



Regulatory and Compliance Insights

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This volume, titled "Regulatory and Compliance Insights", focuses on the significant progress and ongoing challenges in the field of financial regulation and compliance. The articles are organized to cover key themes such as, capital markets, independence of financial supervision, digital transformation, and capacity building, reflecting the comprehensive approach needed to address the dynamic nature of financial markets.

1.3 Professional Insight

Financial Literacy in the Age of Artificial Intelligence

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Authors' Bios



Aleksandra Dimitrova is the Journal Coordinator of the Journal of Financial Supervisors Academy (JFSA). She is the Senior Academy Manager of the Financial Supervisors Academy, the training arm of the Malta Financial Services Authority. In her role, Aleksandra leads the design and delivery of strategic learning initiatives for financial supervisors and professionals. She brings experience in marketing, research, and educational design, and is also a member of the Board of Studies of the Post-Graduate Diploma in Financial Services Regulation and Compliance, created in collaboration with the University of Malta.



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Abstract

The Age of Artificial Intelligence (AI) has brought radical changes to the financial sector, influencing how consumers manage their funds, make purchase decisions and maximise the use of the available technology. This paper offers insight on the significance of having a society with a strong base in financial literacy and education in order to maintain pace with evolving technology. From AI tools and blockchain technology, to different workplace realities and generational gaps, this paper sheds light on the risks of being second best in today's financial world. The central argument revolves around the notion that regulators and employers must tighten the knowledge gap between different generations in order to effectively protect consumers. Essentially, the AI revolution will only be successful, if investment is not merely done in technology, but also in people.

Financial Literacy in the Age of Artificial Intelligence

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Introduction: From Industrial to Intelligent

As humanity moved through distinct eras of Industrial Revolutions, economies shifted from farming and handmade goods to industries and machine production¹. These types of shifts fundamentally transformed our societies, creating new methods of how we work, communicate, and make decisions. Today, we stand at the midst of another imminent radical shift, which can only be described as the Age of Artificial Intelligence (AI). Machines are not merely performing tasks faster and at times better than humans, but are learning, adapting, and influencing us on how we interact with the world around us.

This paper examines how AI is reshaping the financial sector, influencing both employability and consumer protection, and argues that education is essential for sustaining human adaptability in this evolving industrial revolution. As technology continues to evolve, learning and skills development both at the workplace and at a scholarly level will be paramount to equip consumers and employees with the tools that allow them to contribute and thrive in the Age of Artificial Intelligence.

However, this new age also introduces a human-centric approach, addressing global challenges with a focus on sustainability and resilience. This modern industrial revolution aims to align technological innovation with societal priorities, fostering a sustainable and inclusive digital future.² The rapid integration of AI into financial services exemplifies this shift. Institutions like the Commonwealth Bank of Australia have effectively adopted AI to enhance operations and customer interactions, signaling a broader, accelerated transformation within the financial sector.³ As we move forward, understanding and addressing the implication of this ongoing revolution, will be crucial for sustainable and inclusive growth. This is only achievable by continuously dedicating ample resources towards education with the aim of closing the digital literacy gap.

¹ Industrial Revolution | Definition, History, Dates, Summary, & Facts | Britannica

Business Processes in the Artificial Transformation of Industry 5.0; Viktorija BABICA Faculty of Economics and Management, Riga Technical University Riga, LV-1048, Latvia; Deniss SCEULOVS Faculty of Economics and Management, Riga Technical University Riga, LV-1048, Latvia; Proceedings of the 15th International Multi-Conference on Complexity, Informatics and Cybernetics (IMCIC 2024) ZA195KP.pdf (iiis.org)

³ Commonwealth Bank launches new Al data-led insights, as Australian small-to-medium businesses turn to new technology to drive growth

<u>01</u>

Financial Literacy and Consumer Education

For consumers to benefit from the ongoing digital transformation, specifically in financial services, they must first understand the technology they are interacting with. European Supervisory Authorities (ESAs) as well as the vast majority of National Competent Authorities (NCAs) sustained their emphasis on consumer education, featuring it in their annual supervisory priorities multiple years in a row. The digital transformation that the financial services sector had to undergo in the last couple of years critically emphasized the need to have a well-informed and educated pool of consumers who are aware of the risks they will encounter when investing their funds or when interacting with the latest financial applications. A higher level of education amongst consumers and investors further enhances regulators' educational campaigns and investor protection guidelines, given that such outreach would be more effective.

However, while the availability of digital platforms and products expands, educational institutions are struggling to maintain pace with the current and evolving technological landscape. Despite these concerns the educational curriculum remains largely unchanged, with financial literacy not commonly taught, even at the university level, and if it is taught, it often lacks practical applications. The inclusion of such curricula in schools and workplaces can have a far-reaching effect. This has a direct influence on one's financial capabilities, which leads to greater productivity and reduced stress.

However, we can observe a generational divide taking place, particularly in how different consumers interact with financial technological products. Financial literacy, which is directly proportionate to consumer education, is an essential skill in today's environment, however, it remains strikingly low, even in jurisdictions with well-developed financial systems. The younger generations are born into continuous change, digital transformation, and the age of the internet. While this brings a number of benefits and opportunities it also simultaneously introduces new challenges, uncertainties, and risks. Given these ever-increasing complexities of financial products, individuals of all demographics must acquire a solid understanding to make informed decisions which will impact their future. While older generations are still highly dependent on traditional methods, which may at times be outdated, young individuals often rely on self-directed research, financial influencers, and online articles for financial decision-making.⁴ However even though the younger generations are immersed in the ongoing digital transformation and have access to innovative tools, their lack of formal financial education can leave them ill-prepared to make sound financial decisions.

There is an increase in engagement with digital banking, cryptocurrency investments, and the use of Al in academic and professional settings representing a shift in financial behavior. Digital payment technologies, such as mobile and contactless payments, offer convenience and efficiency, but the same increased convenience can also lead to adverse habits such as overspending. Such habits can result in financial mismanagement, and difficulties in maintaining savings buffers. However, targeted education, focusing on the appropriate and safe use of such products, despite their inherent risks, can offer opportunities that improve financial inclusion and independence.

⁴ Lusardi A, Messy F-A. The importance of financial literacy and its impact on financial wellbeing. *Journal of Financial Literacy and Wellbeing*. 2023;1(1):1-11. doi:10.1017/flw.2023.8 | The importance of financial literacy and its impact on financial wellbeing | Journal of Financial Literacy and Wellbeing | Cambridge Core

The generational shift is already evident at the workplace, which indicates that rapid intervention through educational initiatives is required. While the financial literacy throughout all demographics is concerning, recent polls show that in the workplace, 88% of Generation Z (Gen Z) employees are adopting innovative tools such as Al and specifically ChatGPT, to complete tasks more efficiently and overcoming "tasks paralysis". Research indicates that Gen Z's comprehension of Al has more than doubled over the past year, surpassing that of Millennials, Generation X, and Baby Boomers.

These numbers indicate that a new reality is settling into the workplace, driven by the younger generations' enhanced technological capabilities, triggering what is known as reverse mentoring. This rapid adoption of Al is reshaping the workplace dynamics, leading to reverse mentoring scenarios where the younger employees guide the more experienced colleagues in technological use. This raises the question of how to upskill those not raised amid this transformative industrial revolution. In the financial sector, where risk aversion is prominent, this obstacle is even more acute. When implementing such systems, it's crucial to consider the substantial portion of the workforce needing training on both the benefits and risks of these technologies. Effective and efficient utilization of these systems requires comprehensive education before deployment. Addressing these challenges proactively will help bridge the digital divide and ensure that all generations can adapt to and thrive in the ever-evolving technological sector, where new concepts are being introduced year after year.

02

Adapting to the Digital Transformation through Education and Training

As the digital economy evolves, the concepts of the agentic economy and blockchain have recently gained significant ground, reshaping how complex financial decisions are made. As autonomous Al agents are able to perform decision-making on behalf of their human counterparts, they have become an essential part of the financial services sector. Stock trading and financial advice are two critical tasks that are being effectively influenced by Al agents who surpass human capability in terms of processing large amounts of data and deriving an efficient way of interpreting it⁹.

The autonomy of these AI agents is enabled by blockchain, cryptocurrencies, and smart contracts, allowing transactions to take place in a decentralized and reliable manner. Blockchain technology's programmability allows AI agents to interact with each other, which eliminates the need for intermediaries when performing cross-border transactions and delivering fund management analysis¹⁰. The use of cryptocurrencies further refines this system

⁵ Shocking 88% of Gen Z uses Al to do their jobs for them: poll

⁶ Bridging The Generational Gap: Maximizing Productivity In The Modern Workforce | Wellable

⁷ Are Older Workers Ready for an Al Takeover at Work? Oxford Institute of Population Ageing

⁸ https://www.ibm.com/think/insights/ai-upskilling

^{9 &}quot;How Agentic Al Will Transform Financial Services" (World Economic Forum, November 27, 2024) https://www.weforum.org/stories/2024/12/agentic-ai-financial-services-autonomy-efficiency-and-inclusion/.

¹⁰ Tomer Niv, "Al Agents Economy: Why Crypto May Hold the Key to Fund Management" Forbes (November 8, 2024) https://www.

by enabling these AI agents to make payments to each other independently from the traditional banking system. For instance, AI agents are able to use smart contracts to exclude human presence from generating investment strategies and executing trading. This minimizes operational costs and in turn boosts efficiency given the fast decision-making conducted by AI¹¹.

Despite the substantial advancements in this space, the generational knowledge gap is still persistent. Financial services regulators are tasked with the critical responsibility of bridging the knowledge gap between the different demographics present in this sector. The fact that the younger generation are more equipped to understand Al agents and utilize blockchain technologies, introduces the greater probability that older generations are excluded from the benefits of newer technologies. This leaves less financially literate people to be more susceptible to fraudulent activity, and without the ability to maximize their investment opportunities.

Before promoting awareness on regulatory frameworks, regulators must educate consumers on the intricacies of the actual financial products that the regulations are built around. Living in an age of unlimited information, consequential understanding of it, remains inconsistent. There has never been another time in history where people across the globe had the luxury of unlimited information at their fingertips, yet many are still struggling to understand fundamental concepts such as the nature of taxation, how to read the fine print when embarking on an investment decision or if the latest crypto trend being pushed by finfluencers is legitimate or a scam.

Misinformation driven by the abundance of information has become the norm for everyday consumers. Scammers and fraudsters have elevated their game in influencing consumers, by investing in heavy marketing such as celebrity endorsements and legitimate-looking long-term investment deals, while regulators are finding themselves in a never-ending "arms-race" against them.

In order to make regulatory frameworks effective, closing the existing education gap is the only way to achieve long-term success. Once regulators and consumers enhance their knowledge of financial products, emphasis can be placed on the regulatory frameworks themselves. Consumers will then have the ability to better interpret regulatory frameworks to fully understand their scope and remit.

Continuous and effective education does not impact solely the consumer, it is crucial for institutions as well. As Al and digital systems become integral to financial services, both industry participants and regulators must prioritize workforce education. Investing in comprehensive training programs to ensure that employees and regulatory staff possess the skills necessary to navigate and supervise the complexities of a technologically advanced financial ecosystem.

The future of financial services, and all sectors in the economy, will be shaped not just by the technology we invent, but by the people we empower to use it responsibly. Education and comprehensive literacy will become the foundation of progress in a world where the industrial revolution is constant. The institutions that will thrive are those who invest not only in innovation but also in inclusion, ensuring that no consumer or employee is left behind in the Age of Artificial Intelligence.

 $for bes. com/sites/tomerniv/2024/11/07/ai-agents-economy-why-crypto-may-hold-the-key-to-fund-management/\#: \sim :text=As\%20 the\%20 potential\%20 of\%20 autonomous, limitations\%20 of\%20 traditional\%20 finance\%20 systems. >.$

¹¹ Ben Lilly, "The Agentic Economy Goes Permissionless" (Brownstone Research, November 7, 2024) https://www.brownstoneresearch.com/bleeding-edge/the-agentic-economy-goes-permissionless/.