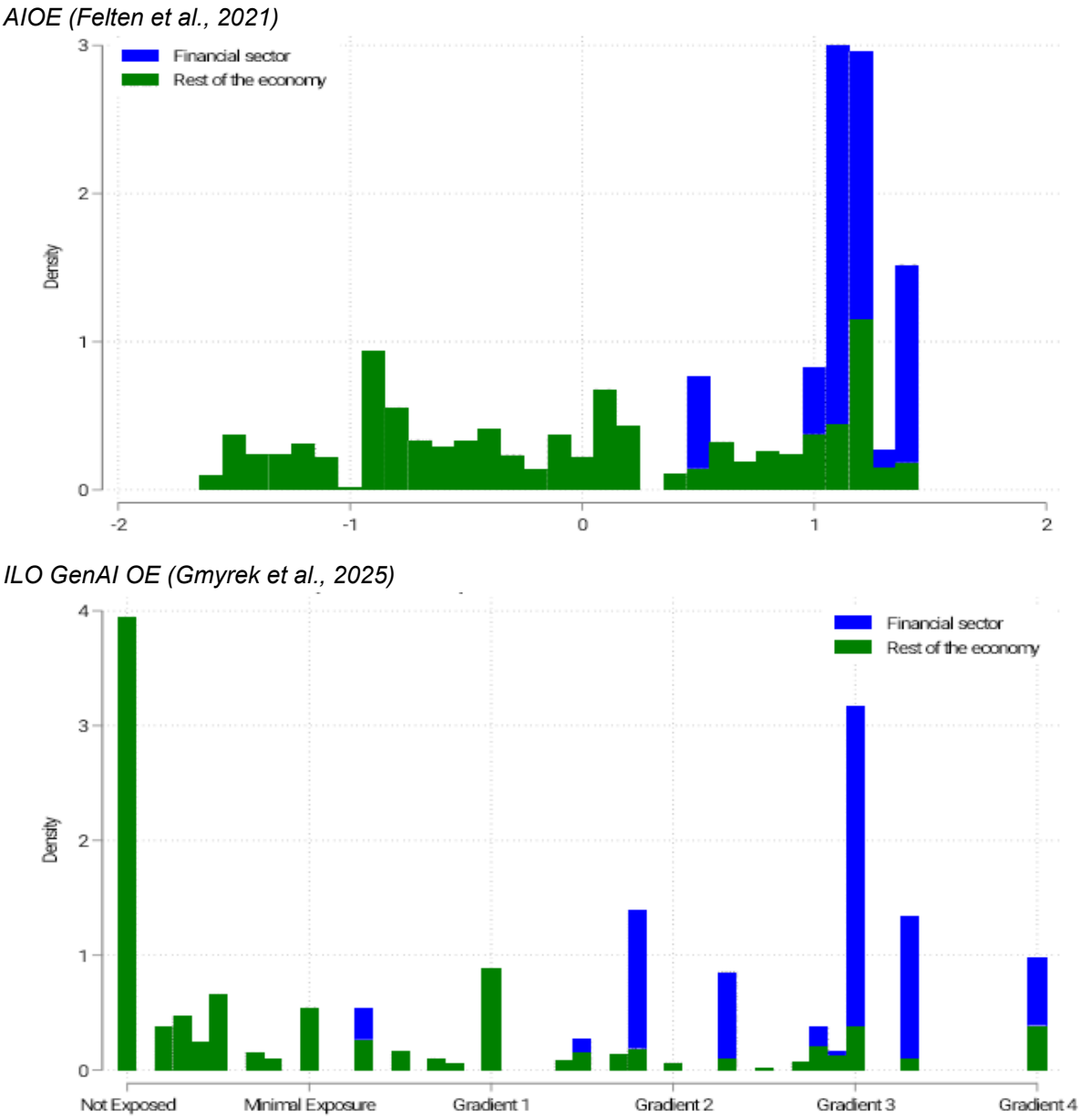
	Occupation (3-digit ISCO-08 code)	AIOE	GenAI OE
1.	Financial and mathematical associate professionals (331)	1.138	Gradient 3
2.	Sales and purchasing agents and brokers (332)	1.184	Gradient 1-2
3.	Finance professionals (241)	1.414	Gradient 3-4
4.	Numerical clerks (431)	1.249	Gradient 4
5.	Tellers, money collectors and related clerks (421)	0.488	Gradient 2-3
6.	Professional services managers (134)	0.994	Minimal exposure – gradient 1
7.	General office clerks (411)	1.238	Gradient 4
8.	Software and applications developers and analysts (251)	1.204	Gradient 3
9.	Administrative and specialised secretaries (334)	1.041	Gradient 2-3
10.	Business services and administration managers (121)	1.085	Minimal exposure – gradient 1
	Average	**1.104**	Gradient 2-3

Source: AIOE (Felten et al., 2021), GenAI OE (ILO, 2025).
Note: AIOE stands for AI Occupational Exposure (Felten et al., 2021), with higher positive values indicating greater exposure to advances in AI technologies. GenAI OE stands for Occupational Exposure to Generative AI (ILO, 2025). Gradient 1: Low GenAI exposure among some tasks, but many still require human input (augmentation). Gradient 2: Moderate GenAI exposure among some tasks. Gradient 3: Significant GenAI exposure among a significant portion of tasks. Gradient 4: Highest GenAI exposure among most tasks.

exposure), with intermediate values representing increasing levels of exposure: 0 (minimal), 1 (gradient 1), 2 (gradient 2), 3 (gradient 3), and 4 (gradient 4).

Also, when broadening the scope to encompass all occupations within the financial and insurance sector, we find that occupations with higher AI exposure are significantly more prevalent in this sector than in the wider economy (Figure 8).

Figure 8. Occupational AI Exposure in the EU9+2, 2020-2022



Source: AIOE (Felten et al., 2021), ILO GenAI OE (Gmyrek et al., 2025).
Note: AIOE stands for AI Occupational Exposure (Felten et al., 2021), with higher positive values indicating greater exposure to advances in AI technologies. ILO GenAI OE stands for Occupational Exposure to Generative AI (Gmyrek et al., 2025). Gradient 1: Low GenAI exposure among some tasks, but many still require human input (augmentation). Gradient 2: Moderate GenAI exposure among some tasks. Gradient 3: Significant GenAI exposure among a significant portion of tasks. Gradient 4: Highest GenAI exposure among most tasks.

This is consistent with the sector's composition, which is characterised by a highly educated workforce. Moreover, this increased exposure to AI advancements in the financial and insurance sector is prominent across all EU9+2 countries (Annex 2, Figure A 8 and Figure A 9).

3.6. Future Workforce Projections

In this section, we present future workforce trends based on Cedefop's skills forecast, which offers projections at the ISCO 2-digit level. These projections take into account global economic developments up to autumn 2023. However, while the rapid diffusion of AI accelerated in 2023 and 2024 (Kergroach & Héritier, 2025), it is important to note that the forecast only partially reflects this recent surge in technological adoption.

We begin by identifying the most prominent 2-digit occupations within the financial and insurance sector (Table 4). Consistent with the findings in Table 2, just five occupational groups account for a substantial share (78%) of total employment in the sector. Among these, business and administration associate professionals (ISCO 33) alone represent over one-third of the workforce.

Table 4. Future workforce among the top five occupations in the financial and insurance sector, EU9+2,2022-2035

	Occupation (2-digit ISCO-08 code)	Share of employment (financial sector) (%)	Projected employment growth within the financial sector between 2022 & 2035 (% annual rate), EU9+2	Projected employment growth within the full economy between 2022 & 2035 (%annual rate), EU9+2
1.	Business and administration associate professionals (33)	36.5	0.1	0.4
2.	Business and administration professionals (24)	12.6	1.7	1.9
3.	Customer services clerks (42)	10.8	-1.8	-0.3
4.	Numerical and material recording clerks (43)	9.4	-2.3	-1.4
5.	Production and specialised services managers (13)	8.4	0.7	0.8
	Total	**77.7**		

Source: LFS, 2008-2022, EU9+2, data are weighted. Projections: Cedefop skills forecast.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. Employment growth is calculated as the ratio of the change in the number of (projected) workers between 2022 and 2035 to the number of workers in 2022.

For these five key occupational groups, we examine the projected annual employment growth between 2022 and 2035. The two largest groups (ISCO 33 and 24) are expected to experience modest annual growth. However, two of the top five occupations are projected to decline in employment over the same period. This negative trend is not unique to the financial sector but is slightly more pronounced when focusing exclusively on these occupations within the sector.

3.7. Conclusions

This report examines the ongoing transformations underway in the European financial services sector, driven by digitalisation and the accelerating adoption of artificial intelligence. Drawing on harmonised EU-LFS microdata between 2008 and 2022 across eleven countries, we document how these technological shifts are reshaping employment dynamics. Specifically, our analysis focuses on nine EU Member States – Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland – along with two European Economic Area countries, Iceland and Norway ("EU9+2"). We restrict the data to the financial and insurance sector (NACE Rev. 2 category K).

Our findings reveal that the financial sector is characterised by high educational attainment, stable employment conditions, and relatively low exit rates. These features have persisted despite significant technological change. However, beneath this stability lies a gradual reconfiguration of occupational structures. Routine cognitive roles, while still dominant, are slowly giving way to non-routine cognitive functions. The sector also shows markedly higher exposure to generative AI compared to the broader economy. This dual exposure to both classical automation and emerging AI capabilities suggests that future workforce adjustments will likely involve task reallocation and skill transformation rather than widespread job loss.

Labour market flows support this interpretation. Projections to 2035 indicate modest growth in analytical and managerial roles, offset by declines in clerical functions. However, it should be noted that these projections only take into account global economic developments up to autumn 2023, and thus only partially reflecting the rapid diffusion of AI accelerated in 2023 and 2024. Notwithstanding, the projected trends highlight the importance of proactive workforce planning.

Policy responses should therefore focus on supporting adaptive and inclusive workforce transitions. This requires investment in lifelong learning systems, targeted reskilling and upskilling programmes, and institutionalised social dialogue between policymakers, employers, and worker representatives. As the report shows, the financial sector is not experiencing abrupt job displacement but rather a gradual reconfiguration of roles and skill demands. In this context, the challenge is not to halt technological progress but to steer it in a direction that aligns with equitable labour

market outcomes. Ensuring that digital and AI tools are deployed in a human-centred and productivity-enhancing manner will be key. A forward-looking policy agenda should therefore combine anticipatory skills strategies with support for occupational mobility, particularly for workers in roles with high exposure to automation or (generative) AI.

Chapter #3-at-a-Glance

The quantitative research phase, whose results are illustrated in Chapter 3, investigates the evolving landscape of the European financial and insurance sector (Nace K) in the context of digitalisation and the accelerating adoption of artificial intelligence (AI). It draws on the EU Labour Force Survey (EU-LFS) microdata from 2008 to 2022, covering eleven countries (EU9+2): Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden, Finland, Iceland and Norway.

The analysis quantifies how technological change is reshaping employment dynamics in the financial and insurance sector, benchmarked against the rest of the economy (all sectors excluding Nace K).

Key findings

Workforce composition (2008-2022)

- The sector's employment share (~2.7%) is rather stable.
- The sector has a relatively high share of tertiary-educated workers (70% in 2022).
- The average age rose from 40.6 (2008) to 43.2 years (2022), with relatively fewer young entrants, hinting at future replacement pressures.
- Gender balance remains stable (~48% male).

Employment conditions (2022)

- Jobs are predominantly full-time (90%) and permanent (90%), with relatively high average tenure (13 years), hinting at limited mobility.

Occupational structure and AI exposure

- Cognitive jobs dominate the sector (60% routine, 37% non-routine cognitive in 2022), with a concentrated occupational structure – 78% of employment is in the top 10 ISCO 3-digit occupations (between 2008-2022), all showing high AI exposure.

Future Workforce Projections (2022-2035)

- Modest growth is projected for analytical and managerial roles, while clerical jobs (customer service and numerical and material recording clerks) are expected to decline.

In sum, the financial sector is undergoing a gradual reconfiguration of roles and skills. While employment remains stable, the nature of work is changing.

Policy implications: proactive workforce planning, including:

- Investment in lifelong learning and targeted reskilling and upskilling.
- Support for occupational mobility, especially in high-exposure roles.
- A human-centred approach to AI adoption, underpinned by social dialogue.

CONCLUSIONS

The FinAI Assessment Comparative Research Report demonstrates that the uptake of Artificial Intelligence in the financial sector is not a neutral technological shift but a multidimensional transformation with regulatory, economic and social implications. Its impact unfolds across legal systems, labour markets and collective bargaining structures, showing how the governance of innovation requires an integrated and interdisciplinary perspective.

From a regulatory perspective, this research traces a progressive widening of the European legal framework. What began as a project of market integration and prudential stability has evolved into a more complex architecture embedding sustainability, digitalisation and fundamental rights. The adoption of the AI Act (Reg. 2024/1689) epitomises this shift: it establishes a risk-based regime that directly affects financial services, particularly credit scoring, insurance pricing and algorithmic human resources management. Yet, as the comparative legal analysis makes clear, this framework remains asymmetrical. Consumer protection is strongly institutionalised, while worker protection is addressed in a fragmented manner, dependent on the interplay between European rules, national legislation and collective agreements. The result is a patchwork of safeguards that vary significantly across jurisdictions, raising questions about coherence, enforcement and the effective integration of employment-related concerns into digital regulation.

The labour market analysis based on EU-LFS microdata provides complementary evidence. While aggregate employment levels in finance remain relatively stable (around 2.7% of total employment), structural transformations are pronounced. The workforce is older, highly educated and concentrated in cognitive occupations with high exposure to automation and AI augmentation. Forecasts suggest a decline in clerical roles, particularly those centred on routine cognitive tasks, and a modest expansion of analytical, managerial and digital-intensive roles. These shifts indicate that AI will not lead to sudden job destruction, but rather to a reconfiguration of occupational structures, with important consequences for career trajectories, job quality and social mobility. This evidence reinforces the strategic role of skills policies: reskilling, upskilling and lifelong learning emerge as prerequisites for sustaining employability, anticipating transitions and ensuring inclusiveness.

The comparative evidence on social dialogue and good practices, gathered through the active involvement of trade union organisations in 13 countries under the coordination of the project leadership, further demonstrates the centrality of collective governance. Across diverse contexts, convergent outcomes can be observed:

negotiated training pathways that anticipate skill needs; rules ensuring transparency and human oversight of algorithmic systems; redeployment measures and social buffers to manage branch closures and technological redundancies; and innovative forms of representation adapted to hybrid work and non-standard contracts. At the same time, the practical impact of such measures remains uneven, depending on institutional capacity, resources and the continuity of dialogue at company level. These practices show that social dialogue is not only reactive, but can also be constitutive of a democratic model of technological governance – provided that commitments are effectively implemented and monitored over time.

At the European level, the Joint Declaration on Employment Aspects of AI in the Financial Sector (2024) reflects this same orientation. By affirming the principle of human oversight, recognising new digital rights for workers, and promoting joint risk assessments for occupational health and safety, it provides a common reference framework for national and company-level bargaining. However, its long-term effectiveness will depend on follow-up mechanisms, resources and the willingness of parties to translate commitments into practice. This demonstrates how European-level social partners can complement legislative initiatives, filling regulatory gaps and offering anticipatory guidance in areas where the law remains under-specified.

Taken together, the findings point to three overarching insights. First, AI in finance cannot be analysed in isolation from its regulatory and institutional environment. Far from producing deterministic effects, outcomes are shaped by the interaction between law, labour market structures and social dialogue. Second, sustainable digitalisation depends on the alignment of three dimensions: legal safeguards that protect both consumers and workers, policies that strengthen skills and mobility, and collective bargaining mechanisms that secure fairness and legitimacy. Third, the anthropocentric approach provides the normative compass for this alignment. By putting workers, consumers and citizens at the centre, it ensures that technological change enhances fundamental rights, job quality and social trust rather than undermining them.

The Report, therefore, concludes that the future of AI in European finance will be determined not by algorithms alone, but by the capacity of European and national institutions, together with social partners, to embed innovation within a coherent framework of rights, participation and adaptability. Finance, as a highly regulated, knowledge-intensive and socially sensitive sector, could serve as a laboratory for democratic digital transition. If governed through law, informed by empirical evidence and sustained by social dialogue, it may provide a benchmark for other sectors in advancing the European model of Industry 5.0[1] – a model in which technological

[1] For a more detailed discussion and an illustration of the features of Industry 5.0 from an institutional perspective, see: https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/industry-50_en.

progress is reconciled with human-centricity, sustainability, resilience and inclusiveness.

ANNEX 1.
SOCIAL DIALOGUE FOR RESPONSIBLE AI IN FINANCE AND BEYOND: A COMPENDIUM OF PRACTICES[1]

A1.1 Introduction

In recent years, the financial sector underwent a profound transformation driven by digitalisation, automation, and the emergence of Artificial Intelligence (AI). These shifts are reshaping the nature of financial services, redefining the boundaries of work, and accelerating changes in business models, customer relations, and employment structures. Against this backdrop, ensuring that digital innovation remains human-centred is not just a normative imperative, but a strategic necessity, as it is also highlighted in the Industry 5.0 paradigm. If European industry, as a key driver of ongoing economic and social transitions, must steer both the digital and green transformations to remain the engine of prosperity, it also needs to place workers' wellbeing at the core of production, harnessing new technologies to deliver prosperity that exceeds jobs and growth while respecting planetary boundaries. In doing so, it is fundamental to explicitly aligning research and innovation with the goal of building a sustainable, human-centric and resilient European industry (European Commission, 2023).

AI and machine learning technologies are now increasingly embedded in core financial processes, from customer service automation to predictive analytics and risk modelling. While these tools promise gains in efficiency and accuracy, they also raise critical questions around job transformation, upskilling, work intensification, and algorithmic management. As traditional roles are reconfigured or displaced, and as institutions reorganise their internal workflows, the demand for advanced digital and transversal skills becomes both urgent and unevenly distributed.

This transformation is unfolding in a context already marked by structural workforce reductions and the phenomenon of "banking desertification"[2], especially in Southern Europe. Looking for example at the Italian context, as reported by First-Cisl, in the first quarter of 2025 Italian banks closed 95 branches, in line with the trend that brought their total number below 20,000 by the end of 2024. It is worth recalling that the last

[1] This Annex is attributable to the following authors: Diletta Porcheddu (Fondazione ADAPT), Sara Prosdocimi (ADAPT), and Margherita Roiatti (Fondazione ADAPT), with the much-appreciated contribution of Anne Guisset (HIVA-KU Leuven).

[2] The Observatory on bank desertification, launched by First-Cisl, the project coordinator, reports on the studies and analyses of the Scientific Committee of the FIBA Foundation, with the goal to provide information on the evolution of the phenomenon in Italy.

quarter of 2024 saw the highest number of closures (432) since monitoring began in 2022. In the first three months of 2025, the decline amounted to 0.5%, a record in itself, as the first quarter of 2025 shows the worst figure when compared to the same period in previous years. On the topic, First-Cisl, the project coordinator, has also established an Observatory on bank desertification, in order to raise public and political awareness of the consequences of banking desertification for the country's development and the preservation of its social fabric. Yet this challenge also presents an opportunity to rethink the future of work in finance, not through unilateral decisions, but through inclusive dialogue.

This is where social dialogue and collective bargaining can play a decisive role. They are not mere instruments of mitigation; rather, they are the infrastructure through which innovation can be governed democratically, balancing the needs of operational agility with fair working conditions. Since the early 2000s, sectoral social partners in banking and insurance have addressed these issues proactively, producing joint statements and frameworks to guide change.

In this context, the present Annex aims to explore practices in social dialogue and collective bargaining within the financial sector and related industries, gathered by the project partners, namely a network of trade unions from 9 European countries (Denmark, Finland, France, Greece, Hungary, Italy, Romania, Spain, Sweden), 1 candidate country (Turkey), 2 non-EU countries of the EEA belonging to the Nordic Finance Union (Iceland and Norway), 1 European federation (UNI Europa), 1 national confederation (Cisl), and 1 national association representing insurance companies in Italy (ANIA), as well as by the research partner ADAPT.

By mapping and analysing practices across 12 countries, this overview aims to illustrate how collective bargaining, joint social dialogue initiatives, and negotiated training pathways can help ensure that digital transitions, particularly the uptake of AI, are managed in a way that safeguards workers' rights, anticipates skills needs, and upholds the principles included in the European Pillar of Social Rights.

In this sense, the present chapter seeks to provide not just a repository of practices, but a roadmap for shaping technologically sound and socially sustainable AI transitions first and foremost in finance, and beyond.

A1.2 Methodology

In sections below, practices at both national and company levels are presented, focusing on specific initiatives, corporate strategies, and examples of social dialogue and collective bargaining that contribute to shaping AI transitions mainly in the financial sector in a way that is both technologically robust and socially sustainable.

The Annex also aims to underscore the growing importance of social dialogue and collective bargaining as key tools for anticipating, managing, and governing the impact

of AI on work, skills, and organisational models, ensuring that innovation aligns with workers' rights, inclusive development, and long-term resilience.

The practices were collected, under the coordination of First-Cisl, in collaboration with FINAI Project Associate Partners, namely a network of trade unions (TUs) and trade union federations from 9 European countries (Italy, France, Spain, Greece, Hungary, Romania, Denmark, Sweden, Finland), 1 candidate country (Turkey), 2 non-EU countries of the EEA belonging to the Nordic Finance Union (Norway and Iceland), 1 European federation (UNI Europa), 1 national confederation (Cisl, Italy), and 1 national association representing insurance companies in Italy (ANIA), as well as by the research Beneficiary Fondazione ADAPT and its Affiliated Entity, ADAPT. It is worth mentioning that two of the practices included below are not directly relevant to the financial sector but were reported by the TUs and highlighted in this report for the innovativeness of the measures they contain.

In order to increase the degree of uniformity and comparability of collected data, Fondazione ADAPT and its Affiliate Entity, ADAPT, together with the KU Leuven team, prepared a multilingual template[3] consisting of the sections reflecting the information contained in the next section of this report (i.e. proposed title/parties involved/case reference level – with specific reference to the relevant level of social dialogue/collective bargaining-/summary of the selected case-key elements/source/SWOT analysis). The template was then illustrated and provided to trade union partners during the training session held in Vico Equense (Italy), on March 6-7 2025. TU partners were tasked with the collection and analysis of relevant practices.

The collected data comprises a diversified set of practices illustrating how social partners are engaging with the challenges and opportunities of AI transitions in the financial sector and related industries. Specifically, the set of practices includes: one notable company-level initiative; eleven examples of collective bargaining or social dialogue undertaken at the company level; seven national/sectoral-level experiences of collective bargaining and/or institutionalised social dialogue; and one initiative conducted at the European level. These cases offer a cross-cutting overview of how industrial relations actors are beginning to shape the governance of technological change across multiple institutional and territorial layers.

It is worth mentioning that, in order to provide a broader overview of practices and initiatives of interest to the Project, Fondazione ADAPT and ADAPT supplemented the first-hand information collected thanks to the involvement of trade unions, with three examples gathered through desk research.

[3] The multilingual template model was finalised and validated during the Steering Committee meeting held in Athens on 14 January 2025. The template is available upon request from First-Cisl.

The practices are grouped according to the level at which the initiatives were implemented.

A1.3 A selection of practices

Company level initiatives

Country: Italy

Parties involved: Intesa Sanpaolo S.p.A. (the largest Italian banking group, with more than 90,000 employees with a strong EU presence)

Title: Digital transformation and responsible AI development at Intesa Sanpaolo

Intesa Sanpaolo's 2022-2025 Industrial Plan reflects an ambitious push toward full-spectrum digital transformation, grounded in a clear multistep strategy. The cornerstone of this strategy was the launch and scale-up of ISYBANK, a digital-native bank designed to deliver a seamless and dynamic user experience, particularly targeting younger demographics. While the early focus was on retail clients, from 2024 onwards the modernisation process expanded across divisions (ISPB, Fideuram, SME and corporate clients, and foreign subsidiaries). The bank's goal with ISYBANK is multifaceted: simplification and digitisation of the offering, omnichannel customer engagement, increased operational efficiency, and cost-effective technology deployment through innovative solutions.

This tech-driven shift has been governed by a robust internal compliance framework for responsible AI use. The Group introduced AI development guidelines, classification criteria, and procedural standards to uphold ethical AI practices, grounded in fairness, transparency, explainability, human oversight and risk-aware innovation (AIXeleration).

The Group Technology Transformation also gave rise to a sweeping cultural shift in workforce management. The company faced the inevitable generational turnover by hiring 1,800 younger professionals in IT and digital fields, lowering the average age and internalising key innovation capacities, thereby reducing reliance on external consultants. Therefore, the company reorganised teams into cross-functional application-based units, supported by thematic Communities that promote knowledge sharing. HR has actively contributed via the 18-month MATRIX program, crafting skill taxonomies and transparent job titling systems, and driving policies on compensation and performance management.

The Industrial Plan also recognises how older employees, often unprepared for such abrupt change, are at risk of being sidelined. In this sense, the document also highlights how ISP must invest seriously in training (including via sectoral training funds) and engagement policies that promote mutual skill exchange between legacy and new hires.

On the operations front, ISP leverages GenAI to shift workers toward higher-value tasks. For instance:

- Smart Routing Help Desk: automates low-value requests, freeing workers for complex issue resolution;

- AML Transaction Monitoring: focuses staff on evaluating customer behaviour patterns, not mechanical flagging.

From the union perspective, adapting representation to the new workforce structure has been crucial. Hybrid contracts (employee/freelancer arrangements) are now widespread – in ISP, for instance, the "mixed contract" is common, where workers alternate between employee status and freelance consultancy under a VAT number. In response, the union has developed tailored services to support these workers (e.g. insurance packages, individual case management) and achieved strong penetration among these newer profiles. Virtual union "rooms" and info days on mobility, work-life balance and career transitions were launched as part of this strategic renewal.

Key features of the 2022-2025 Industrial Plan include:

- Internal guidelines for responsible AI: fairness, transparency, explainability, human oversight;
- Talent renewal with 1,800 digital-native hires and reduced external consultancy;
- Thematic Communities for cross-unit synergy and skill enhancement;
- Strong HR focus on attraction, retention, and performance management;
- GenAI projects (Help Desk and AML) for value-added task redistribution;
- Recognition of risks: digital divide, banking desertification, mobility burdens, job obsolescence;
- Union adaptation: hybrid work contract representation, virtual engagement tools, tailored services.

SWOT Analysis

Strengths: The plan aligns closely with EU priorities on digital finance and AI, particularly regarding Responsible AI and the AI Act, signalling proactive regulatory compliance. Intesa Sanpaolo stands out for its governance approach to tech: internal rules for AI usage, principles of transparency and traceability (explainable AI) and human-in-the-loop oversight in critical processes reflect an organisational and normative transformation, and not only technological. Moreover, the hiring of over 1,800 digital profiles and creation of in-house tech development centres strengthens the group's endogenous innovation capacity, reduces outsourcing dependencies, and increases organisational resilience.	**Weaknesses**: Training speed may lag behind the pace of technological change. The creation of a separate digital bank risks internal fragmentation, deepening the divide between the "old" and "new" core of the company and complicating integrated risk management. While union resistance has been partly mitigated through social dialogue, tensions could still emerge, especially among those workers effectively rendered redundant by digital transformation and reskilling gaps.

Opportunities: By investing in ethical AI and sustainable tech models, the group can enhance its reputation and set itself up as a European benchmark for digital responsibility in finance. On the labour side, the digital transition opens new pathways for internal mobility and upskilling, potentially linking innovation with social sustainability in concrete, visible ways.	**Threats**: Complex EU regulations could increase compliance costs and slow down innovation, especially if coordination across regulatory frameworks remains fragmented. Internally, the growing divide between new digital hires and legacy staff could lead to disaffection and strategic misalignment, particularly if change management mechanisms fail to keep pace.

Source: Intesa Sanpaolo S.p.A., Piano di Impresa Intesa Sanpaolo 2022-2025, 4 February, 2022[4].

Collective bargaining and social dialogue at the company level

Country: Ireland

Parties involved: Bank of Ireland, Financial Services Union – FSU

Title: Responsible AI agreement in retail banking in Ireland

In March 2025, the Financial Services Union and the Bank of Ireland Group signed the first-ever collective agreement on Artificial Intelligence in the retail banking sector in the country. This pioneering initiative establishes a structured framework to govern the responsible introduction and use of AI and other digital technologies in the workplace.

Key features include:

- Clear reference to the obligation for both employer and employees to respect existing legislation on data protection, privacy, and digital security.
- Regular discussions between the union and management to monitor technological developments and assess their impact on work organization.
- Specific mechanisms to anticipate changes in job roles and support smooth redeployment where tasks are restructured due to AI.
- A strong commitment to provide workers with training opportunities to acquire the new skills needed in a digital environment.
- Recognition that employees may need to accept redeployment to new functions, balanced by the guarantee of training and support.

[4] The agreement can be found in the Virtual Agora of the #FinAI project and accessed upon request by contacting the Coordinator (First-Cisl).

SWOT Analysis[5]

Strengths: Being the first agreement in the retail banking sector, it sets a precedent for others to follow. It is also firmly anchored in legal compliance, ensuring that the use of AI respects privacy and data protection requirements. Another strong point is the institutionalisation of social dialogue, which fosters mutual trust and gives workers a voice in shaping technological change. Finally, the explicit commitment to reskilling and upskilling helps to mitigate risks of technological unemployment by enhancing adaptability.	**Weaknesses**: The agreement risks remaining too general if it is not accompanied by binding mechanisms for implementation. The requirement of flexibility for redeployment, while pragmatic, could be perceived by workers as a weakening of job security. In addition, the framework's effectiveness depends heavily on sustained investment in training, which might not always be financially sustainable for the company.
Opportunities: The agreement has the potential to serve as a model, showing that unions and employers can collaborate constructively on managing AI. It can also enhance the corporate reputation of the Bank of Ireland as a responsible actor in digital transformation, strengthening both employee trust and customer confidence. Moreover, by institutionalising workforce reskilling, the agreement creates a more resilient labour force, better equipped to cope with future disruptions. It may also pave the way for broader agreements covering not just AI, but the full range of emerging technologies.	**Threats**: The rapid pace of AI development may quickly render the framework outdated if it is not revised regularly. Employees might resist redeployment if they perceive it as imposed without sufficient safeguards. Also, if the agreement is seen as symbolic rather than substantive, it could damage credibility.

Source: Bank of Ireland, Financial Services Union – FSU, AI Agreement, 4 March, 2025.

Country: Italy

Parties involved: Banca Popolare di Puglia e Basilicata (medium-sized cooperative bank, rooted in Southern Italy, focused on retail banking), Organi di Coordinamento Fabi, First-Cisl, Fisac-Cgil, Rst Unisin (main sectoral trade unions in Italian banking sector)

Title: Adaptive data governance through social dialogue: revising internal agreements in response to AI-driven banking operations

[5] The authors have supplemented the SWOT analysis with their own insights and assessments.

In April 2025, Banca Popolare di Puglia e Basilicata, together with the coordination bodies of Fabi and First-Cisl, renewed a company-level agreement originally signed in 2014, aimed at regulating the use of IT systems for the traceability of banking operations. The revision was prompted by the replacement of the company's outsourced IT provider and builds on the prior implementation of national data protection provisions, particularly those set out in Provision no. 192/2011 by the Italian Data Protection Authority.

The updated agreement reaffirms key safeguards related to employee data processing and introduces mechanisms such as anomaly detection, while explicitly excluding any surveillance purposes.

Key features include:

- Logging of inquiry operations;
- Data retention for 24 months;
- Post-hoc checks, carried out at random or in response to system-generated alerts and anomaly detection tools.

SWOT Analysis

Strengths: The agreement shows how collective bargaining can effectively respond to external changes, like a new IT provider, without compromising workers' rights. It clearly rules out any use of the system for surveillance purposes, reinforcing commitments to privacy and the prohibition of remote monitoring.	**Weaknesses**: Workers have not received adequate training on the updated systems, which may limit proper use and understanding of the safeguards in place.
Opportunities: The system allows for non-invasive detection of irregular or high-risk behaviour through AI-based anomaly detection, which can help prevent misconduct without infringing on privacy.	**Threats**: Relying on outsourced IT services may reduce transparency and internal control over how employee data is managed.

Source: Banca Popolare di Puglia e Basilicata, Fabi, First-Cisl, Fisac-Cgil, RST Unisin, Verbale di accordo, 23 April, 2024[6].

[6] The agreement can be found in the Virtual Agora of the #FinAI project and accessed upon request by contacting the Coordinator (First-Cisl).

Country: Italy

Parties involved: Gruppo Credem (mid-tier Italian banking group, listed, with diversified services), Italian Data Protection Authority (AGP) (independent public authority overseeing privacy and data protection), First-Cisl

Title: Request for clarifications on the use of AI under the European AI Act

In March 2024, Gruppo Credem, in dialogue with trade union representatives and under the oversight of the Italian Data Protection Authority, was asked to clarify how AI is used within its business processes. The request focused on ensuring full compliance with the evolving European and national regulatory frameworks (particularly the European AI Act; Legislative Decree 104/2022 (implementing the EU Whistleblowing Directive); and art. 1-bis of Legislative Decree 152/1997, which governs information obligations towards workers).

Aiming at increasing transparency and accountability in the use of algorithmic systems in financial services, the union inquiry covered several key dimensions to obtain detailed information on the use, scope, and control of AI tools affecting workers and customers alike.

Key features include:

- The presence and methodology of impact assessments for high-risk AI systems;
- The compliance of AI processes with European (AI Act) and national (Legislative Decree 104/2022, Legislative Decree 152/97) regulations;
- Corporate strategies to mitigate algorithmic bias and discriminatory outcomes;
- Governance mechanisms adopted to ensure oversight, traceability, and compliance with both EU and national law.

SWOT Analysis

Strengths: The practice enhances transparency in the use of AI systems within financial services and demonstrates proactive compliance with both European and national regulations, notably the AI Act and Legislative Decrees 104/2022 and 152/1997. It supports improved risk management by addressing algorithmic bias and setting internal standards for AI governance.	**Weaknesses:** Implementation of robust governance frameworks may require significant effort and technical adaptation. There is a risk of fragmented or superficial compliance if organisational structures are not prepared to integrate AI oversight into existing processes. The initiative may also generate additional costs for system upgrades, audits, and staff training.
Opportunities: The case sets a precedent for the codification of best practices in algorithmic transparency and workplace impact assessment. It may foster stronger trust among workers, customers, and regulators, and promote the development of internal audit and verification tools for AI	**Threats**: Ongoing regulatory evolution (e.g. AI Act secondary legislation, national implementation) may require constant updates to governance systems. Divergent interpretations of legal obligations pose compliance ambiguities, and failure to implement effective oversight mechanisms

applications that could serve as sectoral benchmarks.	could expose firms to reputational and legal risks.

Source: First-Cisl, Richiesta di informazioni sulla valutazione di impatto dei sistemi di Intelligenza Artificiale e conformità normativa[7].

Country: Italy

Parties involved: Intesa Sanpaolo S.p.A, OO.SS. (sectoral unions)

Title: Advancing digital transformation and ESG through second-level bargaining at Intesa Sanpaolo

Since 2014, Intesa Sanpaolo and sectoral trade unions have engaged in a structured process of second-level bargaining to manage organisational change, with agreements progressively updated in May 2023, June 2024, and October 2024. These agreements reflect an evolving vision of work, blending flexibility, inclusion, and sustainability, and explicitly address the governance of digitalisation processes. In particular, the agreements focus on the introduction and implementation of flexible work/remote work, including operational procedures and training for all parties involved.

Specifically, the agreement of October 2024 marks a significant step by formally addressing trade union prerogatives within the bank's digitalisation process. It outlines that from July 2024, Intesa Sanpaolo initiated an information phase on its digital transformation, aiming to establish continuous dialogue with trade union representatives. This process culminated in the creation of a Digital Transformation Committee, tasked with monitoring the technological and digital evolution's impact, AI included, particularly focusing on physical bank branches. This committee is Intesa Sanpaolo's first dedicated body on digital transition, mirroring the national-level National bilateral and joint committee on the impact of new technologies/digitalisation in the banking industry, established by the latest renewal of the Italian banking sector NCLA (art. 2). The committee includes two trade union members from each signatory organisation, with additional members proportional to their company representation, alongside company representatives. Notably, if specialised expertise is needed for specific topics, the trade union side may temporarily add one expert member per union to the delegation.

Key Features of the agreements include:

- Digital Transformation Committee: the 2024 agreements establish a joint committee on digital transformation, institutionalising trade union involvement in monitoring and assessing the impact of technological innovation on work organisation and employment conditions;

[7] The document of the request can be found in the Virtual Agora of the #FinAI project and accessed upon request by contacting the Coordinator (First-Cisl).

- ESG-Oriented Approach: the agreements are framed within the company's broader ESG strategy, incorporating social sustainability objectives into industrial relations. This includes attention to responsible innovation, digital inclusion, and ethical use of technology;
- Disability Management: provisions are included to promote accessibility and disability-sensitive organisational models, ensuring that digital transition paths are aligned with principles of equity and non-discrimination.

SWOT Analysis

Strengths: The practice promotes a better work-life balance through the integration of flexible working arrangements, which also contributes to reducing environmental impact by decreasing commuting needs. Moreover, it enhances the company's attractiveness as an employer by embedding principles of equity and inclusion into its organisational model, aligning operational practices with broader ESG objectives.	**Weaknesses:** However, the initiative lacks a clear vision concerning reasonable accommodation for workers with disabilities. Without specific safeguards, there is a risk that remote work becomes a default or imposed condition rather than a real opportunity, thus failing to serve its intended purpose of inclusion and empowerment.
Opportunities: The model offers strong potential to improve the well-being of employees with disabilities through tailored flexibility. It also creates space for broader workforce development strategies, including upskilling, reskilling, and active labour market policies. If adequately supported, the framework could evolve into a reference point for inclusive digital work design in the financial sector.	**Threats:** On the downside, remote work arrangements may generate risks of social isolation and weaken collective identity in the workplace. There is also a broader concern about the potential erosion of the physical workplace, which could lead to a form of de facto telework without proper contractual safeguards. In the long term, automation and digital reorganisation might also result in job reductions if not proactively managed.

Source: Intesa SanPaolo S.p.A., Dircredito-FD, Fiba-Cisl, Fisac Cgil, Sinfub, UGL Credito, Uilca, Accordo per il lavoro flessibile nel gruppo Intesa SanPaolo, 10 dicembre 2014; Intesa SanPaolo S.p.A., Fabi, First-Cisl, Fisac-Cgil, Uilca, Unisin, Verbale di Accordo, 26 maggio 2023; Intesa SanPaolo S.p.A., Fabi, First-Cisl, Fisac-Cgil, Uilca, Unisin, Verbale di Accordo, 13 giugno 2024; Intesa SanPaolo S.p.A., Fabi, First-Cisl, Fisac-Cgil, Uilca, Unisin, Accordo di percorso sulla trasformazione del Gruppo ISP, 23 ottobre 2024.

Country: Italy

Parties involved: Intesa Sanpaolo S.p.A., trade unions, workers

Title: Embedding sustainability culture through social dialogue: the role of joint welfare, safety and sustainable development committee

The Joint Committee on Welfare, Safety and Sustainable Development established within Intesa Sanpaolo plays a strategic role in embedding sustainability culture across the organisation. In its meetings held in March 2024 and March 2025, the Committee reaffirmed the centrality of sustainable work models, with a strong focus on flexible work arrangements and the reconciliation of work and private life.

In particular, the Committee recognised flexible remote work as a key enabler for advancing well-being, organisational resilience, and social sustainability. These discussions reflect a shared commitment between the company and unions to align internal policies with broader ESG principles and to evolve corporate welfare strategies in line with changing expectations of workers. Crucially, the Committee also acknowledged that the accelerating digitalisation of financial services and the diffusion of AI tools are reshaping working conditions. Integrating these technologies into welfare and organisational policies was identified as a priority to ensure that innovation strengthens inclusion, prevents new inequalities, and supports a human-centred transition.

Key elements include:

- Strengthened social dialogue on sustainability;
- Recognition of remote work as a sustainability tool;
- Alignment between welfare, inclusion, and ESG strategy;
- Concrete implementation through a dedicated joint body.

SWOT Analysis

Strengths: The practice demonstrates clear strengths by focusing on innovation and sustainability centred on people, supported by the establishment of a dedicated Welfare Committee that fosters active employee involvement. This structure encourages meaningful dialogue and inclusion in shaping workplace policies.	**Weaknesses:** The lack of specific programs or concrete measures to translate intentions into action could be a weakness, along with an absence of well-defined alternative career paths for affected workers.
Opportunities: The meetings highlight opportunities to enhance the approach by recognising and valuing diverse professional skills, exemplified by initiatives like the CROSS project, which defines two main areas of intervention: the first focuses on identifying cross-functional roles across	**Threats:** Significant threats persist, particularly the risk of mishandling sensitive employee information and failing to deliver genuine social inclusion, which could undermine the practice's objectives.

multiple departments to enable reasonable accommodations for individuals with difficulties using digital tools, promoting inclusion and social participation to the fullest extent; the second targets people with visual impairments, expanding professional opportunities through collaboration with other departments specialising in digital accessibility.	

Source: Intesa Sanpaolo, Fabi, First-Cisl, Fisac-Cgil, Uilca, Unisin, Verbale di riunione Comitato welfare, sicurezza e sviluppo sostenibile, 6 March 2024; Intesa Sanpaolo, Fabi, First-Cisl, Fisac-Cgil, Uilca, Unisin, Verbale di riunione Comitato welfare, sicurezza e sviluppo sostenibile, 24 March 2025.

Country: Italy

Parties involved: Generali Group, First-Cisl, Fisac-Cgil, Uilca, FNA, SNFIA

Title: Generali group 2025 collective agreement on AI, sustainability, and workforce transformation

On April 18, 2025, Generali Group signed its new company level agreement, which includes a dedicated section on Social Rights and Digital Transformation, reflecting a long trajectory of social dialogue and worker protections, now updated to address the challenges of AI and digitalization in the insurance sector. A central innovation is the establishment of three joint "Transformation Hubs", specifically permanent bipartite commissions composed equally of company and union representatives, tasked with monitoring, analysing, and proposing solutions in three strategic areas:

- AI and work organisation: the company must present to unions the AI tools adopted and their market context, share the rationale behind corporate decisions, and ensure compliance with the AI Act provisions on AI literacy. Training programs are designed to help employees understand basic AI principles, assess risks and benefits, recognise legal/ethical implications, and apply AI responsibly.
- Sustainability and ESG models: this hub addresses the implementation of EU directives on sustainability (CSRD, CSDDD, Pay Transparency), benchmarking practices across the sector, and promoting organizational models consistent with environmental and social responsibility.
- Active ageing and skills management: this hub focuses on intergenerational knowledge transfer, promotion of diverse competencies, and planning for generational renewal within the workforce.

By combining dialogue, transparency, and joint governance mechanisms, Generali's agreement not only anticipates the regulatory landscape (AI Act, sustainability directives) but also embeds worker involvement as a key driver of corporate transformation.

SWOT Analysis[8]

Strengths: The establishment of joint Transformation Hubs provides structured, permanent arenas for cooperation between unions and management, ensuring that AI deployment, sustainability strategies, and demographic challenges are addressed inclusively. The integration of AI literacy, linked explicitly to the AI Act, is a pioneering move that places skills and awareness at the centre of responsible AI adoption. Moreover, connecting digitalisation to broader ESG goals strengthens the company's alignment with EU regulatory frameworks and positions it as a socially responsible market leader.	**Weaknesses:** The reliance on commissions for analysis and proposals may risk inertia if not paired with clear implementation powers. The scope of the agreement, while ambitious, may remain more declaratory than binding if concrete outcomes are not ensured. Training commitments, while forward-looking, require continuous investment and may not equally reach all segments of the workforce. There is also the challenge of ensuring that the intergenerational dialogue foreseen by the "Active Ageing" hub translates into actionable HR practices.
Opportunities: It can serve as a best-practice benchmark across the financial and insurance sectors, showcasing how social partners can shape the governance of AI and ESG transformations together. By embedding union participation in AI governance, Generali may increase worker trust, reduce resistance to technological change, and enhance productivity. It also creates reputational capital in terms of compliance with EU sustainability and digitalisation agendas. Moreover, the emphasis on intergenerational skills transfer can make the workforce more resilient to demographic and technological pressures alike.	**Threats:** The rapid pace of AI development could outstrip the deliberative capacity of the hubs, making the governance model reactive rather than anticipatory. There is the risk that workers may perceive the agreement as too abstract if the promised training and participatory mechanisms are not delivered consistently. Finally, EU regulation on AI and sustainability is itself evolving; if Generali's framework does not adapt dynamically, it could quickly become outdated.

Source: Generali Group, First-Cisl, Fisac-Cgil, Uilca, FNA, SNFIA, Contratto integrativo aziendale, 18 April, 2025[9].

[8] The authors have supplemented the SWOT analysis with their own insights and assessments.
[9] The agreement can be found in the Virtual Agora of the #FinAI project and accessed upon request by contacting the Coordinator (First-Cisl).

Country: Italy

Parties involved: UniCredit European Works Council

Title: UniCredit EWC: joint declaration on remote work and AI (renegotiation phase, 2025)

The Joint Declaration on Remote Work, originally signed in October 2020 by UniCredit European Works Council, established a European framework for smart working based on voluntariness, the right to disconnect, neutrality, and equal access.

Already in 2020, the agreement explicitly acknowledges that AI tools are increasingly shaping task allocation, performance monitoring, and workflow organization in remote settings. By committing to anticipate and regulate these developments, UniCredit and the EWC are embedding algorithmic transparency, worker involvement, and continuous monitoring into the governance of remote work. In 2025, the parties have initiated a renegotiation of the declaration to incorporate the emerging impact of Artificial Intelligence and algorithmic management on remote work. The renegotiation signals a proactive approach: the parties are now actively operationalizing these principles to ensure that remote work arrangements remain fair, transparent, and inclusive, while safeguarding employees from algorithmic bias and reinforcing trust in digital management systems.

SWOT Analysis[10]

Strengths: The main strengths of the renegotiation lie in the early recognition of AI's impact on remote work and the institutional commitment to integrate algorithmic oversight into a pre-existing European framework. By anchoring AI governance within a joint declaration, UniCredit and the EWC reinforce social dialogue and ensure that digital transformation is guided by transparency and accountability. The prior emphasis on equity and workers' rights (e.g., right to disconnect) provides a strong normative basis to extend protections into the AI era.	**Weaknesses:** Without enforceable commitments, the risk is that AI-related provisions stay aspirational. The breadth of potential AI impacts, from monitoring to automated decision-making, makes it challenging to define clear safeguards in a single framework. Furthermore, constant technological evolution will demand frequent updates, which may strain the joint governance process and create gaps between practice and regulation.
Opportunities: The declaration positions UniCredit and the EWC as frontrunners in embedding AI considerations into European-level agreements, potentially	**Threats**: AI adoption in remote work may accelerate faster than the social partners' ability to concretise and update the framework, leaving workers exposed to

[10] The authors have supplemented the SWOT analysis with their own insights and assessments.

setting a standard for other financial institutions. By addressing algorithmic management explicitly, the declaration could enhance employee trust and mitigate resistance to new technologies. It also provides the basis for future bargaining on more complex issues such as predictive analytics, data governance, and human oversight of automated systems.	algorithmic opacity or bias. Also, if workers perceive the future renegotiated declaration as symbolic rather than substantive, this could erode confidence in both the EWC and UniCredit's commitments.

Source: UniCredit European Works Council, Dichiarazione congiunta su "lavoro da remoto", 21 October, 2020[11].

Country: Sweden

Parties involved: Finansförbundet (FSU Sweden), Finansarbetsgivarna (The Employers of the Financial Sector in Sweden – BAO), Klarna (Swedish company)

Title: Supporting digital transition in the banking sector in Sweden

On November 3, 2023 a collective agreement was signed between Klarna Bank Sweden, FSU Sweden and BAO. For several years, collective bargaining at Klarna Bank was conducted by the Swedish Trade Unions Unionen and Sveriges Ingenjörer. When negotiations failed, the unions announced a strike. This action was called off when it became clear that Klarna Bank were willing to sign with BAO and FSU Sweden.

Klarna joined The Employers of the financial sector in Sweden from 1 January 2024, which means it will be covered by a collective agreement between The Employers of the financial sector and FSU Sweden, Engineers of Sweden and Akavia. The deal aims to preserve some operational flexibility for Klarna while embedding more formal labour structures. FSU Sweden today organises around 700 members at Klarna.

Key features include:

- During the spring of 2024, the union local committee managed to secure a general salary increase of two per cent. This was not obvious when the collective agreement was signed, as Klarna was allowed to retain parts of its existing salary model.
- Introduction of equal overtime compensation for on-call duty. At Klarna, all employees have an on-call week followed by a day off, and compensation has previously been based on professional role.
- The agreement is designed so that it will be supplemented with local agreements.

[11] The document of the request can be found in the Virtual Agora of the #FinAI project and accessed upon request by contacting the Coordinator (First-Cisl).

SWOT Analysis

Strengths: The agreement enhances FSU Sweden's credibility by demonstrating that collective bargaining remains relevant even in fast-moving, digitally driven sectors. It may also help attract younger workers, who increasingly value fair and transparent employment conditions. The process highlights the crucial role of locally elected trade union representatives, whose efforts were decisive in achieving this result. As a consequence, both employees and managers at Klarna may develop a more positive view of collective agreements and the role of trade unions within the company.	**Weaknesses**: The fintech industry's speed, fluid hierarchies, and global operations demand updated negotiation strategies and deeper technical expertise. The rapid pace of change risks overburdening the local union branch, which is still young and relatively small, with a growing number of consultations, negotiations, and support cases linked to technological innovation. Moreover, emerging challenges such as algorithmic management, data privacy, and digital performance monitoring require specific legal and technical knowledge. The initial split among employees over unionisation also exposed internal divisions, potentially weakening cohesion and slowing consensus-building on future union strategies.
Opportunities: This development may encourage other fintech companies to enter into collective agreements with FSU Sweden, expanding the model's reach. It also creates a solid foundation for local-level bargaining, enabling employees to focus on the conditions most relevant to their work. Given Klarna's strong involvement in AI-related projects, employees now have an opportunity to engage directly in shaping technological and ethical frameworks. The agreement opens a formal and stable channel of dialogue between management and workers' representatives, fostering early problem identification, collaborative innovation, and co-designed solutions. In a highly competitive talent market, having a collective agreement may also strengthen Klarna's employer brand by signalling respect for workers' rights and organisational stability – an appealing factor for both recruitment and retention.	**Threats**: There remains a risk that Klarna's management views the agreement merely as a procedural step to prevent strikes or reputational harm, rather than as a genuine endorsement of the Swedish co-determination model. If so, the formal structures may exist on paper, but without a corresponding culture of participation and dialogue, undermining the spirit of the agreement.

Source: Finansförbundet, Finansarbetsgivarna, Klarna, Klarna Collective Agreement, November 2023[12].

Country: Italy

Parties involved: Società Autostrade per l'Italia (Italy's largest motorway concessionaire, managing highways; majority controlled by state lender Cassa Depositi e Prestiti with private co-investors), Filt-Cgil, Fit-Cisl, Uiltrasporti, Sla Cisal, Ugl VI, regional and local secretaries of trade unions, RSA (transport sector unions)

Title: Implementation of safety projects through the use of AI at Autostrade per l'Italia

On March 6, 2025, Autostrade per l'Italia met with national and regional representatives of the main transport unions to address occupational health and safety challenges, focusing on the "Uomo a Terra" (Man Down) project. This initiative aims to protect workers operating alone by deploying a digital safety technology designed to detect automatically if a worker falls or is incapacitated and promptly trigger emergency responses.

The company presented the technological system, which includes a protection kit for lone workers: a belt equipped with a Bluetooth Low Energy (BLE) sensor paired with a dedicated mobile app installed on company phones. When an incident is detected, an alarm is sent to the central Radio Operations Centre (SIV), enabling quick intervention.

Importantly, geolocation data is only activated during an emergency alarm and is strictly limited to this function. The company guarantees compliance with privacy laws, especially GDPR and the AI Act, assuring workers that the system will not be used for employee monitoring or disciplinary purposes. Data generated by alarms will be deleted automatically within 24 hours.

The company commits to provide training to affected employees, including clear communication on data processing and access rights. Any privacy violations reported will trigger a joint review with union representatives to determine corrective actions.

Key features of this new project include:

- Introduction of Digital Safety Technology, mainly Bluetooth sensor and a mobile app system for automatic "man down" detection and alarm activation;
- Emergency-only geolocation, implying that workers' location is tracked solely when alarms are triggered to protect privacy;
- Strict data privacy compliance, through full adherence to GDPR and national privacy laws, data erased within 24 hours and no surveillance or disciplinary use;
- Collaborative negotiation and continuous involvement of unions in implementation and monitoring procedures;

[12] The agreement can be found in the Virtual Agora of the #FinAI project and accessed upon request by contacting the Coordinator (First-Cisl).

- Comprehensive employee training and clear information about data handling and responsibilities.

SWOT Analysis[13]

Strengths: The project leverages advanced safety technology to significantly enhance injury prevention and response for lone workers. One of the major strengths lies in the system's strict adherence to privacy protections: geolocation is only activated upon alarm trigger, which avoids any perception or reality of surveillance. The data is automatically deleted after 24 hours, aligning with GDPR requirements and reinforcing trust among employees.	**Weaknesses**: The system's dependence on mobile connectivity and BLE functionality may introduce reliability concerns, especially in remote or signal-poor environments. Additionally, workers might perceive the system as an implicit form of control, despite safeguards, particularly if training and communication are not fully transparent.
Opportunities: The project opens a path for wider application of non-invasive safety tech across other operational units and potentially other sectors. It could also serve as a benchmark for social dialogue on the responsible use of digital tools in occupational health, stimulating collective bargaining on tech governance. Furthermore, the initiative provides an opportunity to strengthen the internal safety culture and showcase a best practice in employer-union cooperation.	**Threats**: A potential risk exists that geolocation functionalities, initially intended solely for emergency situations, may in the future be repurposed for routine monitoring.

Source: Società Autostrade per l'Italia, Filt-Cgil, Fit-Cisl, Uiltrasporti, Sla Cisal, Ugl VI, regional and local secretaries of OO.SS., RSA, Verbale di accordo, 6 March, 2025[14].

Country: France

Parties involved: BNP Paribas Group; Uni Global Union; EWC of the BNP Paribas Group; Fédération Européenne des Cadres des Etablissements de Crédit et des institutions financières (FECEC); Confédération Française Démocratique du Travail (CFDT); Confédération Française de L'Encadrement-Confédération Générale des Cadres (CFE-CGC).

[13] The authors have supplemented the SWOT analysis with their own insights and assessments.
[14] The agreement can be found in the Virtual Agora of the #FinAI project and accessed upon request by contacting the Coordinator (First-Cisl).

Title: Agreement on the Fundamental rights and Global social floor of the BNP Paribas Group[15]

Through the present agreement – renewing its previous version, signed in 2018 – the parties aim to support the pursuit of sustainable growth in BNP Paribas' activities and to implement a process of continuous, positive, and shared improvement to foster satisfactory working conditions for employees in all countries where the Group operates.

Chapter 3, article 3 of the agreement is focused on the topic of digital transformation within the Group, which is structured around several key areas, including artificial intelligence (AI).

Under this agreement, the Group commits to implementing actions to: support employees as work methods and organizational models evolve; maintain and develop their skills throughout their professional lives; avoid developing practices or tools that create bias or discrimination, and to take preventive and corrective actions if any such issues are identified; protect personal data and employees' privacy in accordance with applicable regulations; remain vigilant to the emergence of inappropriate behaviours through technology; safeguard employees' health and safety, ensure work-life balance, and respect the right to disconnect.

With respect to AI, the Group has embarked on the implementation of several use cases, e.g., loan pricing, automation of marketing campaigns and transactions, credit analysis, virtual assistants, customer satisfaction measurement, process improvements, reduction of repetitive or low value-added tasks, protection against fraud and cyber risks, anti-money laundering, etc.

In the future, BNP Paribas commits to deploying AI in a secure and ethical manner, under human supervision and in line with the principle of human oversight set out in the European Social Partners Framework Agreement of June 2020. To this end, the Group is establishing a strengthened governance framework covering model risk assessments, data protection and privacy frameworks, IT and security standards, and anticipation of potential impacts on individuals and the environment.

The Group also commits to supporting employees in AI implementation through awareness and training initiatives: according to the signing parties, a generative AI awareness module is already available to all staff. BNP Paribas will also rely on impact analyses of generative AI on jobs and skills to guide its actions.

SWOT Analysis

Strengths: The agreement demonstrates how AI governance constitutes a core pillar of BNP Paribas long-term vision. The Group's commitment to the creation of clear frameworks for risk assessment, data	**Weaknesses:** The agreement outlines a series of ethical principles, lacking specific procedures and processes for their implementation, together with enforcement mechanisms. Monitoring bodies, together

[15] This SWOT analysis entry has been supplemented by the Annex's authors.

protection, and ethical oversight indicates an important assumption of responsibility towards a correct use of AI. BNP also places great importance in employee development, demonstrated through the agreement's strong focus on training, and upskilling initiatives on AI technologies.	with information and consultation procedures are also not mentioned in the agreement, making social partner oversight on the topic of AI implementation quite overlooked by the signing parties.
Opportunities: The setting of binding ethical principles of AI can position BNP Paribas as a leader in responsible and socially sustainable digital banking – all while enabling the exploitation of new opportunities connected to new product design, customer interaction models, and enhanced advisory services. Moreover, engagement and dialogue with European social partners and other international institutions enhances credibility and influence on sector-wide standards.	**Threats**: In the absence of enforcement mechanisms and/or specific monitoring bodies, the principles outlined in the BNP agreement may suffer from a lack of concretization in the concrete implementation of AI technologies in the various – and globally distributed establishment of the company.

Source: BNP Paribas Group; Uni Global Union; EWC of the BNP Paribas Group; Fédération Européenne des Cadres des Etablissements de Crédit et des institutions financières (FECEC); Confédération Française Démocratique du Travail (CFDT); Confédération Française de L'Encadrement-Confédération Générale des Cadres (CFE-CGC). Agreement on the Fundamental rights and Global social floor of the BNP Paribas Group, April 14, 2024.

Country: France

Parties involved: AXA (global insurance group operating in insurance protection and asset management), Group Trade Union Representation, representative trade union organisations.

Title: Structuring social dialogue on artificial intelligence: establishing a framework for responsible AI within AXA France[16]

In June 2025, AXA and the representative trade unions of the Group signed a framework agreement on social dialogue and artificial intelligence (AI) in France. The agreement, aligned with AXA's strategic plan Unlock the Future 2024-2026, seeks to promote responsible AI governance across ethical, technical, HR, and environmental dimensions, while ensuring continuous dialogue with employee representatives.

[16] This SWOT analysis entry has been supplemented by the Annex's authors.

It defines a structured and iterative approach to social dialogue on AI, covering information and consultation procedures, experimentation phases, and impact assessment on work organisation, skills, and employment. It also reinforces transparency regarding AI use, particularly generative AI, and the treatment of employee data.

Key features include:

- Regular exchanges with workers' representatives at each stage of AI experimentation and deployment;
- Annual reporting to the Group Committee;

Training for trade union and employee representatives to develop shared understanding of AI-related changes in skills and employment.

SWOT Analysis

Strengths: The agreement establishes a structured and iterative framework for social dialogue on AI, fostering transparency and trust between management and unions. By integrating AI governance within a broader ethical and sustainable framework, the agreement aligns with AXA's group-level commitments while ensuring early involvement of workers' representatives in AI-related projects. This approach allows for the assessment of impacts on skills, training, and work organisation, linking technological innovation with sustainability and decent work. Continuous monitoring is institutionalised through annual reporting to the Group Committee and regular follow-up meetings, enhancing accountability and dialogue.	**Weaknesses**: The agreement's non-binding nature may limit its enforceability at the entity level, leaving significant discretion to local management. Mechanisms for measuring the social and employment impact of AI remain imprecise, potentially hindering effective monitoring. Training for worker representatives depends on the company's initiative and resources, which may reduce its consistency and reach. Additionally, the agreement does not specify sanctions or remedies in cases of non-compliance or insufficient information-sharing.
Opportunities: The agreement can serve as a benchmark for responsible AI social dialogue across other multinational contexts, bridging innovation, ethics, and collective representation. It provides a platform for developing skills policies, reskilling pathways, and competence mapping aligned with digital transformation. Moreover, the agreement supports the safe adoption of generative AI tools while embedding social safeguards, potentially	**Threats**: Rapid technological evolution may render the agreed procedures quickly outdated, requiring frequent adaptation or renegotiation. Conflicts may arise between business confidentiality and workers' information rights, limiting transparency. Uneven engagement by different entities within the Group could undermine coherent implementation, and without robust data protection and algorithmic accountability measures, there remains a residual risk of

informing sectoral or European-level frameworks. By fostering a participatory approach to innovation governance, it enhances corporate legitimacy and employee acceptance of technological change.	unintended surveillance or bias in AI deployment.

Source: AXA, Group Trade Union Representation, representative trade union organisations, Accord RSG sur le dialogue social et l'intelligence artificielle au sein d'AXA en France, 13 June, 2025.

Collective bargaining and social dialogue at the national and sectoral level

Country: Denmark

Parties involved: Finansforbundet (Financial Sector Union), Denmark, and Finans Danmark (Finance Denmark)

Title: Strengthening employee involvement in tech and data ethics through sectoral bargaining

The 2025 sectoral collective agreement for the Danish insurance and pension sector signed by Finansforbundet (Financial Sector Union), Denmark, and Finans Danmark (Finance Denmark) introduces binding provisions to enhance employee involvement in digitalisation and data ethics, with a focus on early dialogue and trust-building through the Samarbejdsudvalg (Works Council). The agreement offers a replicable model for embedding ethical standards in digital transformation processes through collective bargaining.

More specifically, Section D "Technology" highlights that companies must involve the Works Council at an early stage in all significant IT-related changes, particularly when these may affect jobs or increase surveillance. Employers are also required to avoid redundancies where possible, instead of offering retraining or internal reassignment. In addition, Section E on Data Ethics underlines how firms are encouraged to co-develop internal data ethics guidelines with the Works Council, ensuring responsible use of data and increasing transparency. An annex provides guiding questions and examples of good practices, including algorithmic transparency, fairness, and mechanisms for continuous evaluation.

Other key features of the agreement include:

- Formalised employee involvement;
- Codified data ethics principles;
- Clear preference for job preservation over displacement.

SWOT Analysis

Strengths: The agreement institutionalises employee involvement in both technological transitions and data governance via the Works Council, reinforcing democratic oversight in digital transformation processes. It explicitly places digital rights and AI-related surveillance on the bargaining agenda, enhancing transparency and accountability. Moreover, it introduces a job protection logic, requiring companies to prioritise reskilling, retraining, or redeployment over layoffs when new technologies threaten employment.	**Weaknesses:** Despite its ambitions, the data ethics component relies on voluntary implementation, significantly reducing its enforceability. Additionally, the agreement allows firms to address data ethics "outside" the work council, which risks bypassing collective oversight and weakening the role of trade unions in shaping corporate digital strategies.
Opportunities: This framework provides a foundational step toward codifying ethical standards for technology use in the workplace. It creates space for unions to influence the governance of AI, digital surveillance, and predictive systems from a rights-based and ethical perspective. Early employee involvement can curb the spread of opaque algorithmic management practices and raise awareness of data-related risks among all stakeholders. Unions can also build on this precedent by crafting model data ethics templates for broader application across the sector.	**Threats:** Without binding mechanisms, there's a concrete risk that employers will either neglect the guidelines or provide incomplete or misleading information, undermining the initiative's credibility. The soft-law nature of the agreement also makes it vulnerable to becoming symbolic rather than substantive, thus becoming a performative gesture with minimal structural impact.

Source: Finansforbundet (Financial Sector Union), Denmark, and Finans Danmark (Finance Denmark), Protokollat nr. 10 om Aftale mellem Finans Danmark/Arbejdsgiver og Finansforbundet om samarbejde og samarbejdsudvalg, 1 April, 2025[17].

[17] The document of the request can be found in the Virtual Agora of the #FinAI project and accessed upon request by contacting the Coordinator (First-Cisl).

Country: Denmark

Parties involved: Forsikringsforbundet (Denmark union for insurance workers), The Insurance Trade Union Denmark and Forsikring & Pension Arbejdsgiver (F&P Arbetsgiver), The Danish trade association for insurance companies and pension funds

Title: Embedding data ethics in collective bargaining: the Danish insurance sector approach

The new 3-year collective agreement between Forsikringsforbundet and F&P Arbejdsgiver, effective April 1, 2025, introduces a mandatory discussion on data ethics guidelines within the companies' Samarbejdsudvalg (Works Council). This ensures employee data is managed responsibly and transparently.

Based on this, companies must develop their own data ethics guidelines covering:

- What employee data is accessed and how it is processed and used;
- How employees are involved in decisions regarding their data;
- Measures to prevent indirect discrimination through data collection and use;
- Use of algorithms and ensuring human oversight;
- Frequency and methods for reviewing and updating these guidelines.

SWOT Analysis

Strengths: The practice fosters ongoing dialogue and discussion around employee data and AI ethics, providing workers with a meaningful platform to voice concerns. It strengthens transparency and trust in the workplace by addressing fears related to surveillance and emphasises a human-in-control approach. By going beyond legal baselines such as GDPR, especially on AI use in HR decisions, the guidelines set ethical boundaries that help prevent opaque or biased algorithmic systems. Additionally, this framework empowers unions with leverage to negotiate locally on issues like employee monitoring, data minimisation, and fairness in algorithmic processes.	**Weaknesses:** The lack of clear enforcement mechanisms undermines the guidelines' effectiveness, as there are no defined sanctions if companies fail to comply or maintain transparency. Moreover, the guidelines only apply mandatorily to companies with over 35 employees, making them optional for smaller organisations and thus limiting their scope and impact.
Opportunities: This practice offers a solid starting point for further development and refinement of workplace data ethics. It opens the door for unions to influence the deployment of AI, digital monitoring, and predictive analytics in employment settings. Early involvement of workers reduces the	**Threats**: There is a significant risk that companies might ignore the guidelines or provide misleading information from the outset, which could erode trust. The initiative also faces the danger of becoming mere window dressing, thus becoming a formal compliance without substantive

risk of exploitative algorithmic management and fosters a shared understanding of data ethics between employees and employers. Active participation by employees can also strengthen mutual trust and improve overall workplace culture.	change, if not backed by genuine commitment and oversight.

Source: Forsikringsforbundet, The Insurance Trade Union Denmark and Forsikring & Pension Arbejdsgiver (F&P Arbetsgiver), The Danish trade association for insurance companies and pension funds, Forsikringsoverenskomsten Overenskomstforhandlingerne 2025, 20 March 2025.

Country: Denmark

Parties involved: Finansforbundet (FSU) Denmark, Arbejdsgiverforeningen for FinTech (The Employers' Association for Fintech (AF)), Finans Danmark.

Title: AI and the fintech sector in Denmark

FSU Denmark is the first union in the world to negotiate a national collective agreement specifically for the FinTech sector. In late 2020, they achieved this milestone by successfully negotiating a national collective agreement for the first time. Now, FSU Denmark and AF have agreed to renew this national collective agreement for the period from 2025 to 2028. Finance Denmark has represented AF in the collective bargaining negotiations.

This agreement establishes a clear and common baseline for companies within the FinTech industry while allowing the necessary flexibility to adapt to the individual needs of each company. The renewed framework agreement for FinTech ensures that employees will have improved opportunities for skills development, enhanced leave options, and paid time off for fertility treatment. There is also a clause that allows trade union representatives to meet new hires during working hours.

The agreement applies to companies that are members of AF and have a minimum of 10 full-time employees. It is set to remain in effect until June 30, 2028.

Key features include:

- Employers have agreed to increase their contributions to the Finanskompetencepulje (Financial Competence Pool). This initiative enhances employee reskilling and upskilling, and better aligns qualifications in demand within the financial sector with the courses offered through the pool.

SWOT Analysis

Strengths: The agreement reinforces FSU Denmark's credibility by showing that	**Weaknesses**: The main weakness lies in the ambiguity surrounding the concept of

collective bargaining remains meaningful in fast-moving, digitally oriented industries. It establishes a solid foundation for local negotiations, enabling employees to tailor priorities and focus on the employment terms most relevant to their needs. The inclusion of a competence fund signals a genuine commitment to continuous learning and upskilling, equipping workers to navigate ongoing digital transformation. Moreover, the clause granting trade union representatives the right to meet new hires during working hours ensures an early presence and influence in the workplace, strengthening the union's role in building engagement and awareness from the outset.	"flexibility," which may lead to differing interpretations and potential conflicts over its scope and practical implications.
Opportunities: The agreement formalises a structured channel of communication between management and union representatives, creating space for early problem detection, joint innovation, and co-designed solutions. It also offers an exceptional opportunity to strengthen union representation in fintech – both by recruiting new members and by electing shop stewards at company level, thereby expanding the union's presence in a strategically important sector.	**Threats**: There is a risk that some employers may exploit the flexible provisions or the scope for local adaptation to circumvent or dilute key benefits, undermining the intended balance of rights and obligations within the agreement.
Source: Finansforbundet (FSU) Denmark, Arbejdsgiverforeningen for FinTech (The Employers' Association for Fintech (AF)), Finans Danmark, Renewed National Collective Agreement in the Fintech Sector, May 2025[18].	

Country: Finland
Parties involved: Trade Union Pro, Service Sector Employers Palta **Title**: AI and social dialogue in the insurance sector in Finland

[18] The agreement can be found in the Virtual Agora of the #FinAI project and accessed upon request by contacting the Coordinator (First-Cisl).

A notable provision in the Collective Agreement for the Insurance Sector (signed on 1 February 2025, ending 31 January 2028) is the inclusion of "Artificial Intelligence as part of the dialogue between employers and employees" in the signing protocol, reflecting a shared commitment to integrating AI considerations into the framework of industrial relations.

The core aspects of this provision are several. First, employers and employee representatives are expected to actively engage in discussions regarding workplace rules, practices, and guiding principles, explicitly including the use and impact of AI. In particular, employers are obliged to inform employee representatives about AI applications that may influence work processes and working conditions, ensuring that any such impacts are transparent and comprehensible.

Second, any changes in required skills or competencies should be incorporated into the workplace development plan, forming part of the ongoing co-operation process. In line with this, employers are responsible for providing appropriate training for shop stewards and, more broadly, for all participants in development activities. Crucially, employees must be able to attend AI-related training during working hours to ensure equitable access to learning opportunities.

Third, the agreement emphasises responsible AI practices across several domains, including recruitment, career progression, and data protection, as well as fostering AI literacy for relevant roles. This approach underlines that AI is not only a technical issue but also a matter of participatory governance and worker empowerment.

Finally, the collective agreement establishes a joint working group to continue this dialogue, ensuring that AI-related co-operation between employers and employees remains a sustained and structured process.

Key features include:

- The provision emphasises and specifies the employer's obligations under Finnish the Co-operation Act and the co-operation agreement between the social partners;
- There is a common view between the union and the employer association that AI should be part of the cooperation and dialogue between the employees and employers;
- The provision clearly states that AI's impact on employees' work and working conditions must be as transparent and understandable as possible;
- The provision may work as a "memory list" for the employee representatives and the employers.

SWOT Analysis

Strengths: The provision demonstrates a shared perspective between the trade union and the employer association, signaling a genuine willingness on both sides to engage on the issue. Indeed, it was negotiated during collective bargaining	**Weaknesses**: The provision is framed more as a recommendation than a binding rule, which limits its enforceability. Being part of the signing protocol also means it lacks permanence; it is not formally embedded in

highlighting a real commitment to dialogue. Moreover, putting it in the signing protocol rather than burying it in the full collective agreement ensures visibility, making it easier to reference and harder to overlook.	the collective agreement itself, leaving its long-term impact uncertain.
Opportunities: AI is a topic of growing attention, increasingly present in training and workplace discussions, which means the provision can guide emerging practices and shape organizational culture. Its influence as a guiding principle can be significant, even if indirect.	**Threats**: Because the provision is not legally binding, there is a danger that it may be treated as a mere advisory note, with limited effect on actual workplace practices and decision-making. Its non-mandatory nature could dilute its potential impact if not actively reinforced through ongoing dialogue and implementation efforts.

Source: Trade Union Pro, Service Sector Employers Palta, Signing protocol of the Collective agreement of the insurance sector, February 1, 2025.

Country: Greece

Parties involved: Alpha Bank, Attica Bank, Bank & the NBG Group, Eurobank Group, Piraeus Bank, Optima Bank (largest commercial banks in Greece), BNB Paribas SA – Athens Branch (foreign banking presence), Cooperative Bank of Thessaly SYN.P.E, Cooperative Bank of Karditsa SYN.P.E, Cooperative Bank of Epirus SYN.P.E (small regional co-ops), OTOE – Greek Federation of Bank Employee Unions

Title: Ensuring responsible AI integration through collective bargaining in the banking sector in Greece[19]

The 2025-2027 national collective agreement for the Greek banking sector, signed under the auspices of OTOE, the Greek Federation of Bank Employee Unions, provides a forward-looking model for embedding ethical, transparent, and worker-inclusive AI governance through social dialogue.

Recognising the transformative impact of AI on financial services and employment, the agreement enshrines a set of binding principles to steer AI deployment in ways that are both socially responsible and innovative. Art. 10 of the agreement affirms that AI must augment, not replace, human decision-making, especially in sensitive areas such as hiring, performance evaluations, and broader HR processes. In this sense, human oversight remains a non-negotiable safeguard to ensure fairness and transparency.

[19] The analysis has been supplemented by the report's authors.

A core commitment concerns data protection: the agreement reaffirms that both employee and customer data are to be handled in strict accordance with EU legislation, notably the GDPR, and the evolving regulatory framework on AI and digital services, such as the AI Act.

Another pillar of the agreement is the shared responsibility for workforce adaptation. The parties commit to comprehensive and ongoing training pathways to equip employees with the necessary digital and transversal skills. The aim is not just to reskill, but to empower workers to actively participate in the digital transition.

Finally, and most significantly, the agreement institutionalises social dialogue as the means for anticipating and managing technological change. Rather than treating AI as a managerial prerogative, it becomes a domain for collective governance, helping mitigate risks and ensure alignment with broader social and ethical goals.

Key features include:

- AI must support and not replace human judgment in employment-related decisions;
- Decisions in hiring, evaluation, and career management must remain under human control;
- Strong reaffirmation of safeguards for workers and customers;
- Banks are obligated to provide continuous training for digital adaptation;
- Institutionalisation of social dialogue.

SWOT Analysis

Strengths: The agreement provides a normative anchor for ethical AI deployment in the sector, directly negotiated between social partners. It embeds principles of human-centricity and transparency into AI systems, reinforcing a rights-based approach in line with the EU regulations. By explicitly reaffirming human oversight over sensitive decisions (recruitment, appraisal), it protects core dimensions of procedural fairness. The commitment to continuous training also ensures that digitalisation becomes a shared process of transformation. Importantly, the agreement institutionalizes social dialogue as the governance mechanism for AI in the sector.	**Weaknesses:** The agreement lacks operational detail on implementation. There is no mention of specific procedures for algorithmic transparency, impact assessments, or dispute resolution mechanisms. There is also no monitoring body or clear benchmarks for training effectiveness or fairness audits. Moreover, smaller banking institutions with limited digital infrastructure or HR capacity may struggle to comply in practice, creating asymmetries across the sector.
Opportunities: The recognition of social dialogue as a strategic governance tool could catalyse more participatory approaches to tech transitions, setting a precedent beyond banking. There is also	**Threats**: In the absence of effective enforcement, employers could engage in window dressing, therefore citing compliance with the agreement while deploying systems that are unaccountable

scope for unions to co-develop training content, shaping not just the use of AI but its design, embedding worker perspectives into digital infrastructure.	or discriminatory in practice. Also, structural power imbalances may limit the capacity of unions to meaningfully contest harmful deployments in real time.

Source: Alpha Bank, Attica Bank, Bank & the NBG Group, Eurobank Group, Piraeus Bank, Optima Bank, BNB Paribas SA – Athens Branch, Cooperative Bank of Thessaly SYN.P.E, Cooperative Bank of Karditsa SYN.P.E, Cooperative Bank of Epirus SYN.P.E, OTOE – Greek Federation of Bank Employee Unions, Collective labour agreement of banks 2025-2027, 2 April, 2025[20].

Country: Spain

Parties involved: Asociación Española de la Banca (Spanish main employers' association for banking), Comisiones Obreras (CCOO), Unión General de Trabajadores (UGT) and Federación de Banca de FINE (major trade union federations in the Spanish finance sector)

Title: The Spanish NCLA of the banking sector and the digital transition[21]

On 12 November 2024, the Spanish social partners in the banking sector (AEB, CCOO, UGT, FINE) signed the 25th national collective agreement. Chapter 15, titled Digital Transformation and Digital Rights, includes two provisions addressing the use of AI.

In particular, art. 79 highlights the role of collective bargaining as a key mechanism to ensure a fair and balanced digital transformation, preventing risks of segmentation or exclusion. It grants company-level worker representatives (RLPT) the right to be informed about technological innovations introduced at the company level that may impact working conditions or employment levels.

In addition, art. 80 sets out a series of digital rights for employees, including the right to disconnect, the right to privacy in relation to the use of digital devices, surveillance and geolocation systems, and the right to digital education. With regard to AI, employees have the right not to be subject to decisions based solely on automated processes, and to request human intervention where such decisions occur.

Worker representatives are entitled to information about AI or data analysis systems that make autonomous decisions affecting individual employment relationships or trade union prerogatives. This information must at least include the data input into the algorithm, its operational logic, and an assessment of the outcomes, in line with art. 64(4)(d) of the Spanish Workers' Statute.

[20] The document of the request can be found in the Virtual Agora of the #FinAI project and accessed upon request by contacting the Coordinator (First-Cisl).
[21] The initiative has been collected and analysed by the report's authors.

Notably, both provisions were already included in the previous 2021 agreement and have been confirmed without changes in the 2024 renewal, signed after the adoption of the EU AI Act.

SWOT Analysis

Strengths: The agreement reinforces collective bargaining as a safeguard in digital transformation, ensuring transparency and worker involvement. It formalises key digital rights, including AI-related protections, fostering trust and legal clarity.	**Weaknesses**: The lack of enforcement mechanisms may weaken practical impact.
Opportunities: The agreement provides a strong baseline for future collective bargaining on AI and digitalisation. It could serve as a model for other Member States or inspire cross-sectoral initiatives. It also enhances workers' digital literacy and data awareness.	**Threats**: There is a real risk that these provisions could become outdated if they are not regularly revised to keep pace with rapidly evolving AI technologies. Moreover, companies might exploit ambiguities in the language to sidestep their responsibilities, undermining the agreement's intent. Without ongoing and active social dialogue, these rights risk turning into mere formalities, lacking real impact on workers' daily experiences.

Source: Asociación Española de la Banca, Comisiones Obreras (CCOO), Unión General de Trabajadores (UGT) and Federación de Banca de FINE, XXV Convenio colectivo de banca, 20 December, 2024.

Country: Italy

Parties involved: Felsa-Cisl, Nidil-Cgil, Uiltemp (Italian unions representing atypical/agency/temp workers), Assogrocery (Italian employers' association for the grocery/retail sector)

Title: National agreement regulating platform-based grocery "shoppers"

On 19 February 2024, Italy's main unions representing non-standard and self-employed workers (Felsa-Cisl, Nidil-Cgil, Uiltemp) signed a national framework agreement with Assogrocery to regulate coordinated and continuous collaborations (as per art. 2(2)(a) of Legislative Decree 81/2015) for "shoppers", workers purchasing and delivering grocery carts ordered online via digital platforms. The agreement is relevant as it showcases how

collective bargaining can shape algorithmic governance, ensure transparency in platform work, and extend rights and protections to digitally-managed labour relations.

Key elements and features of the agreement include:

- Definition of a new occupational profile within a contractual framework that introduces specific protections in terms of fair remuneration, occupational health and safety, work organisation, and environmental sustainability;
- Central role of collective bargaining in algorithmic transparency: the agreement includes provisions on how assignments are distributed via algorithm, ensuring fairness, protection of privacy, the right to disconnect, and access to relevant data;
- Extension of trade union rights and representation to platform workers, with provisions for participation and consultation in platform governance.

SWOT Analysis

Strengths: The agreement shows advanced collective bargaining framework for regulating new professional roles and directly addressing algorithmic management. It also demonstrates the ability of industrial relations to tailor protections to the specific features of coordinated self-employment contracts.	**Weaknesses:** The agreement may have limited enforceability if not complemented by company-level agreements and oversight mechanisms. There is also a risk of partial application in the absence of widespread platform adherence[22].
Opportunities: The agreement shows a pioneering model for enhancing representation of self-employed workers in the platform economy and it provides a replicable framework for protecting non-standard workers in other digital and web-based sectors, potentially scaling through second-level bargaining.	**Threats:** Platforms might resist collective regulation efforts. Also, there's legal uncertainty about how platform-mediated self-employment is classified and protected under both national and EU law[23].

Source: Assogrocery, Nidil-Cgil, Felsa-Cisl, Uiltemp Uil, Accordo collettivo nazionale per la regolamentazione dell'attività di collaborazione alle imprese che svolgono, attraverso l'ausilio di piattaforme digitali, attività di acquisto e rivendita di un carrello contente i prodotti di largo consumo ordinati online dal cliente, 19 February, 2024.

[22] This SWOT analysis entry has been supplemented by the Annex's authors.
[23] This SWOT analysis entry has been supplemented by the Annex's authors.

Social dialogue at the European level

Country: EU level practice

Parties involved: EBF (European Banking Federation), ESBG (European Savings and Retail Banking Group), EACB (European Association of Co-operative Banks), UniEuropa Finance (European trade union federation representing employees in the financial sector)

Title: The Joint Declaration on the employment aspects of Artificial Intelligence[24]

On May 14, 2024, EU-level social partners in the financial sector (EBA, ESBG, EACB, UniEuropa Finance) signed a Joint Declaration on the employment aspects of AI. This follows previous initiatives on digital transition, reaffirming the centrality of social dialogue and collective bargaining in shaping the sector's response to technological change.

The Declaration focuses on current and future HR-related applications of AI, such as personnel planning, selection, marketing, and people analytics, emphasising the need for its responsible use in line with ethical principles. It highlights impacts on work organisation, especially regarding occupational health and safety (OSH) and digital skills development. Specifically, it calls for joint OSH risk assessments addressing algorithmic unpredictability and systematic training for up/re-skilling and career support.

In addition to standard collective rights, the Declaration introduces "digital rights" for workers affected by AI systems. These include limits on surveillance, safeguards against fully automated decision-making, and strict personal data protections under EU and national law.

Finally, the social partners commit to disseminating the Declaration broadly and encourage its adoption at national, sectoral, and company levels.

SWOT Analysis

Strengths: The declaration stands out for its robust reinforcement of social dialogue and collective bargaining in addressing the transformations brought about by AI in the financial sector. By focusing specifically on human resources-related applications of AI it narrows the scope to areas with immediate and tangible impacts on workers, where risks of opacity and discrimination are higher. A key strength lies in the articulation of digital rights for workers, including the right to be free from fully automated decisions, transparency in monitoring practices, and strict adherence	**Weaknesses:** The primary weakness is the declaration's non-binding nature, which limits its enforceability and risks reducing it to a set of well-meaning but ultimately symbolic principles. While it sets out important protections, it remains vague regarding implementation tools or mechanisms for follow-up, particularly at national or company level. Furthermore, by focusing heavily on HR use cases, the declaration pays relatively little attention to broader AI applications (e.g., algorithmic decision-making in credit, risk

[24] The initiative has been collected and analysed by the report's authors.

to EU data protection laws. It also recognises the unpredictability of algorithmic management and recommends joint occupational safety and health (OSH) assessments as a preventive measure.	management, or customer service) that also affect working conditions and job structures.
Opportunities: The document opens clear avenues for national-level and company-level actors to develop stronger regulatory frameworks around AI's use in the workplace. It serves as a reference point for collective agreements that aim to embed principles of ethical AI use, worker training, and digital rights. The emphasis on training and re-skilling also provides a foundation for long-term employability strategies and workforce adaptation, particularly crucial in a sector facing rapid technological change.	**Threats**: There is a latent risk that, in absence of binding obligations, the declaration remains underutilised or ignored by employers not actively engaged in dialogue. The rapid evolution of AI technologies could also outpace the relatively general commitments made in the document, making it obsolete or insufficient in dealing with more complex or invasive forms of AI integration. Additionally, fragmented adoption across Member States may lead to uneven protections, reinforcing existing inequalities in the sector.
Source: EBA, ESBG, EACB, UniEuropa Finance, Joint Declaration on employment aspects of Artificial Intelligence, 14 May, 2024.	

A1.4 From Regulation to Co-Governance: Emerging Patterns of Social Dialogue on AI and Digital Transformation in the Financial Sector

The practices examined reveal a growing convergence across European banking and financial institutions in addressing the employment implications of digitalisation and AI through multi-level social dialogue. A recurring theme is the institutionalisation of joint governance structures – such as digital transformation committees, works councils, and joint welfare bodies – designed to monitor and shape the deployment of new technologies. These practices demonstrate a shared emphasis on responsible AI use, often grounded in principles of human oversight, transparency, and algorithmic fairness, reflecting alignment with evolving EU regulations like the AI Act and GDPR.

At the company level, initiatives such as Intesa Sanpaolo's integration of responsible AI guidelines or Autostrade per l'Italia's safety tech reflect how technological innovation is increasingly embedded in broader ESG strategies and HR transformation. At the sectoral and national levels, agreements from Denmark, Greece, Spain, and Italy show how collective bargaining is being adapted to include data ethics, AI governance, and digital rights, with a particular focus on preventing exclusion, discrimination, or job displacement. Across all levels, employee involvement, training, and internal mobility emerge as critical enablers for socially sustainable digital transitions. However, a persistent weakness is the non-binding or soft-law nature of many provisions, which

may limit enforceability and create disparities in application. Still, these developments mark a significant shift: from reactive regulation of technology to proactive co-governance, where unions and employers co-shape the rules and standards guiding AI and digital transformation.

Annex #1-at-a-Glance

Annex 1 collects and systematises examples of European, national-sectoral, company-union initiatives addressing the digital and just transition in the financial sector. It highlights how social dialogue, collective agreements and joint bodies are being mobilised to steer organisational change, embed sustainability culture, and mitigate the risks of digitalisation and AI promoting a human-centred approach.

Key findings

- **Growing European convergence**: Banks and financial institutions across Europe are increasingly aligned in addressing the employment impacts of digitalisation and AI through multi-level social dialogue.
- **Institutionalised joint governance** with AI mandates: Companies are setting up structures like digital transformation committees, works councils, and joint welfare bodies to monitor and guide technology deployment, embedding co-governance into everyday decision-making. Several now have explicit AI mandates, the ability to involve external experts, and periodic reporting duties (e.g. Generali's Transformation Hubs; Intesa Sanpaolo's Digital Transformation Committee).
- **Responsible AI practices,** AI literacy and impact assessments: There is a clear emphasis on transparency, human oversight, and algorithmic fairness, reflecting alignment with evolving EU regulations such as the AI Act and GDPR with growing attention to AI literacy programmes and impact assessments for high-risk systems.
- Negotiated algorithmic transparency and data governance. Collective bargaining increasingly covers traceability of algorithmic systems, bias-mitigation, limits to surveillance, and workers' rights to information on input data, operating logic and outcomes.
- **Integration with ESG and HR strategies**: Corporate initiatives, for example Intesa Sanpaolo's responsible AI guidelines or Autostrade per l'Italia's safety technologies, illustrate how AI and digital tools are increasingly embedded within broader sustainability and workforce transformation agendas.
- Health and safety 'privacy-by-design'. AI-based safety solutions are emerging with emergency-only geolocation and strict data-retention limits, representing a replicable good practice for privacy-compliant innovation.
- **Adaptive collective bargaining, also beyond traditional banking**: Sectoral and national agreements in Denmark, Greece, Spain, and Italy are expanding to cover data ethics, AI governance, and digital rights, with particular attention to preventing exclusion, discrimination, or job displacement. Bargaining now extends to fintech incorporating algorithmic governance and digital rights
- Reskilling, redeployment and competence funds. Agreements increasingly provide for assisted redeployment, structured up-/re-skilling pathways, and sectoral competence funds (e.g. Finanskompetencepulje in Denmark; Intesa Sanpaolo and Generali plans).
- **Employee engagement as a driver**: Training, internal mobility, and active worker involvement emerge as critical enablers for socially sustainable digital transitions.

- Human-in-control in HR decisions. Several national-level practices (Greece, Spain) reaffirm that AI must support, not replace, human judgment in hiring, appraisal and career management, ensuring the right to human intervention.
- New forms of work and representation. Unions are adapting to hybrid and digital professional profiles, developing tailored services and virtual tools for representation (e.g. Intesa Sanpaolo).
- **Limits of enforceability**: Many provisions remain non-binding or soft-law,–sometimes applying only above certain size thresholds, creating risks of uneven implementation or window-dressing. Periodic reviews are needed to keep frameworks effective.
- **Shift toward proactive co-governance**: Overall, there is a notable transition from reactive regulation of technology toward a model where unions and employers actively co-shape the rules and standards guiding AI and digital transformation in the workplace.

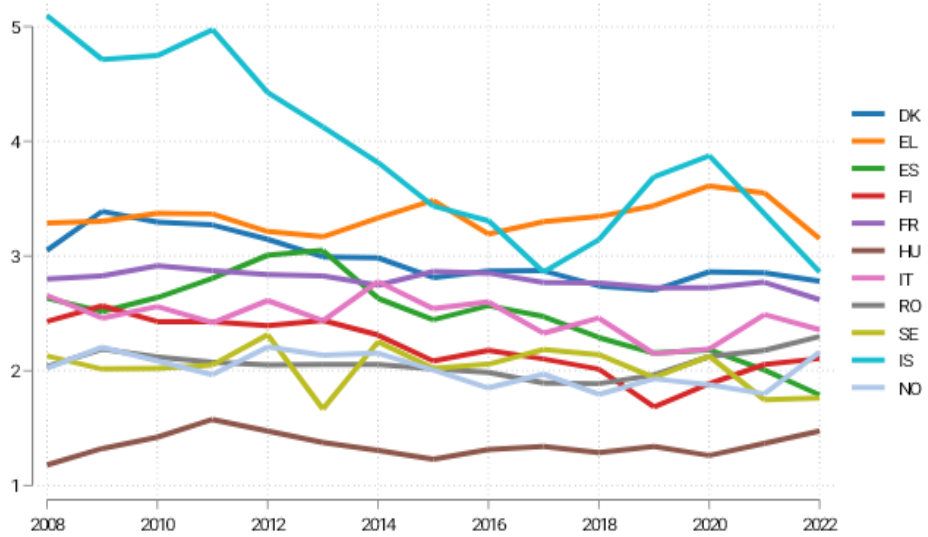
In sum, good practices converge on the recognition that embedding sustainability and managing AI/digitalisation are inseparable. Joint committees, namely the ones with AI mandates, and collective bargaining are central to aligning innovation with workers' rights, welfare policies, and environmental objectives.

Policy implications:

- Strengthen joint bodies at company level as permanent fora for digital and green transition, with explicit AI mandates, reporting calendars and the possibility to consult external experts.
- Expand collective bargaining coverage on AI, data use, and algorithmic management, also across fintech and platform work.
- Ensure reskilling and lifelong learning provisions accompany digitalisation.
- Introduce AI-literacy programmes for exposed roles and mandatory impact assessments for high-risk AI, integrated with OSH risk evaluation.
- Promote alignment of corporate sustainability strategies with social dialogue and worker participation.
- Monitor territorial impacts, such as banking desertification, through joint observatories and corrective social-cohesion measures.

ANNEX 2.
SUPPLEMENTARY FIGURES AND DATA ON WORKFORCE TRANSFORMATIONS IN EU FINANCIAL SERVICES[1]

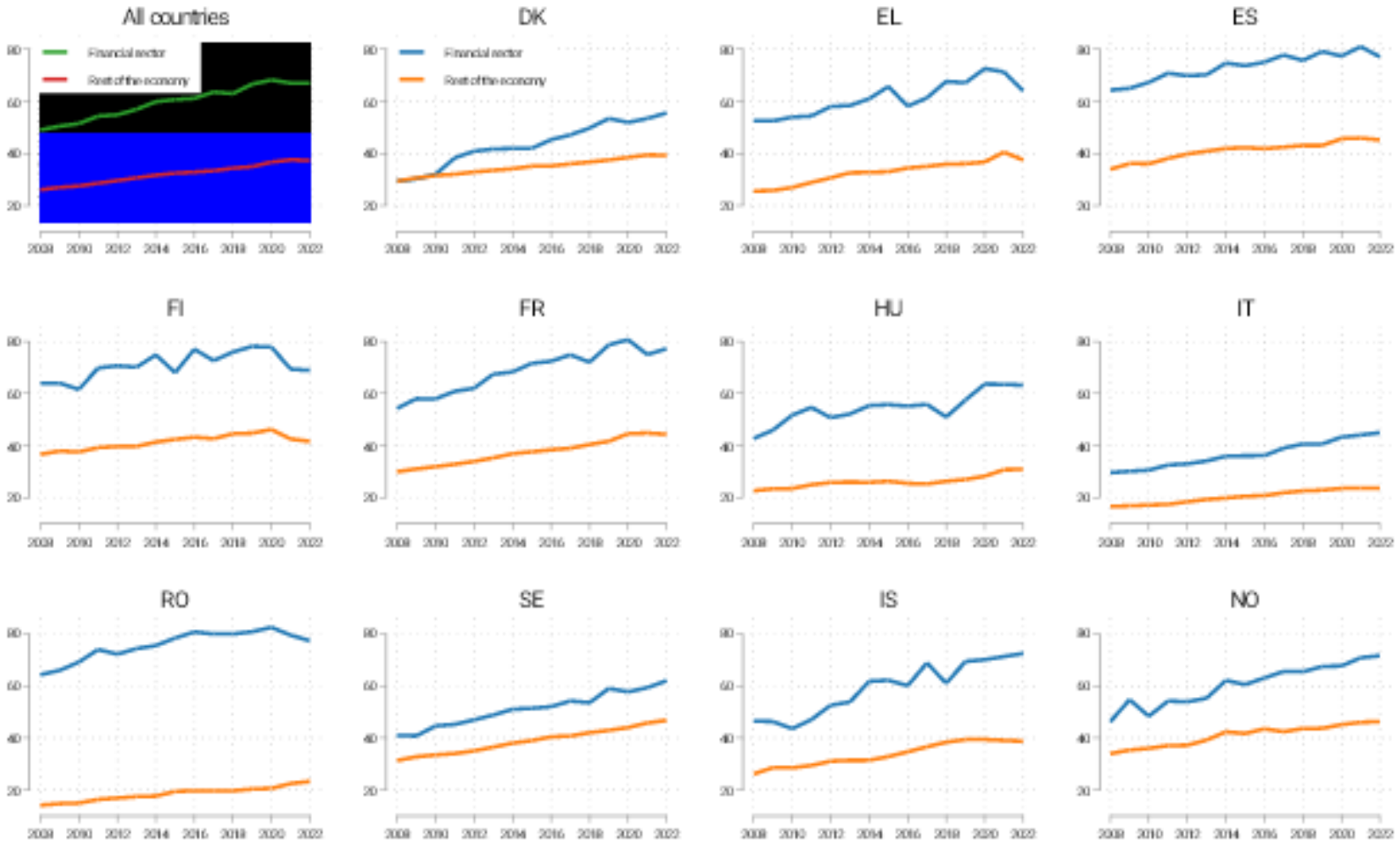
Figure A 1. Financial sector employment share (%) by country, EU9+2, 2008-2022



Source: LFS, 2008-2022, EU9+2, data are weighted.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway.

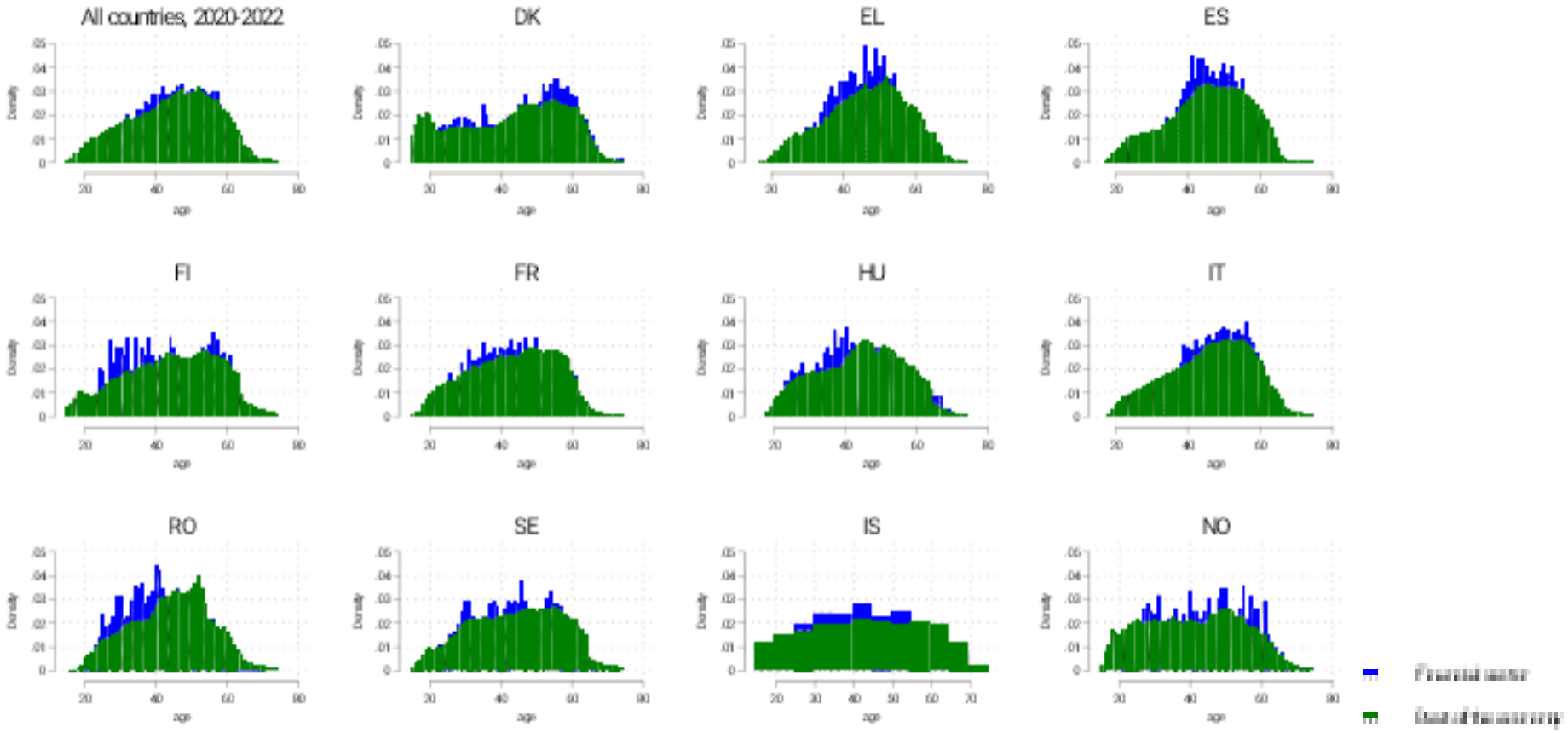
[1] This Annex is attributable to the following authors: Mikkel Barslund (HIVA-KU Leuven), Ilse Tobback (HIVA-KU Leuven), Anne Guisset (HIVA-KU Leuven), Karolien Lenaerts (HIVA-KU Leuven) and Valeria Pulignano (CESO-KU Leuven).

Figure A 2. Share of highly educated persons in total employment (%) by country, EU9+2, 2008-2022



Source: LFS, 2008-2022, EU9+2, data are weighted.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway.

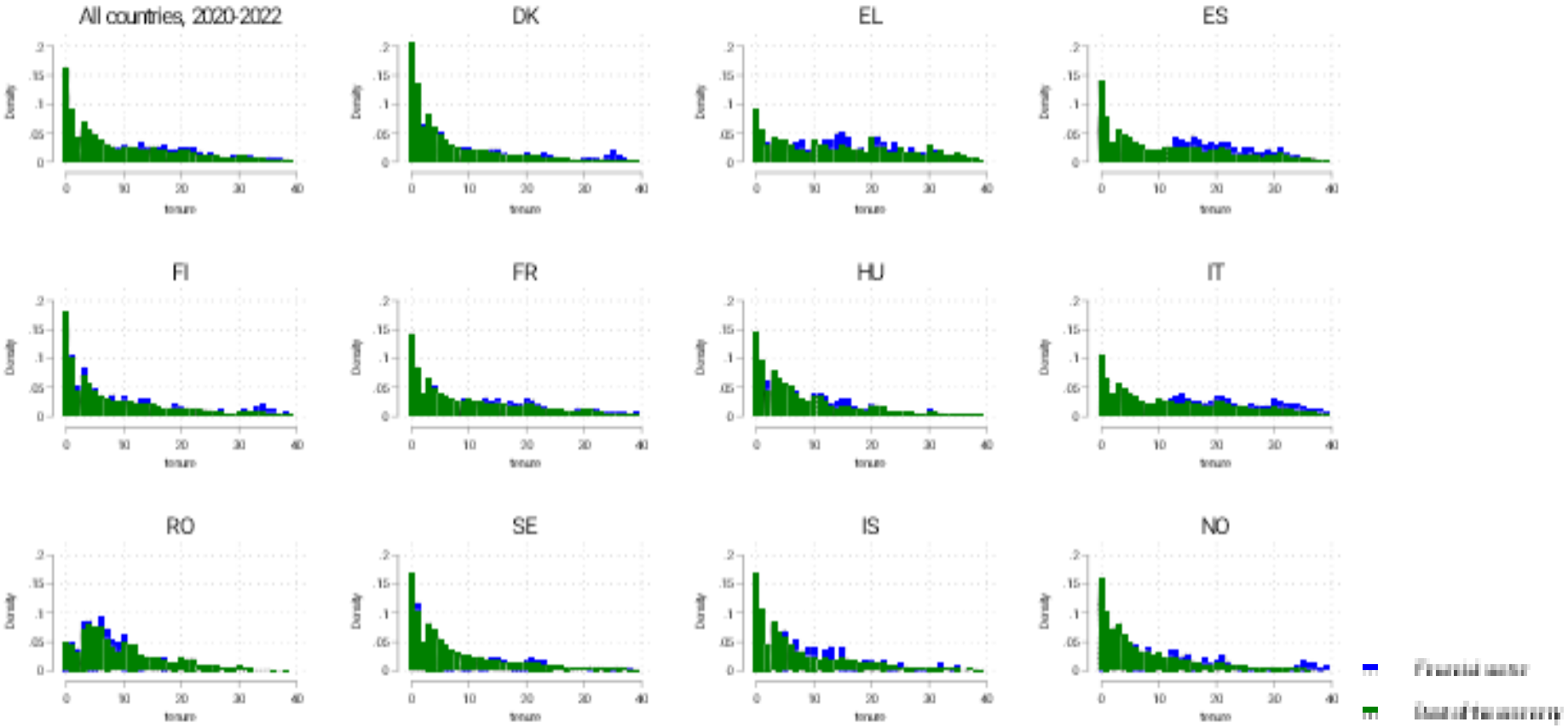
Figure A 3. Age distribution of employees by sector and country, EU9+2, 2020-2022



Source: LFS, 2008-2022, EU9+2.

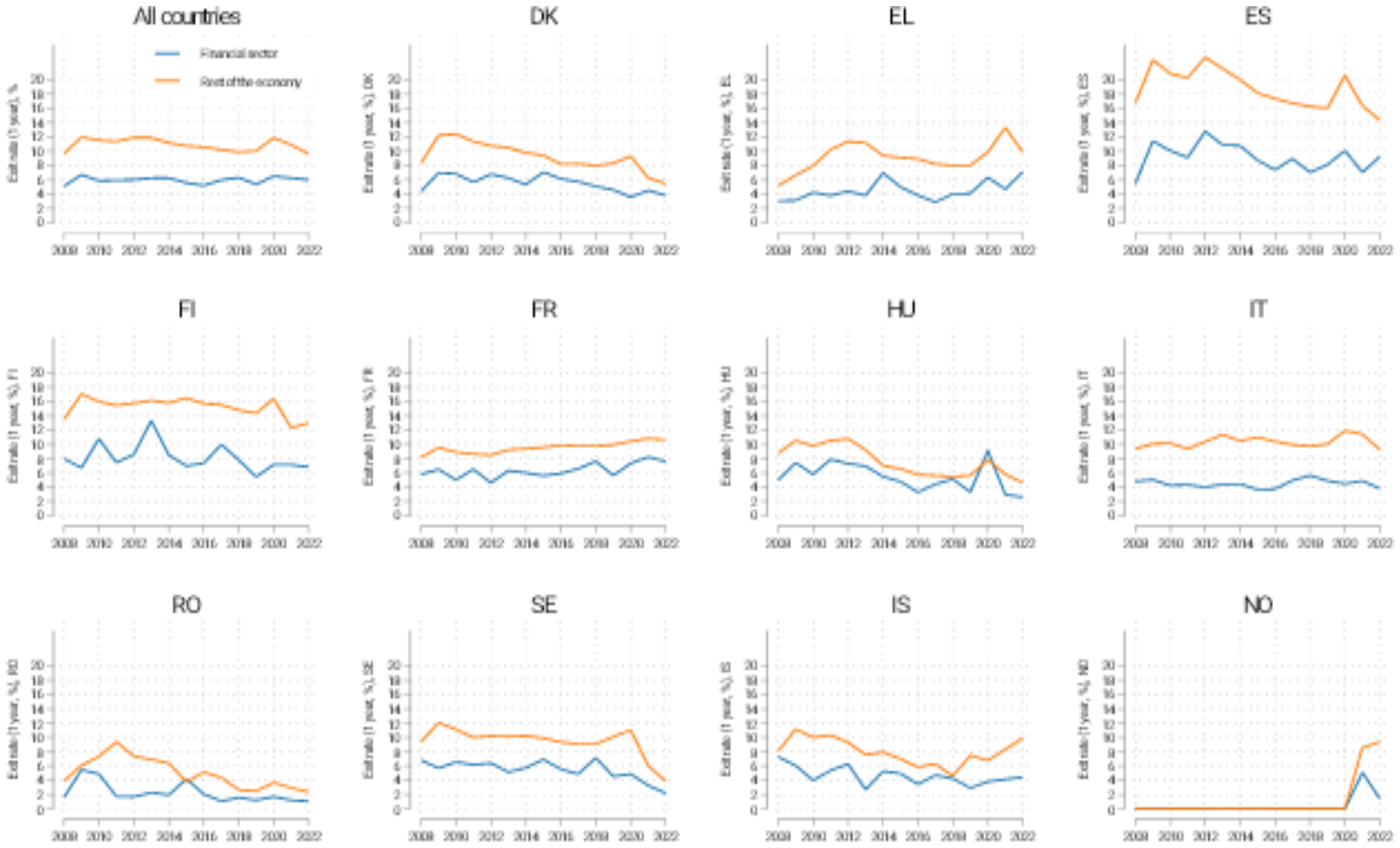
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. Age is restricted to age 74. For Iceland, only age categories are available. For this country, age has been approximated as the midpoint of each 4-year age bracket.

Figure A 4. Tenure distribution of employees by country, EU9+2, 2020-2022



Source: LFS, 2008-2022, EU9+2.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. Tenure is expressed in years and is restricted to 40 years.

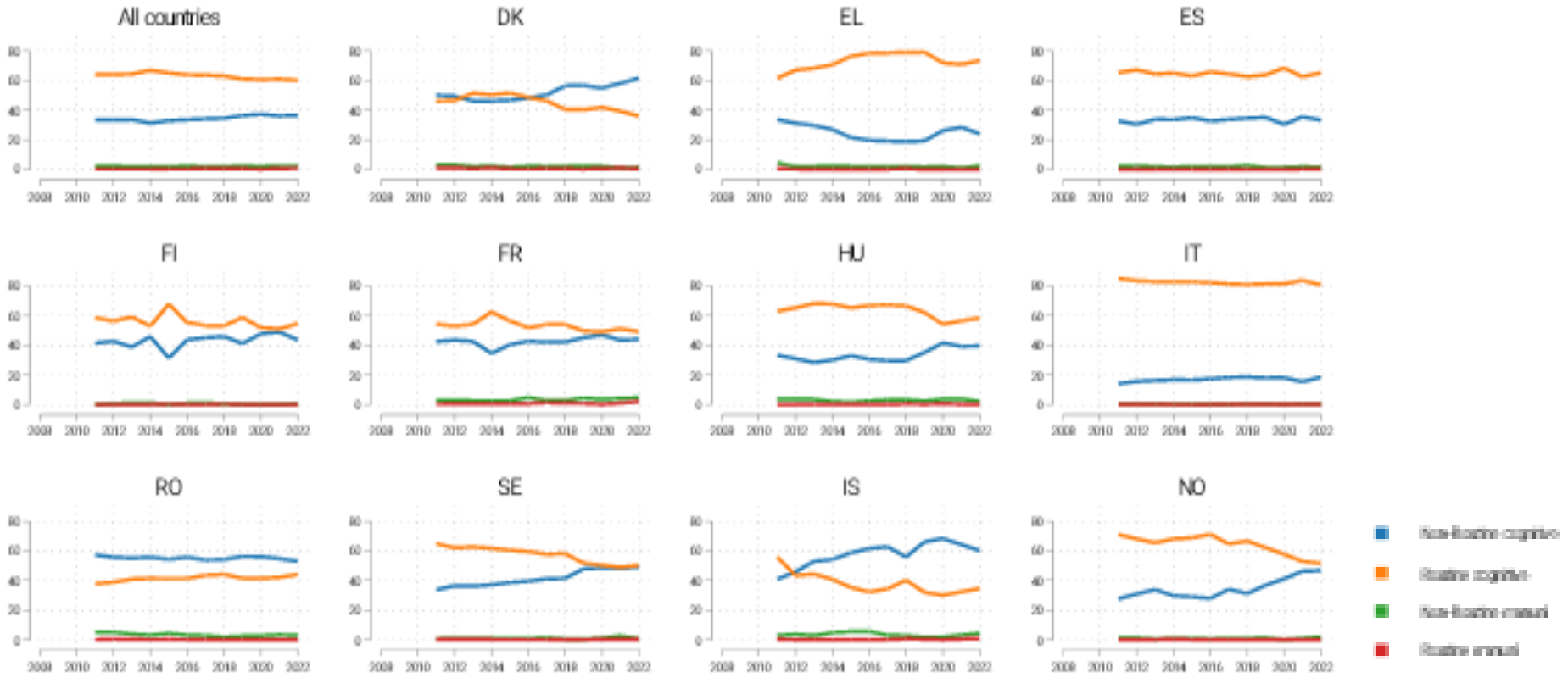
Figure A 5. Exit share (1 year), all workers (%), by country, EU9+2, 2008-2022



Source: LFS, 2008-2022, EU9+2, data are weighted.

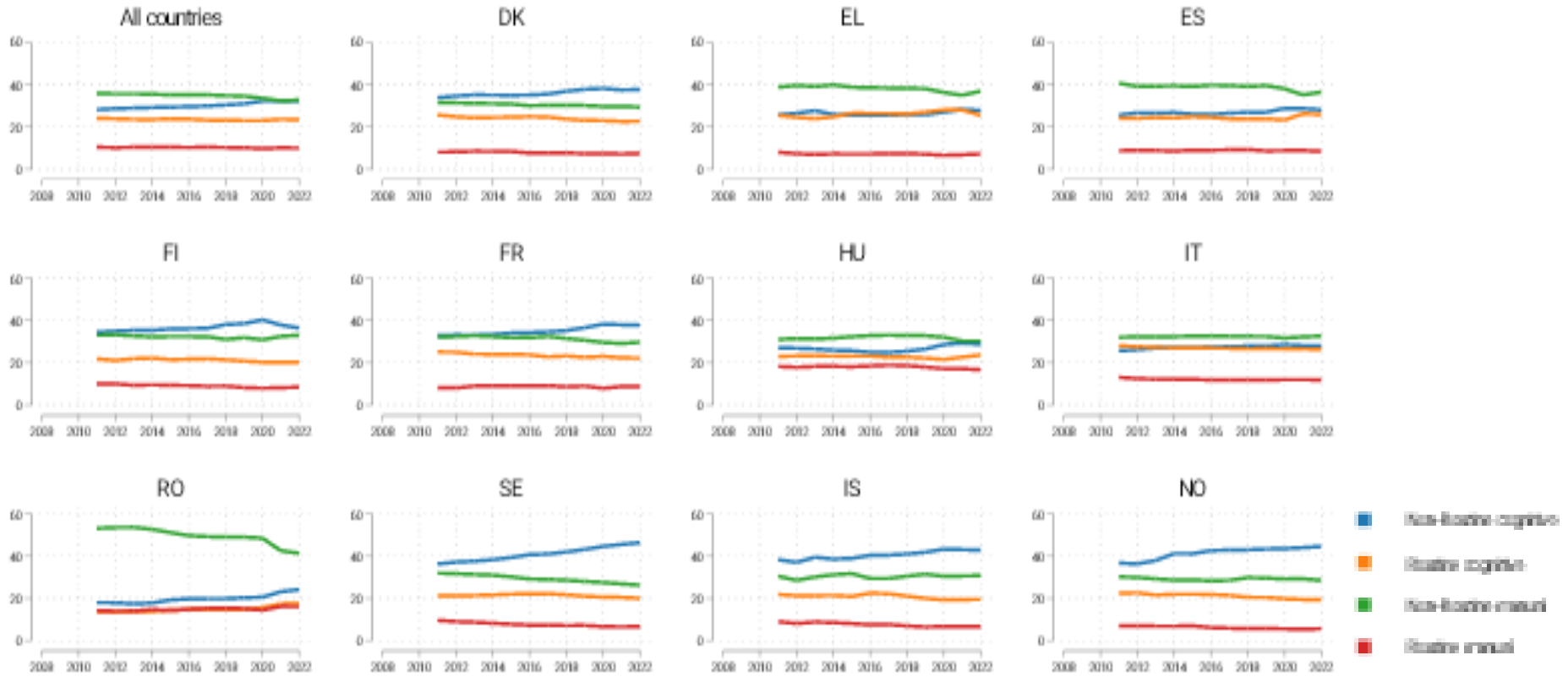
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. The exit share represents the ratio between the number of individuals who left a sector (either financial or the rest of the economy) within the past year, based on the time since they last worked, and the number of high educated individuals currently employed in that sector during that year. For Norway, the sample size is relatively small, which may result in less smooth trends in the graphs.

Figure A 6. Share of employment by task-type and country in the financial and insurance sector, %, EU9+2, 2011-2022



Source: LFS, 2008-2022, EU9+2, data are weighted.
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. The share of employment by task-type represents the ratio between the number of employees with a certain task-type within a sector (either financial or the rest of the economy) and the total number of workers employed in that sector.

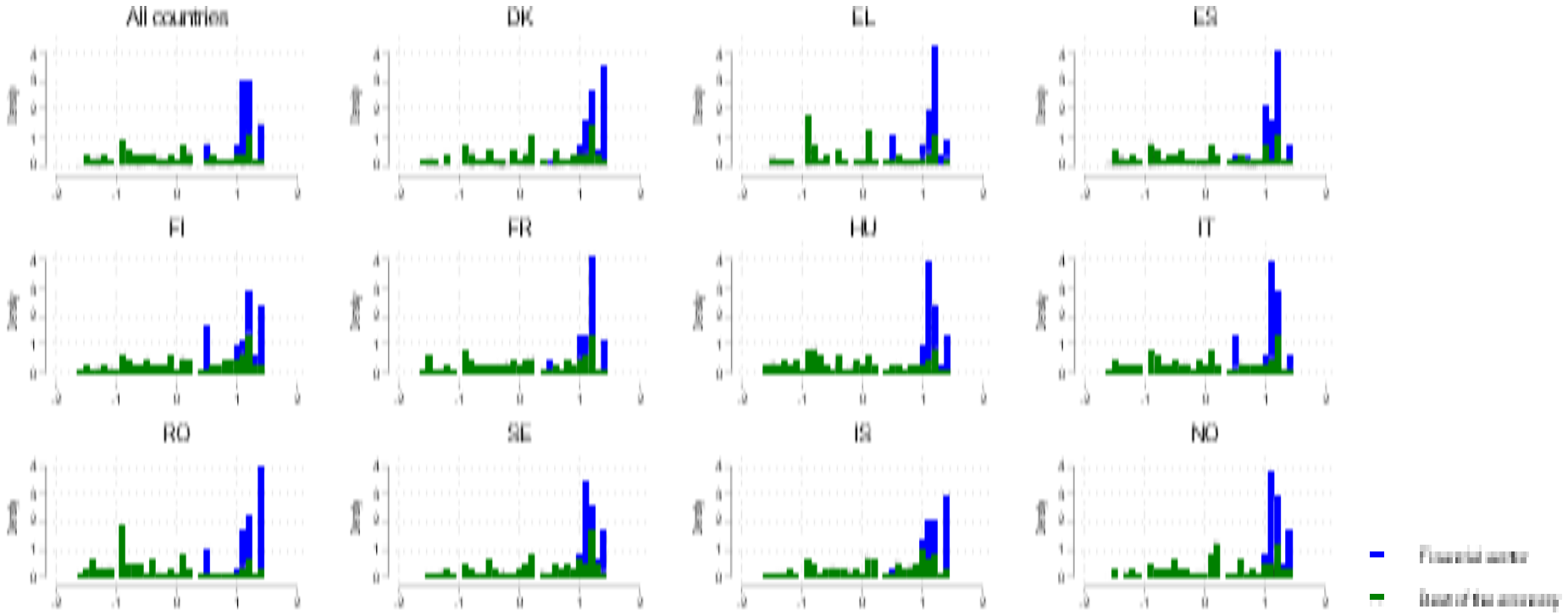
Figure A 7. Share of employment by task-type and country in the rest of the economy, %, EU9+2, 2011-2022



Source: LFS, 2008-2022, EU9+2, data are weighted.

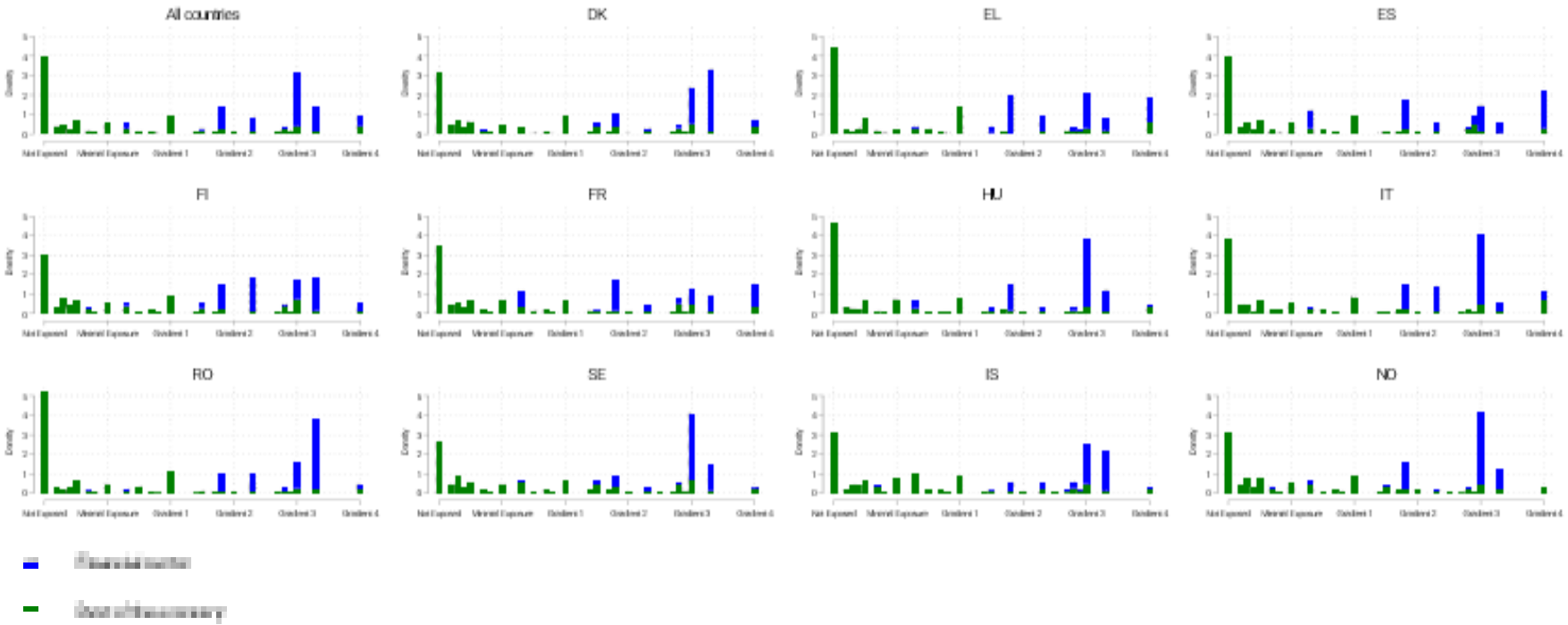
Note: EU9+2 includes Denmark, France, Greece, Hungary, Italy, Romania, Spain, Sweden and Finland (EU9), along with two European Economic Area countries, Iceland and Norway. The share of employment by task-type represents the ratio between the number of employees with a certain task-type within a sector (either financial or the rest of the economy) and the total number of workers employed in that sector.

Figure A 8. Occupational AI Exposure by country, EU9+2, 2020-2022: AI Occupational Exposure (Felten et al., 2021)



Source: AIOE (Felten et al., 2021).
Note: AIOE stands for AI Occupational Exposure (Felten et al., 2021), with higher positive values indicating greater exposure to advances in AI technologies.

Figure A 9. Occupational AI Exposure by country, EU9+2, 2020-2022: ILO Generative AI occupational exposure



Source: ILO GenAI OE (Gmyrek et al., 2025).
Note: GenAI OE stands for Occupational Exposure to Generative AI (Gmyrek et al., 2025). Gradient 1: Low GenAI exposure among some tasks, but many still require human input (augmentation). Gradient 2: Moderate GenAI exposure among some tasks. Gradient 3: Significant GenAI exposure among a significant portion of tasks. Gradient 4: Highest GenAI exposure among most tasks.

ANNEX 3.
ANNOTATED BIBLIOGRAPHY

Sources for the Literature Review						
Author(s)	**Organisation**	**Type**	**Title**	**Date**	**Link/Reference**	**Topic**
J. Berg, P. Gmyrek, K. Kamiński, F. Konopczyński, A. Ładna, B. Nafradi, M. Troszyński	//	Paper	Generative AI and jobs: A refined global index of occupational exposure	2025	ILO Working Paper, No. 140	Labour market, artificial intelligence
ECB	ECB	Report	Digital banking: how new bank business models are disrupting traditional banks.	2025	Accessed here: Digital banking: how new bank business models are disrupting traditional banks.	Labour market, finance
S. Baldassarre, M. Cavola, E. Pipicelli	//	Article	Bank branch desertification and the design of a postal banking network.	2025	Socio-Economic Planning Sciences, 100, 102216	Labour market, finance
J. Héritier, S. Kergroach	OECD	Article	Emerging divides in the transition to artificial intelligence	2025	OECD Regional Development Papers, No. 147, OECD Publishing, Paris, https://doi.org/10.1787/7376c776-en	Artificial intelligence
E. Dagnino	//	Article	AI and Work: Taking Worker Involvement Seriously – New Insights	2025	ADAPT International Bulletin, n. 12. https://englishbulletin.adapt.it/ai-and-work-taking-worker-involvement-seriously-new-insights-from-france/	Artificial Intelligence, labour law

			from France			
K. Langenbucher		Book chapter	Artificial Intelligence and Financial Services	2025	In: Smuha NA, ed. The Cambridge Handbook of the Law, Ethics and Policy of Artificial Intelligence. Cambridge Law Handbooks. Cambridge University Press; 2025 (p. 322-338)	Artificial intelligence, finance
S. Sereno	//	Article	Le déploiement de l'IA dans le monde du travail: entre pratiques et (non-) droits.	2025	Revue du Droit de travail, January 2025	Artificial intelligence in the employment context
M. Corti	//	Article	Intelligenza artificiale e partecipazione dei lavoratori. Per un nuovo umanesimo del lavoro	2024	DRI, 2024, n. 3., pp. 615-641	Artificial intelligence, labour law
D. Iodice	First-Cisl	Speech	Politiche industriali per l'Intelligenza Artificiale, audizione di First-Cisl presso il Cnel	2024	https://www.firstcisl.it/wp-content/uploads/2024/06/FirstCisl_Audizione_Cnel_20240529_Politiche_industriali_per_Intelligenza_Artificiale_settore_finanziario_e_assicurativo.pdf	Artificial intelligence, finance
D. Iodice	First-Cisl	Article	La Joint Declaration sulla "intelligenza artificiale" per il settore finanziario europeo: la primazia dell'"intelligenza collettiva" delle parti sociali	2024	DRI, 2024, n. 3., pp. 867-877	Artificial intelligence, finance
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E. Falletti	//	Article	Credit scoring under scrutiny by the Court of Justice of the European Union: brief remarks	2024	SSRN, (14 February 2024), pp.1-9	Credit scoring

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L. Zappalà	//	Article	Sistemi di IA ad alto rischio e ruolo del sindacato alla prova del “risk-based approach”	2024	Labour & Law Issues, n. 1	Artificial intelligence, trade unions
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OECD	OECD	Working paper	Generative artificial intelligence in finance	2023	OECD Artificial intelligence Papers, No. 9	Artificial Intelligence, Financial sector

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D. Busch	//	Article	The future of EU financial law	2022	Capital Markets Law Journal, Volume 17, Issue 1, January 2022, Pages 52-94, https://doi.org/10.1093/cmlj/kmab038	Digital transition, financial sector
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K. Botopoulos	//	Article	The European supervisory authorities: role-models or in need of re-modelling?	2020	ERA Forum, n. 21 https://doi.org/10.1007/s12027-020-00609-7	Supervisory authorities
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C. Karakas, C. Stamegna	//	Report	Financial technology (fintech): Prospects and challenges for the EU	2017	European Parliamentary Research Service https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2017)599348	Fintech sector
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BANKING SECTOR				
European Parliament and the Council of European Union	Capital Requirements Directive (CRD) (2013/36/EU)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013L0036	2013	Banking sector
European Parliament and the Council of European Union	Capital Requirements Regulation (CRR) ((EU) No 575/2013)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32013R0575	2013	Banking sector
European Parliament and the Council of European Union	Bank Recovery and Resolution Directive (2014/59/EU)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0059	2014	Banking sector
European Parliament and the Council of European Union	Single Resolution Mechanism Regulation (Regulation (EU) No 806/2014)	https://eur-lex.europa.eu/eli/reg/2014/806/oj	2014	Banking sector
European Parliament and the Council of European Union	Deposit Guarantee Schemes Directive (Directive 2014/49/EU)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0049	2014	Banking sector
European Parliament and the Council of European Union	Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU (AMLD5)	https://eur-lex.europa.eu/eli/dir/2018/843/oj/eng	2018	Banking sector
European Parliament and the Council of European Union	Directive (EU) 2018/1673 of the European Parliament and of the Council of 23 October 2018 on combating money laundering by criminal law (AMLD6)	https://eur-lex.europa.eu/eli/dir/2018/1673/oj/eng	2018	Banking sector

European Parliament and the Council of European Union	Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019 amending Directive 2013/36/EU as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures (CRD V)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019L0878	2019	Banking sector
European Parliament and the Council of European Union	Regulation (EU) 2019/876 of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No 575/2013 as regards the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities, counterparty credit risk, market risk, exposures to central counterparties, exposures to collective investment undertakings, large exposures, reporting and disclosure requirements (CRR II)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R0876	2019	Banking sector
European Parliament and the Council of European Union	Regulation (EU) 2022/2554 of the European Parliament and of the Council of 14 December 2022 on digital operational resilience for the financial sector and amending Regulations (EC) No 1060/2009, (EU) No 648/2012, (EU) No 600/2014, (EU) No 909/2014 and (EU) 2016/1011 (DORA)	https://eur-lex.europa.eu/eli/reg/2022/2554/oj/eng	2022	Banking sector
European Parliament and the Council of European Union	Directive (EU) 2024/1619 of the European Parliament and of the Council of 31 May 2024 amending Directive 2013/36/EU as regards	https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32024L1619	2024	Banking sector

	supervisory powers, sanctions, third-country branches, and environmental, social and governance risks (CRD VI)			
European Parliament and the Council of European Union	Regulation (EU) 2024/1623 of the European Parliament and of the Council of 31 May 2024 amending Regulation (EU) No 575/2013 as regards requirements for credit risk, credit valuation adjustment risk, operational risk, market risk and the output floor (CRR III)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AL_202401623	2024	Banking sector
FINANCIAL MARKETS				
European Parliament and the Council of European Union	Markets in Financial Instruments Directive (MiFID I) (2004/39/EC)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32004L0039	2004	Financial markets
European Parliament and the Council of European Union	Solvency II Directive (2009/138/EC)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32009L0138	2009	Insurance sub-sector
European Parliament and the Council of European Union	European Market Infrastructure Regulation (EMIR) ((EU) No 648/2012)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32012R0648	2012	Financial markets
European Parliament and the Council of European Union	Markets in Financial Instruments Directive (MiFID II) (2014/65/EU)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0065	2014	Financial markets
European Parliament and the Council of European Union	Markets in Financial Instruments regulation (MiFIR) ((EU) No 600/2014)	https://eur-lex.europa.eu/eli/reg/2014/600/oj	2014	Financial markets

European Parliament and the Council of European Union	CCP Recovery and Resolution Regulation ((EU) 2021/23)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0023	2020	Financial markets
European Parliament and the Council of European Union	Regulation (EU) 2024/791 of the European Parliament and of the Council of 28 February 2024 amending Regulation (EU) No 600/2014 as regards enhancing data transparency, removing obstacles to the emergence of consolidated tapes, optimising the trading obligations and prohibiting receiving payment for order flow (MIFIR III)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AL_202400791	2024	Financial markets
European Parliament and the Council of European Union	Directive (EU) 2024/790 of the European Parliament and of the Council of 28 February 2024 amending Directive 2014/65/EU on markets in financial instruments (MIFID II)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024L0790	2024	Financial markets
SUSTAINABLE FINANCE				
European Parliament and the Council of European Union	Regulation on sustainability-related disclosures in the financial services sector ((EU) 2019/2088)	https://eur-lex.europa.eu/eli/reg/2019/2088/oj	2019	Sustainable finance
European Parliament and the Council of European Union	Regulation on sustainability-related disclosures for benchmarks ((EU) 2019/2089)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32019R2089	2019	Sustainable finance
European Parliament and the Council of European Union	Taxonomy Regulation ((EU) 2020/852)	https://eur-lex.europa.eu/eli/reg/2020/852/oj	2020	Sustainable finance

European Parliament and the Council of European Union	Corporate Sustainability Reporting Directive (CSRD) ((EU) 2022/2464)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022L2464	2022	Sustainable finance
European Commission	Regulation on European Sustainability Reporting Standards (ESRS) (UE) 2023/2772 (delegated acts under (EU) 2022/2464)	https://eur-lex.europa.eu/eli/reg_del/2023/2772/oj	2023	Sustainable finance
European Parliament and the Council of European Union	Corporate Sustainability Due Diligence Directive (CSDDD) 2024/1760	https://eur-lex.europa.eu/eli/dir/2024/1760/oj	2024	Sustainable finance
FINTECH SECTOR				
European Parliament and the Council of European Union	Payment Services Directive (PSD I) (Directive 2007/64/EC)	https://eur-lex.europa.eu/legal-content/IT/TXT/?uri=CELEX%3A32007L0064	2007	Fintech sector
European Parliament and the Council of European Union	Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC (PSD2)	https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex:32015L2366	2015	Fintech sector
European Parliament and the Council of European Union	Regulation on interchange fees for card-based payment transactions (EU) 2015/751	https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32015R0751	2015	Fintech sector
European Parliament and the Council of European Union	General Data Protection Regulation (EU) 2016/679 (GDPR)	https://eur-lex.europa.eu/eli/reg/2016/679/oj	2016	Fintech sector

European Parliament and the Council of European Union	Regulation on digital operational resilience for the financial sector (DORA) ((EU) 2022/2554)	https://eur-lex.europa.eu/eli/reg/2022/2554/oj	2022	Fintech sector
European Parliament and the Council of European Union	Regulation on a pilot regime for market infrastructures based on distributed ledger technology ((EU) 2022/858)	https://eur-lex.europa.eu/eli/reg/2022/858/oj	2022	Fintech sector
European Parliament and the Council of European Union	Regulation (EU) 2023/1113 of the European Parliament and of the Council of 31 May 2023 on information accompanying transfers of funds and certain crypto-assets and amending Directive (EU) 2015/849 (TFR)	https://eur-lex.europa.eu/eli/reg/2023/1113/oj/eng	2023	Fintech sector
European Parliament and the Council of European Union	Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 (MiCA)	https://eur-lex.europa.eu/eli/reg/2023/1114/oj/eng	2023	Fintech sector
SUPERVISORY AUTHORITIES				
European Parliament and the Council of European Union	Regulation (EU) No 1093/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Banking Authority)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02010R1093-20210626	2010	European Banking authority
European Parliament and the Council of European Union	Regulation (EU) No 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02010R1095-20200101	2010	European Supervisory Authority (European

	Supervisory Authority (European Securities and Markets Authority)			Securities and Markets Authority)
European Parliament and the Council of European Union	Regulation (EU) No 1094/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Insurance and Occupational Pensions Authority)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02010R1094-20200101	2010	European Supervisory Authority (European Insurance and Occupational Pensions Authority)