

Leveling the Playing Field: Tackling Unfair Contractual Capacity Discrepancies in Artificial Intelligence-driven B2C Financial Transactions

Aziz Yassin Aziz

Law Department, Faculty of Law, Department of Law, Soran University

ABSTRACT

Artificial Intelligence and other digital technologies have been integrated into various industries, impacting consumer rights in Business to Consumer (B2C) transactions. While these technologies have the potential to revolutionize economies and financial transactions, safeguards must be in place to minimize the risks they pose to consumers' interests. This research considers whether existing regulations protect consumers in cases of B2C unfair practices that could impede their ability to seek justice. The study will analyze critical problems associated with artificial intelligence systems in B2C transactions and financial markets. The analytical comparative method used in this study will reveal various biases and injustices that impact consumer rights and the current legal approach to consumer protection is found to be deficient, and modernizing regulations and promoting transparency is necessary to protect consumer rights. artificial intelligence

KEY WORDS: artificial intelligence, consumer rights, unfair practices, transparency, explainability, financial markets.

1.

The fourth industrial revolution, driven by artificial intelligence systems (Nersessian, Mancha, 2020, 57), has put consumers at the forefront of digitized financial markets and e-commerce platforms. These markets offer consumers a vast array of goods and diverse services, including healthcare, life insurance, banking services, risk management, trading, advisory, and asset management (Kerrigan, 2022, 271-272 & Barfield, xix-53). Financial institutions and cross-border digitalized markets have also become fascinated by the potential of artificial intelligence and have started exploring ways to integrate machine learning into their businesses to maximize their economic interests (Magnuson, 2020, 339). However, contractual capacity discrepancy and asymmetric information is one of the significant risks associated with the deployment of artificial intelligence (1), which undermines the role of consumer law in financial transactions and creates additional problems for consumers as the weaker party in these transactions. The challenges faced by consumers in their dealings with business operators are multi-dimensional, but this research focuses particularly on the contractual difficulties and information asymmetry that pose a

Introduction

threat to consumers' right to access justice. In the era of artificial intelligence dominance, one of the most disruptive challenges is its ability to magnify the effects of targeting consumers through sophisticated use of information and monetization of consumer data. This is particularly the case when machine learning algorithms rely on identifying patterns in historical data, as these techniques tend to reinforce existing biases in the data when dealing with potential consumers (Magnuson, 2020, 339). Additionally, as consumers navigate the digital world, they are constantly exposed to profiling data and personalization of their information, which is almost inevitable. However, accurate information about the nature of products and the benchmarks used to tailor services to maximize financial benefits through attracting consumers becomes increasingly unclear and opaque.

In the context of Business to Consumer (B2C) transactions and financial markets (2), contractual capacity discrepancies or asymmetric information will likely generate several unfair practices and prejudices that confine consumers capacity in the case of contracting and involvement in daily transactions with

gigantic enterprises. These practices are often linked to a lack of equilibrium between the two parties involved in the agreement, with regards to the requisite amount of information required to legally bind both parties. This is especially pertinent given that typical consumers may not peruse or be able to negotiate all of the stipulations outlined in a contract (Shmuel, 2008, 724). As previous studies have demonstrated, a significant number of consumers not only fail to peruse understanding financial contracts but also experience difficulties comprehending them even if they do (Joasia & Junuzovic, 2019, 3). According to the European Commission's report (hereafter, the Commission) on the vulnerability of consumers in the European Union, numerous consumers are vulnerable in the financial sector, including individuals with ability to figure out sophisticated systems in other domains (European Commission, 2019).

This situation is attributable to various factors, including complex financial information processing, limited financial literacy, and inadequate experience with procuring financial products (Joasia & Junuzovic, 2019,3). In such instances, businesses will be empowered to invest in the limited powers and expertise of individuals and take advantage of consumers lack of sufficient knowledge about the exhibited products or bargaining power to negotiate fair terms in their contracts. Also, misrepresentation is a further possibility wherewith giant companies will likely develop misleading techniques and invest in false information to induce consumers into entering into contracts. This would often lead to inserting unconscionable terms by businesses into their transactions where they include terms in their contracts that are unreasonably favorable to themselves and oppressive to consumers. From this perspective, it is crucial for consumers to understand the rights that they are entitled to when entering into contractual agreements with businesses. This includes the right to fair and transparent terms, protection from

exploitation and misrepresentation, and the ability to make informed decisions. However, without full transparency it is almost impossible for law to regulate all aspects of artificial intelligence, nevertheless the literature indicates that achieving transparency is challenging, for instance machine learning techniques will be transparent if the person who designed them can explain how it works. This includes how it learns from data to make predictions and how it is structured. Transparency can refer to the model itself, how it was designed, and the specific algorithm used. However, expertise believe that it is unlikely for a machine learning method to be completely transparent in every aspect, but some parts can be more transparent than others. (Roscher, 2020, 42201).

Accordingly, by using an analytical comparative method this study is comprised of five major sections, in addition to a conclusion. The first section will discuss the role of law in relation to the dominance of artificial intelligence, while the second section will provide a brief history of consumer rights. The third section is intended to explore the issue of 'marketing in the dark,' which explains how asymmetric information impacts consumer transactions. In the following section, contractual challenges resulting from the integration of artificial intelligence will be examined. Lastly, this research aims to develop a strategy that may mitigate the negative effects of aggressive aspects of artificial intelligence deployments by big companies in the market, by proposing a triple solution for consumer protection in business-to-consumer transactions.

2. The Legal Conundrum of Artificial Intelligence Dominance: A Normative and Realistic Approach

Artificial intelligence and other emerging digital technologies, such as the Internet of Things (3) have tremendous potential to transform the nature and quality of products, services, and even entire financial sectors with respect to consumers' rights and activities (4). The rapid deployment of artificial intelligence

applications in various consumer domains creates new opportunities and challenges for legal reasoning. At first glance, all current and future advancements in artificial intelligence are expected to bring more amenities and safety to consumers' financial environment. This world will be characterized by high productivity, convenience, and equal opportunities for all manufacturers to reach their customers without any time or geographical restrictions (Barfield, xix & 53). However, the unique powers of artificial intelligence systems and their complexly enhanced potentials will inevitably lead to corresponding challenges for consumers, and may even exacerbate existing risks in unpredictable ways. From this perspective, before entering into a discussion on the legal rights of consumers in B2C transactions, it is appropriate to examine, from a philosophical viewpoint, the question of how and if the law can counteract the negative consequences that may result from the widespread adoption of artificial intelligence in all sectors of society, particularly in regards to the private and public activities of consumers which are heavily impacted by these advancements.

The concept of legal normative rules has been present throughout history as a means to address and resolve challenges posed by various factors such as politics, society, economics, science, and technology progresses. In this context, Kelsen's perspective is that the ultimate function of law is to regulate human behavior and the social reality through the sphere of 'Ought'. This principle entails that certain acts should be deemed legal or illegal. The legal order, as a result, is a normative order of human behavior, regulating and guiding human activities (Kelsen, 1967, 4). In the external world, this notion supports the idea that legal normative rules can be used to counteract the challenges posed by technological advancements and the integration of artificial intelligence into society. In this sense, law can be seen as a tool to regulate and manage the impact of technological progress on society, protecting individuals

and preserving social order. In regards to the current situation, it is the responsibility of laws and lawmakers to address any difficulties that may arise from advancements in both the economy and technology such as business-to-consumer transactions that have numerous unresolved issues. This includes making sure that new technological advancements do not become integrated into society without first being thoroughly evaluated for any legal and moral consequences by the businesses involved.

However, this understanding of law should not be viewed solely through a pure positivist lens, as Kelsen would argue (Meyerson, 2007,6). Instead, the normativity in the current context must be understood as the 'epistemological' role of law. In the sense that certain actions should be encouraged and regulated, while others should be restricted or even prohibited, especially when they are related to human behavior and lifestyles, since law must connect the physical [what is] and the virtual [what ought to be] realms, just as current academic research suggests that law should not regulate the way of life in terms of external reality, but the interrelated intellectual space would have to be taken into consideration as well (Durante, 2010, 21).

On the flip side, it seems that the above understanding of the law is more of an idealistic view than being realistic, lacking a grasp of the actual events taking place in society. The reality is that the law has seen a considerable decline in its authority to regulate the daily lives of individuals and the operations of commercial entities. As technology continues to advance and shape our world, there is a growing concern that future cataclysmic events could arise as a result. To address this issue and prevent, or at least delay, such disasters, it is vital for humanity to take a step back and critically examine its modern legacy. By doing so, we can hope to find a way to mitigate the negative consequences of technological advancements and preserve a stable and secure future, because as Leonhard intriguingly

explains, humanity is currently in a state where we are about halfway through the first half of the century and we are witnessing a significant shift in technology evolution. This is a crucial turning point, where change will not only be a combination of exponential growth but will also become inevitable and irreversible (Leonhard, 2016, iii). However, it is crucial for concerning authorities and enterprises to guarantee that such unavoidable alterations and transformative shift result in progress for society rather than disaster.

A clear illustration of this pressing issue can be seen in the case of consumer rights. Literature suggests that the role of the law in protecting these rights has been disregarded, as many of them are already beyond the reach of the law. The following discussions will shed light on the unfortunate circumstances faced by consumers in their dealings with large corporations. This serves as a vivid example of the current state of law's inadequacy in safeguarding the rights of individuals. The situation is dire and calls for immediate attention and action to address the imbalance between consumers and transnational companies using artificial intelligence in their daily interaction with people. From a research perspective, this problem is closely tied to the extremist scientific ideology known as scientism (5). This ideology tends to disregard legal issues in the face of constant scientific breakthroughs. The challenges posed by artificial intelligence systems to consumer rights are a direct result of the gap and disconnection between law and science, which hinders the law's ability to fulfill its epistemological role. Therefore, in the context of governing artificial intelligence systems, it is essential to understand that law should not be considered subservient to scientific and technological advancements. Instead, the virtual reality of the law must be taken into serious consideration. This shift in perspective is crucial for ensuring that the law can effectively regulate and protect the rights of individuals in the age of artificial intelligence (Durante, 2010, 21).

On the other hand, in researchers point of view, the international community must urgently undertake a comprehensive re-examination of its modern legacy to effectively address the aggressive and disruptive features of artificial intelligence and other emerging technologies. The rapid evolution and exponential growth of technology in recent years have brought about significant changes in the way we live, work, and interact with each other. However, the law, which is designed to regulate human behavior and protect human rights, has been struggling to keep up with the pace of technological advancements. This is due to the fact that scientific discoveries often fail to consider the immoral and detrimental implications that emerge when these technologies encounter society and marketplaces. Furthermore, the pursuit of the highest rate of wealth and prosperity has become the final and ultimate objective of enterprises that produce and employ such technologies. As a result, these entities tend to overlook the potential negative impacts of their innovations and prioritize their financial gains over the well-being of society and the environment. This creates a dangerous situation where technology can be used for malicious purposes, such as financial fraud and deceiving consumers, leading to widespread economic and social instability. Therefore, it is crucial that humanity reconsiders its understanding of the law and regulations that govern technology. Even certain neutral activities must be restricted to prevent the hazards that arise from artificial intelligence in all fields, including financial markets. Burstiness is a characteristic of technology that makes it highly unpredictable and capable of generating sudden and unexpected changes in society and the economy. As such, we must develop a legal framework that is flexible and adaptable enough to cope with the fast-paced and unpredictable nature of technological advancements. This will require collaboration and cooperation among different stakeholders, including governments, businesses, and civil society, to ensure that

technology is developed and used in a responsible and ethical manner.

To effectively manage the advancements and downsides of technology, the researcher holds the view that it is crucial for humanity to embrace what Immanuel Kant referred to as 'inner legislation'. This means prioritizing the protection of human and consumer rights in the deployment of artificial intelligence, as it's challenging for lawmakers to keep up with the pace of emerging technologies and businesses without a strong ethical foundation. Therefore, in order to succeed, mankind must rigorously and honestly compare ourselves with the moral law, recognizing its sanctity and rigidity, and integrate ethics with scientific progress. In this sense Kant reiterates that 'when we realize that we are capable of this inner legislation, and the (natural) man feels himself compelled to reverence the (moral) man in his own person. By virtue of this worth we are not for sale at any price and possess an inalienable dignity which instills in us reverence for ourselves' (Seidler, 2009, 25). To apply this understanding to the issue of modern technological breakthroughs, the idea of moral autonomy requires us to recognize our ability to make moral decisions. This recognition leads to an increased sense of self-respect and self-worth, and a greater appreciation for our moral nature. This is in contrast to contemporary societies where many consumers are compelled out of their will to prioritize fulfilling their basic daily needs over moral concerns. As a result, they often become a tool for businesses to expand and increase their wealth. This is why Kant's call to oppose this form of mechanization is significant. When he states that 'man is not for sale at any price,' he suggests that our moral worth is inherent and cannot be bought or sold. This is further emphasized by the phrase 'inalienable dignity' which reinforces the idea that external forces cannot compromise our moral worth. Be that as it may, in order to participate in the ongoing legal debate, I will provide a concise comparative summary of

the evolution of consumer rights.

3. A Walk Through Time: Tracing the Development of Consumer Rights

In most countries, consumer protection is a major concern, and a legal framework surrounding B2C transactions is designed to address this issue within the provisions of consumer law, yet this does not guarantee the entire consumer rights. For instance, contractual capacity discrepancies arise when there is an imbalance associated with mental and intellectual capacities, such as a mismatch between the parties involved in a transaction in terms of their comprehension of the past, present, and future reality. This may occur, for instance, when a consumer lacks the ability to fully understand the terms of a contract or its future implications or previous state, mainly due to age, mental capacity, or other reasons. The legal framework that protects consumer rights, including contractual capacity discrepancies associated with engaging and implementing of B2C transactions typically includes consumer protection laws and regulations, which establish the minimum requirements for fair and transparent corporate practices that govern the relationship between consumers and businesses. These laws may also prohibit the use of unjust terms in consumer contracts and establish dispute resolution mechanisms for the resolution of disputes that may arise between consumers and enterprises.

Over the past several decades, the growth of financial markets and technological advancements have brought new challenges and risks, leading to increased scrutiny of their impact on consumers. This situation has driven the need for an international and national response to protect consumers' rights in digitalized markets consumers (Niziol, 2022, 36-47). Financial markets (6), utilize artificial intelligence deployments to facilitate transactions and increase economic interests by bringing buyers and traders together. The economic contribution of artificial intelligence in the global financial market is

substantial, with estimates projecting annual benefits ranging from \$3.5-\$5.8 trillion across multiple industries and business functions. This trajectory is expected to continue, with predictions that artificial intelligence will contribute to the growth of the global economy by \$15.7 trillion (14%) by 2030 due to the efficiencies and innovations brought about by widespread deployments of the technology. However, the increased complexity and sophistication of financial markets and technological advancements have raised concerns about the potential consequences for consumers. As a result, there is a growing need to understand and address the impact of artificial intelligence on consumers in digitalized markets. (Nersessian & Mancha, 2020, 57, 58).

Naturally, consumers of financial markets often seek out services in consumer communities, known as financial markets (7), in an effort to efficiently engage in 'mutually beneficial intertemporal exchanges' (Bradfield, 2007, 5). These markets are rapidly growing and use artificial intelligence systems, such as neural networks, to function in the modern economy (Ferran, Goodhart, 2001, 212). These advancements in financial markets can result in adverse consequences, including increased exposure to cyberattacks, a greater need for information protection, increased opacity, information asymmetry, limited predictability, and attribution of liability (Niziol, 2020, 4140), as well as the potential for algorithmic biases (Bradfield, 2007, 182). However, despite these serious issues, the regulations of financial markets and major consumer laws have largely overlooked them. It is crucial that these markets be subject to a more robust legal framework that addresses these challenges and protects consumers. Given that, in the context of business-to-consumer (B2C) transactions, a majority of unfair practices that arise from discrepancies in contractual capacity are associated with these new markets which are constantly changing the way businesses interact with consumers.

The difficulties posed by these advancements have

prompted developed nations to take decisive steps to address the potential threat of artificial intelligence to consumer rights. In the early 1960s, the attitude towards consumer rights underwent a dramatic change and began to focus on protecting the moral and economic interests of consumers. This shift garnered widespread political attention in EU countries and international organizations. The U.S president John F. Kennedy's historic speech to Congress in 1962 marked the beginning of the consumer rights movement and was followed by the Consumer Bill of Rights, which outlined various categories of consumer rights, including 'the right to safety, the right to be informed, the right to choose, the right to be heard, the right education, and the right to redress' (8). Over time, the consumer rights movement gained traction across the Atlantic and, starting in the 1970s, many European countries began to implement and promote consumer protection regulations (9), especially in response to the Paris Summit of October 1970 EU Consumer Law and Human Rights, (Benöhr, 2013, 18-19).

Nearly two decades later, the EU pushed consumer rights forward in a more concrete manner after the Single European Act (SEA) became effective in 1987, where Article 100, clearly highlighted important fundamental consumer rights. Furthermore, in 1993, the Treaty of Maastricht entered into force and consumer interests occupied a strategic position in the EU policies, where Article 3(s) of the European Community (EC) treaty provided that 'a contribution to the strengthening of consumer protection' should be part of the ultimate objectives of the Community, and it rendered the European Community with an official competence to exercise legislation on consumer issues (10). On the international scale, the Assembly of the United Nations likewise adopted Resolution 39/248 on 9 April 1985, through which the consumer protection as a novel legal conception was celebrated by reaffirming Kennedy's Consumer Bill of Rights (11).

However, the lack of a strong transparency policy and stability in certain markets led to serious financial hardship for consumers in the aftermath of the financial crisis of 2008-2009. Since then, consumer rights have undergone significant reassessments, and the need for 'stronger and more consistent oversight to ensure that the markets for consumer financial products and services are fair and transparent, serving the welfare of consumers' has been recognized. In response, the Consumer Financial Protection Bureau was established in America to keep pace with developments and reduce the likelihood of such a crisis (Corday, 2015, 307).

This awakening of nations coincided with the unprecedented emergence of modern technologies, leading to the expansion of digitalized financial markets and requiring an upgrade of consumer law instruments to play a vital role in the European integration process. In this context, the European Charter of Fundamental Rights (ECFR) (12), which took effect in 2009, mandated that the Union's policies "shall ensure a high level of consumer protection," recognizing that consumer rights are considered fundamental rights (Article 38). The Treaty on the Functioning of the European Union (TFEU) similarly upholds the high level of protection assigned to consumer rights by ensuring their economic interests (Article 12, 169/1). (13). One of the key directives in the field of financial rights is Directive 2004/39/EC, adopted by the EU to protect consumers and promote fairness, transparency, and access to justice in integrated financial markets, as well as to safeguard 'market integrity by establishing harmonized requirements for the activities of authorized intermediaries.' (Chen, 2018, 232).

Aside from the European Union, at the national level, Italy is among the leading countries, such as France and Luxembourg (Poillot, 2018, 125 & Rumi, Ferraro, 2020,91), in codifying consumer rights into a comprehensive and integrated legislation through the Italian Codice del Consumo (14). This legislation has

become the main uniform legal framework for consumer protection in the country, aimed at providing coherence, transparency, and accessibility to consumer rights in the era of an algorithmically systematized economy. In 2005, almost all existing legislation and provisions from 21 legal measures, both within and outside the Civil Code, were consolidated under the Italian Consumer Code (Rumi, Ferraro, 2020, 91). The Italian Consumers' Code aims to harmonize regulations regarding purchases and consumption, in accordance with the general principles of the EU, to ensure a high level of protection for consumers in all contractual obligations. There are still various complementary 'provisions for sector-specific consumer protection' such as telecommunications, energy and gas, and data protection (Micklitz, Saumier, 2017, 3). In 2011, the Code was expanded to include instruments to protect micro-enterprises (15) against prejudicial business transactions by traders. Additionally, the Law of March 24, 2012, No. 27, which converted the Law Decree of January 24, 2012, No. 1 with amendments, further expanded the powers of the Italian Competition Authority (ICA) to protect 'consumer rights against unfair terms in contracts' (Pailli, Poncibo, 2017, 3 & Micklitz, Geneviève, 2018, 350).

Despite the numerous advancements in consumer protection laws and the introduction of several instruments, there are still serious challenges facing consumer rights. Some aspects of consumer protection may require further attention from legislators, especially in the context of artificial financial intelligence distributions. One of the major challenges is the issue of unequal contractual capacity, asymmetric information, and a lack of transparency policy. If these issues are not addressed, the use of automated systems may lead to the commodification of human consumers. Thus, it may be necessary to reconsider current laws.

In the past, consumer rights in Iraq were only governed by the general provisions outlined in its Civil Code No. 40 of 1951. This legal framework provided minimal

protection for consumers and did not address the specific needs and challenges facing consumers in the marketplace. However, in response to the growing importance of consumer rights and the impact of international developments, the Iraqi parliament enacted the Consumer Protection Law No. 1 of 2010. This law aimed to provide a more comprehensive framework for protecting consumer rights, however, it still falls short in providing legal protection for consumers, particularly in light of the rapid developments in industry and technology. The law needs to be updated and expanded to address the challenges posed by these advancements and ensure that consumers are protected in the ever-evolving marketplace. The Consumer Law of 2010, was later adopted by the Kurdistan Regional Parliament in accordance with Law No. 9, of the same year to address new challenges facing the protection of consumer rights. This adoption showed the effort of the Kurdistan Parliament to ensure that consumer rights are protected and upheld in the region. Nevertheless, it would have been more beneficial to enact a more comprehensive law that thoroughly covers all aspects of consumer rights in the era of artificial intelligence predominance. Given that literature indicates that artificial intelligence presents significant threats to fundamental consumer rights, not just in Europe but globally, and no legal system worldwide provides consumers with sufficient protection against the distribution practices of big tech companies (Ebers, Navas, 2020, 51). In relation to this, the Final Report of the ARTSY project highlighted the serious challenges faced by consumer rights in that have not been fully evaluated from a legal standpoint, (16) especially without a robust protection regime based on the epistemological rule of law, consumers' rights in the financial markets are likely to suffer from significant risks (17).

In line with the above discussions, subsequent discussions aim to further explore and highlight the specific dangers and prejudices that consumers may face

in this context as a means of illustrating the insufficiency of current laws and regulations. It may include examples of how machine learning techniques can be used to deceive consumers, the ethical implications of these practices, and potential solutions to mitigate the risks and ensure fair practices.

4. Hiding in Plain Sight: The Subtle Power of Asymmetric Information in Marketing

The principles of consumer law dictate that information given to customers should be easy for regular or average people to understand, both in terms of content and communication methods (Weatherill, 2005, 6-7, Benöhr, 2013, 13, Mathis, Tor, 2021, 89-91). However, this principle is currently being threatened and diminishing in today's industries as a result of growing information asymmetry. Akerlof's 1970 work on asymmetric information theory, focusing on the second-hand car market, is widely considered the most significant contribution to the field, where he contends that the knowledge gap between buyers and sellers would create adverse selection, and buyers prefer better cars at lower prices, leading to a market flooded with low-quality cars. The knowledge imbalance would mean to him that buyers were more likely to end up with low-quality cars at lower prices, resulting in adverse selection (Yakup, Kılınc, 2007, 3). In this connection, in B2C transactions the fundamental cause of most contractual discrepancies or issues typically stems from the uneven distribution of information between the parties involved; asymmetric information refers to a situation in which one party in a transaction possesses more or superior information compared to the other party. In the context of B2C transactions, this can occur when the seller has access to more information about the quality, quantity, or features of a product or service than the buyer. Lack of familiarity with contractual terms is one type of asymmetric information, where the contract drafter (seller) knows more about the terms than the contract signer or consumer (Shmuel, 2008, 733).

Initially, asymmetric information is an inherent feature of almost all, if not all, technological and conventional markets. However, until recent times, this did not significantly hinder consumers from satisfying their primary needs. In the era of artificial intelligence dominance, this information imbalance not only exacerbates situations but also undermines the efficacy of consumers' additional rights, setting the stage for widespread, perilous implications arising from artificial intelligence distributions. One of the most disruptive challenges of artificial intelligence is its omnipotent capacity to magnify the effects of targeting consumers through sophisticated information and data. In particular, when machine learning algorithms techniques heavily rely on "identifying patterns in historical data," the use of these techniques tends to perpetuate the status quo in the data when dealing with possible customers (Magnuson, 2020, 339). Furthermore, throughout their digitized experiences and activities, consumers constantly encounter profiling data and personalization of their information, along with the structure of environments they navigate, which is almost indispensable. Meanwhile, accurate information about the nature of products and the benchmarks according to which services are tailored to maximize financial benefits through consumer attraction become more ambiguous and opaquer (Magnuson, 2020, 355). This digitized asymmetry not only results in the problem of adverse selection, where consumers are unable to accurately evaluate the qualitative nature of provided services and products due to inadequate information, but also frustrates consumers' access to justice and pursuit of fairness in case of being subject to prejudices. When consumers are unable to make informed purchasing decisions, business operators can easily evade liability attribution concerns. Under this information, service suppliers' restrictive control extends to both the information asymmetry presented opaquely to consumers and the entire structure of the financial

systems. Consequently, it is likely to manipulate and badly influence consumers' weaknesses and temperaments while making purchasing decisions mainly due to the lack of required information (Jablonowska, 2018, 23).

Further, artificial intelligence technologies are to be challenging consumers' rights of choice based on the information given, while making financial arrangements. In majority of cases, not a single disclosure sign is a mandatory proceeding 'on the extent to which the offered view of the market... is filtered through algorithmic goggles' in a fathomable pattern (BEUC, 2022, 4), which will prevent consumers from comprehending the complex architected content and the data involved in transactions. Thus, when consumers are prompted to express their agreement to the critical conditions, they are 'typically feigning an informed decision on the basis of a policy disclosure that is impossible to read' (BEUC, 2022, 4), and henceforth the businesses will smoothly be enabled to monopolize the whole architecture of the afforded services. Under this information asymmetry, service suppliers' restrictive control will extend to both the operated information which is often opaquely presented to consumers and the entire structure of the financial systems. Moreover, artificial intelligence is at large employed for currying out, among other functions, 'translations, content screening (to assess its...compliance with the platform's rules..., as well as powering communication via chatbots' (Jablonowska, 2018, 23). In return, it will likely manipulate and badly influence consumers' weaknesses and temper while making purchasing decisions due mainly to lack of the required information.

Accordingly, far from the monitoring role of the law and legal restrictions, in the long run, this asymmetric information results in devastating effects on consumer trust in financial and digitalized markets and democratic societies. This profoundly progressive imbalance in financial markets between the limited capacities of

consumers and the data-empowered traders will necessarily manipulate consumers and frustrate their essential methods of accessing justice. Despite international and domestic efforts to celebrate consumer rights, neither continental laws nor national regulations have clear and specific provisions to contain the adverse consequences of asymmetric information and other related illegal financial activities, compared to regulations of conventional markets and commerce instruments. This might render the enforcement of law and access to justice in the digital environment very difficult without setting up a comprehensible revision of the laws.

The lack of face-to-face interaction is a characteristic of B2C transactions that sets it apart from traditional commercial practices. In traditional sales, consumers visit physical stores or places of service to purchase goods and services, which would provide them with a level of assurance that the business is operating and will remain so for a certain period. This physical presence also would allow consumers to see, touch, and even try products, and to consult with sales staff if they have questions. In contrast, in B2C artificial intelligence-based transactions like e-commerce activities consumers lack these physical elements, which can make them vulnerable and even powerless in terms of assessing the exhibited products or services due to the fact that the businesses may not be legally behaving and the products may not meet their expectations. In the majority of cases, no disclosure is required to inform consumers about the extent to which the market view offered to them is filtered through algorithms in a fathomable pattern (BEUC, 2022, 4).

Misleading Information is an additional threat to consumer rights in B2C transactions which would have to be reduced through the adoption of transparency principle. Consumers intend to involve in B2C transactions in view they believe that acquiring sufficient information will be possible before making any

discussions about the products and services they are purchasing from businesses through their interaction with artificial intelligence technologies; they consider the information provided by businesses to be accurate and reflective of reality and the external or advertised aspects of the given products which will enable them to easily make informed decisions far from being misled. However, in the virtual world of financial markets or e-commerce transactions this expectation will not easily be realized; companies that try to expand their wealth utilize unique tricks to deceive consumers and even block off legal complainants. This lack of transparency prevents consumers from understanding the complex content and data involved in transactions. Consequently, when consumers are asked to agree to critical conditions, they are often making an uninformed decision based on a disclosure that is difficult to understand. This enables businesses to monopolize the entire architecture of the services offered more easily (BEUC, 2022, 4).

The rapid growth and proliferation of sophisticated artificial intelligence systems will create more opportunities for big tech companies to manipulate consumers' emotions and take advantage of their vulnerabilities (18). These companies may develop complex policies to constantly inspect and monitor individuals' race, gender, and socio-psychological circumstances. The feeling of being tracked online by service providers makes it difficult for consumers to fully understand the extent of data ecosystem's influence on their lives, even though they are aware of the use of algorithmic techniques to shape their psychology and behavior. Notwithstanding, current regulations may not sufficiently address this issue. In addition, financial institutions may attempt to influence consumers through the use of sophisticated self-learning algorithms that manipulate individuals through microtargeting. A strong legal protection system is necessary to protect consumers from such practices (Martin, Navas, 2020, 70). Algorithms, such as chatbots, have the potential to

surveil and discriminate against the content of services provided. They can constantly reproduce uncensored productions that easily influence the commitments and faithfulness of users by processing the linguistic input of consumers and generating intelligent communication content whose ultimate objectives remain ambiguous to consumers (Wagner, 2021, 101). This can lead to the twisting and falsification of the content available to consumers, even beyond the reach of national law. In digital markets that are based on artificial intelligence distributions, businesses have enough techniques to break into the innermost world of individuals (19). By activating smart-designed channels and directing algorithmic capabilities towards the inner circumstances of consumers, big tech companies can penetrate into the inner habits and psychological states of consumers and the energy they are willing to sacrifice to satisfy their social and other needs. Consumers' daily movements will be subject to systematically intensified surveillance that will be used to gather data as 'free raw material for translation into behavioral data...as a proprietary behavioral surplus, fed into advanced manufacturing processes known as 'machine intelligence,' and fabricated into prediction products that anticipate what you will do now, soon, and later' (Zuboff, 2019, 14). In the words of Zuboff, consumers in such situations would not understand whether they are 'going to be working for a smart machine, or [they] have smart people around the machine?' who would bankroll their enterprises regardless of ethical and legal norms (Zuboff, 2019, 10).

Similarly, the widespread practice of 'retail selling' in consumer society will impact consumers through the exhibition of related products (20). Businesses often use sophisticated artificial intelligence systems to manipulate the psychology of potential clients or consumers, by collecting millions of digitized facts related to their desires and purchasing habits. Personalization of pre-verified data about customers facilitates distracting them

from the true nature of the products on display. As a result, the 'boundary between (personalized) retail offers and advertising is becoming more blurred than ever before'. (Jablonowska, 2018, 27). Also, retailers can easily exploit the weaknesses that have been identified through algorithmic techniques, leading to the possibility of discrimination and privacy violations (21). This significant issue must be addressed within consumer law based on relevant domestic constitutional principles. Likewise, artificial intelligence systems are playing a leading role in developing insurance systems by preventing fraud attempts and combating cyberattacks (Arslanian, Fischer, 2019, 187-189) (22), often through a contractual relationship. However, the intentional contributions of artificial intelligence also carry the risk of lowering the quality of information shared with consumers within the insurance contract scope, and potentially absolving liability for any misleading advice provided through the use of fallacious or flawed data (Jablonowska, 2018, 21). This issue may be difficult to address due to the highly technical nature of artificial intelligence (23). This legal vacuum can be especially challenging in countries where the law provides minimal protections for consumers. Furthermore, the impressive capabilities of autonomous machine services, such as drones and self-driving cars, come with serious dangers and risks that could disrupt the way in which the law protects consumers. Autonomous vehicles have been the subject of extensive investigations from various perspectives (24). However, this research focuses on the legal vacuum related to the risks of hacking, discrimination, bias, and liability that arise from the interconnection of neural networks. It is challenging to comprehend the results of such interconnections, especially in the aftermath of catastrophic accidents.

Keep moving forward, according to constitutional provisions (25), the right to healthcare, similar to privacy and data protection, must be safeguarded and kept far from being objectified as a product. Although healthcare

beneficiaries are not consumers in the conventional sense but patients, the relationship between consumers and healthcare providers appears to suffer from the commodification of the right if it is not protected against artificial intelligence systems. The 'social and market practice do not seem to be bothered' by the objectification of consumers' healthcare, which has become 'an enormous sector of the contemporary economy' (Jablonowska, 2018, 31). Therefore, special consideration should be given to protecting consumers' healthcare in the face of possible artificial intelligence applications that are already in progress. Finally, with regards to the law protecting consumers, there is a significant risk that liability may be compromised without appropriate attention. For example, there is a possibility that artificial intelligence systems could make medical diagnostic errors that mislead patients and result in injury or death. In such situations, who would be held responsible? It is possible that consumers, faced with the incomprehensible complexities and substantial autonomy of artificial intelligence systems, may be left without recourse when transactions go awry and contravene regulatory requirements. Another important issue to consider is that consumers often face difficulties accessing justice when they experience unfair treatment. This is due to the high costs associated with pursuing legal action and navigating the complex legal system. As a result, individuals may struggle to find effective avenues for seeking their rights before a court of law. In addition, government agencies may not be responsive to individual complaints against companies, leaving consumers with limited options for recourse. Even if consumers do pursue legal action, the high costs associated with litigation can make it prohibitively expensive for many to seek justice.

5. Untangling the Knots: Navigating Contractual Challenges in Artificial Intelligence Utilization

The aim of this section is clarifying the contractual difficulties that arise when utilizing artificial intelligence techniques. First, there are problematic issues facing consumers in the preceding actual contracting stage. In general, financial markets contracting involves a demand for goods or services, where the consumer is domiciled in a distance other than the location from which the goods or services are ordered, which requires conducting comprehensive communications and displaying the goods or nature of services. In this connection, three main problematic issues challenge consumers. In the first place, there is the consumer's right in B2C contracts to negotiate with the traders about the details of items and services but in many situations, consumers will be given the opportunity only to press on 'continue' and 'accept' icons in click-wrap and browse-wrap agreements, wherewith an apparent asymmetry obliges the weaker party (consumer) to compromise his rights. Also, the lack of an unmistakable differentiation between an 'offer' and an 'invitation to treat' in certain contracts brings about real confusions for inexperienced consumers irrespective of burdensome consequences in particular when asymmetric information predominates. Finally, in financial artificial intelligence-based markets negotiating the contract terms and conditions is not always approachable due to technical terminologies and consumers lack of making connections between his historical data and future trends (26).

Further, the stage of concluding contracts between businesses and consumers is crucial, but it is also the point where various unfair practices may arise. These practices are based on the 'offer' made to the consumer, and the subsequent 'acceptance' by them, which can take various forms depending on the nature of the transaction and the method of contracting (27). At this stage, a range of problems can be encountered by consumers, from difficulties in identifying and verifying the identity of B2C contractors to challenges around the

deployment of artificial intelligence systems to facilitate the transaction. One major problem faced by consumers is the tricky and complicated process of recognizing and verifying the identity of B2C contractors, which is often made even more challenging due to the complex nature of such transactions that are implemented partially by artificial intelligence applications. This challenge is further compounded by the deployment of artificial intelligence systems as intermediaries and facilitators between the two parties, creating difficulties in determining the direct parties to the contract, attribution of liability, and characterization of the third party. However, the final challenge in this stage of contracting is related to the issue of acceptability of the signature as evidence and guarantees required to keep the information from being manipulated, and whether it is restorable for probative purposes and with the same validity (Benöhr, 2013, 156, ff). Here the use of deception, as a defect of will, is likely to be done, which means one of the contractors deliberately uses tricks, such as mentioning a fraudulent act to induce the other party, who is the wronged, to make a mistake that would push them to contract with him (Rasool, 2015, 54). The principle in Iraqi civil law is that in contracts involving trusts, it is important to avoid ambiguity and clearly state any necessary information to prevent fraudulent misrepresentation during concluding the contract. For example, in contracts related to resale with profit, cost-sharing, discounts, or losses, it is crucial to provide adequate clarification to avoid any misleading or cheating behavior (Art. 121/2). However, mere fraud does not prevent the contract from being valid, as long as it is not accompanied by deception that misleads the contractor and makes them enter into the contract under the impression that it is in their best interest, while in reality it is not (Rasool, 2015, 54).

Similarly, carrying out contractual obligations between businesses committed to delivering certain goods or performing specific services and consumers liable to pay

the price is not free from further problematic difficulties. The mutual obligation to transfer the items and receive services with the same quality and stipulations contained in the agreement might be affected by the possibility of failure in fulfilling the commitments consistently and in a correct manner. In this case, consumers need special protection due to their natural weaknesses compared to gigantic businesses. These challenges will multiply in the case of implementing commitments related to intangible goods, such as electronic programs, games, and intellectual property issues. To some degree, conventional rules of contract law and consumer law have the potential to administer such challenges; yet, the special nature of financial market transactions gives rise to technical and practical problems related to access to justice. In such cases, it is necessary to ensure that consumers are guaranteed the option to withdraw from contracts, even if it may be difficult. In France, this right protects against hasty contract signing that can result from advertising and promotional methods used to tempt and simplify. Such methods can influence consumers who lack experience with the product or service subject to the agreement or need to enter into a contract urgently (Rasool, 2015, 193). Under these conditions, consumers can modify or withdraw from the contract at their discretion within the specified time, even if the seller did not use fraudulent means. If a consumer withdraws from a contract, the seller must compensate for any resulting damage, except for violations or modifications of the contract beyond the agreement or the law (28).

The fourth category of challenges is interconnected with disputes arising from infringement of rights and inconsistent fulfillment of mutual commitments. In traditional contracts, applicable laws and judicial competence are relatively comprehensible and free from complexity (Benöhr, 2013, 165). However, as a result of the disappearance of geographical borders and transnational characteristics of financial market

transactions, it is difficult to identify which court should extend its jurisdiction to review such disputes and which legal regulations should be enforced where the location of the consumer's domicile is different from the businesses deploying artificial intelligence systems. The same problem is true with differences in nationalities and their belonging to distinctive jurisdictions with corresponding legal regimes and ideologies. Also, determining where the agreement would have been finalized, or where the mutual obligations would have been performed, is an additional problematic issue. In the majority of cases, consumers remain unaware of these ambiguous situations.

Taking refuge to imposing hidden fees is another implication of contractual capacity discrepancies in relation to B2C transactions. Hidden fees indicate to unsubstantial charges that remain unknowable by consumers. Although policy makers are increasingly attempting to introduce effective regulations and legal instruments to combat or even eliminate these draconian non-salient charges (Sumit and others, 2014, 240), but I think it is not an easy task that might be accomplished, because the very nature of artificial intelligence deployments surpasses the predictions and measurements of not only ordinary individuals, but also governments and the process of legislation as well. Additional charges such as processing fees, service fees, maintenance fees, or others may not be immediately visible to the consumer. This can lead the consumer to believe they are paying a lower price for a product or service, only to later discover the hidden fees. The utilization of non-salient charges seems to have a manipulative characteristic that misinforms consumers and hampers their capacity to thoroughly comprehend the whole value of a product or commodity. For instance, a business could advertise a discounted price for an item, although there may be additional expenses for licensing, marketing, or transportation which are only disclosed after the transaction (29).

Unilateral contract modification represents a further unfair practice that may affect consumers when they engage in B2C transactions; this refers to a situation where enterprises invent a complex system via artificial intelligence applications such as machine learning that have the capability to adjust the terms of an agreement without the consent of the client mostly as a result of asymmetric information between the involved parties. This means that the company can change the conditions of the contract without the client having any say in the matter (Rasool, 2015, 203-205). In such cases, the consumers would be left with only two options: they can either accept the transformational modifications approached by the company or they can terminate the contract altogether even if it generates adverse consequences. However, but respecting the principle of right to information and transparency can provide consumers with a high degree of protection, including the possibility of compensation. In this connection, the EU Directive 97/7/EC provides that if a consumer exercises their right of withdrawal, the supplier must reimburse them for any payments made, and the only charge that can be imposed on the consumer is for the direct cost of returning the goods, with reimbursement to be completed within 30 days at the latest (Art. 6/2). (30).

In summary, consumers face challenges in financial market contracting and artificial intelligence-based businesses, including power asymmetry, offer confusion, difficulty negotiating contracts, identity verification, fulfilling obligations, and disputes related to rights infringement, which may be complicated by jurisdictional issues. Hidden fees are a common practice in B2C transactions that may not be easily regulated due to their manipulative nature, while unilateral contract modification by companies using complex artificial intelligence systems can be unfair, but transparency and right to information can provide protection and compensation for consumers. Addressing these

challenges and establishing a fairer marketplace requires transparency, explainability, and clear legal provisions.

6. The Triumvirate of Consumer Protection in B2C Transactions

In the following discussions, I will attempt to present a viable legal solution that can protect consumers from unfair practices that may arise from business-to-consumer (B2C) transactions. To achieve this objective, I propose that we focus on three crucial factors: transparency, explainability, and accountability. These three factors are vital to minimize the risks that consumers face when entering into B2C contracts and dealing with financial markets (31).

It is obvious that B2C transactions are a common occurrence in our daily lives. It is necessary for consumers in the modern world to rely on businesses which are established to provide them with goods and services. Hence the duty to uphold the principle of transparency is a vital obligation for businesses in B2C contracts, such as sales or service agreements. The companies must provide the consumer with all necessary and comprehensive information about the product or service, including its legal and material status, essential features, potential difficulties and risks, pricing information, and any conditions related to contractual responsibilities or warranties. This obligation, as it is currently understood, was established by the French legal system through its interpretation of the parties' intent to enter into the contract, with the goal of offering the utmost level of protection to consumers (Ahmed, Rasool, 2017, 322). Nonetheless, the services provided by these companies are not provided freely or out of goodwill. Instead, businesses anticipate receiving compensation from individuals who engage in transactions with them. In my opinion, the majority of the challenges that result from uneven access to information go beyond the legal safeguards provided by traditional laws, specifically those in Iraq.

To start with the process of exploring and mitigating

consumer risks, transparency measurement is identified as the most efficient method, and it refers to the degree to which market information is readily available and easily accessible to those who use it (Zhu, 2004, 670). This conception suggests that the degree of information transparency relies on two main aspects: the amount of information available and the quality of the interface that facilitates access to it. An excessive quantity of information displayed can impede transparency, especially when presented in a complex layout. Although such a layout may make a large amount of information accessible, it may be hard for buyers to grasp the information relevant to their purchase decision. In contrast, simple layouts that present only the vital information can promote transparency (Galitz, 2007, 347). Transparency, in this sense, is crucial because it implies the sender's intention to reveal or conceal information. In contrast, phrases like 'information availability' or 'information sharing' do not necessarily connote a deliberate disclosure of information. Our emphasis on accessibility is motivated by the understanding that, in today's information age, merely making information available is insufficient. If a company genuinely desires to share information with an external party, it must not only provide the information but also design a search mechanism that enables the recipient to efficiently navigate through the data and extract the relevant information aligned with their objectives (Nelson and others, 2010, 210).

In the context of discussing artificial intelligence, transparency refers to the ability to explain, examine, and replicate the processes by which artificial intelligence systems arrive at decisions. Transparency and trust are closely related, as both involve being explicit and forthright about decisions and choices made regarding data sources, development procedures, and stakeholders (32). Essentially, achieving transparency in an artificial intelligence system means having a comprehensive understanding of the system on three

different levels (Dignum, 2019, 54 & Roscher and others, 2020, 42201). The first level is at the implementation stage, where the artificial intelligence model uses input data to generate a known output, including the technical principles of the model and associated parameters. As some would contend, the EU Commission considers this as the 'white-box' model, in contrast to the 'black-box' model where the principles and relevant information or data are unknown. The second level is at the specification stage, where all the information that resulted in the implementation, such as objectives, tasks, and relevant datasets, should be open and known to consumers and involved parties in artificial intelligence-based transactions. The ultimate and third tier represents the issue of output interpretability which encapsulates the predicament of interpreting outputs, necessitating comprehension of the model's intrinsic workings, including the logical foundations of data manipulation and the reasoning behind a specific output. However, it is widely acknowledged by the EU Commission that responding to these three interrelated and complementary inquiries can be quite demanding, and at present, the majority of artificial intelligence systems fall short of attaining the third tier of transparency. The majority of artificial intelligence systems currently utilized in practical applications lack transparency due to either the unavailability of implementation details and specifications, often for reasons concerning intellectual property, or the model's complexity, rendering the interpretation of outcomes overly convoluted (Harmon, Junklewitz, Sanchez, 2020, 11-12).

To overcome the relevant difficulties, expertise would argue that Consistent documentation alongside code implementation is necessary to identify use cases and ensure traceability for artificial intelligence models in industry, with documentation templates proposed to address the lack of proper specifications and maintenance procedures by the research community. Further, Early research on expert systems in the 1980s

already raised questions about artificial intelligence explainability, and while current discussions about explainable artificial intelligence have broadened to include technical work on interpretable models and the precise meaning and definition of explainability and interpretability, most methods and tools introduced by researchers do not rely on a formal definition of explanation, instead relying on the idea of providing elements to explain the results to a human in understandable terms (Harmon, Junklewitz, Sanchez, 2020, 12).

Furthermore, explainability is a solution that has the potential to reduce the aggressive aspects of artificial intelligence in B2C transactions and financial markets. It has been argued that using a model outlined in a recent study, which connects social science perspectives to artificial intelligence explainability, is helpful. This model categorizes explanatory questions into three types: what, how, and why. This assists legal and interdisciplinary scholars in understanding the concept of explainability as a collection of features in the interpretable domain that contribute to a decision, such as classification or regression. This conception indicates that while an explanation may be expressed in understandable terms, it is often not self-contained and may require additional contextual information related to the analysis goal. An algorithmic approach to explainability is often insufficient, as the interpretation of a model may not provide a complete explanation of a decision. For instance, while several data points may share the same relevant variables, the overall predictive behavior may differ in how different variables are ranked for each datum. Therefore, the explanation needed will depend on the specific analysis goal, and the questions 'Why is the decision made?' and 'Why is the decision for datum A different than datum B?' would require different explanations. (Roscher, and others, 2020, 42203).

It is evident that transparency in artificial intelligence

involves understanding how an artificial intelligence model makes decisions, while explainability goes further by requiring justification for those decisions. For example, in the case of loan application rejections, consumers may request an explanation for why their application was denied in order to understand the rationale behind their rejection. This is a crucial issue, as it can protect consumers from potential discrimination based on factors such as race, gender, and color (Bielicki, Damian, 2022, 7). For this reason, there is an ongoing academic debate on the extent of legal requirements under the GDPR concerning this matter (Brkan, Maja, Bonnet, 2020, 19 ff).

Furthermore, explainability in artificial intelligence is also concerned with promoting accountability for illicit acts. This means that artificial intelligence experts should have a clear understanding of their work and be able and willing to explain, clarify, and justify the impact that artificial intelligence models have on both human and non-human entities. This is especially important to ensure that consumers have access to justice in case businesses are involved in injustices. There is also a moral obligation to understand the unintended consequences and ethical implications of artificial intelligence models. This understanding is necessary for the effective functioning of artificial intelligence in the context of financial markets and technologically-driven companies (Mark, 2020, 2051). To ensure explainability in artificial intelligence, it's important to understand the methods of achieving it. One way is by providing explanations for the significant features used in artificial intelligence decisions or clarifying the unmet requirements. For instance, in customer-oriented cases like loan applications, it may be helpful to explain to the customer the reasons for not qualifying and the criteria they didn't meet (Bielicki, Damian, 2022, 7). However, despite such explanations, there's still a possibility of human biases leading to subjectivity. The Commission recognizes that bias and discrimination are inherent in

human decision-making in any societal or economic activity, and thus should always be taken seriously (EU Commission, 2020, 11).

Through the above discussions, it became clear that transparency and explainability pertain to clarifying the reasoning behind decisions before the artificial intelligence model makes its decision (Bielicki, Damian, 2022,7). On the other hand, accountability refers to the ability to explain the function of an artificial intelligence model after an action has been taken, or not taken. The ultimate aim is to ascertain who bears responsibility for the outcome. It is important to recognize the distinction between accountability and responsibility, despite the fact that they are often used interchangeably. In simple terms, accountability pertains to the ability to provide an explanation or report on one's role in events or actions, while responsibility refers to the obligation to answer for one's actions. Responsibility involves liability and exists before a task or action is carried out. Accountability, on the other hand, only becomes evident after the action has been completed, or not completed. When someone delegates a task to an agent, whether it's a machine or a person, the outcome of that task is still the responsibility of the person delegating it (the principal), who will be held liable if things go wrong. The agent, however, must be able to report on how the task was performed and explain any issues that arose during execution. This forms the basis of the principal-agent theory, which is often used to describe the relationship between people and autonomous systems (Dignum, 2019, 54).

Not surprisingly, there are few definitive guidelines on liability. However, two primary concerns must be taken into account. Firstly, it is essential to determine how responsibility will be allocated among the various players involved in the development and use of an artificial intelligence system; there are several individuals involved in the life cycle of an artificial intelligence system, such as the developer, deployer (the individual who employs an artificial intelligence-

equipped product or service), and potentially others (e.g., producer, distributor or importer, service provider, professional or private user). (Bielicki, Damian, 2022,7). However, the Commission believes that in the upcoming regulatory framework, it is essential to assign each obligation to the most appropriate actor(s) to handle potential risks. For instance, artificial intelligence developers may be in the best position to address hazards that may arise during the development phase. However, they may have limited control over risks during the usage phase. Therefore, it is necessary to impose the relevant obligation on the deployer. Nevertheless, this does not prejudice the issue of liability for harm suffered by end-users or other affected parties and the need to ensure that they have access to justice. In accordance with the EU product liability law, the responsibility for defective products falls on the producer. Nonetheless, it is not excluding the possibility of recovery from other parties under national laws (EU Commission, 2020, 22).

Geographic scope is another crucial concern. The Commission is of the strong opinion that the legislative measures must be applicable to every commercial operator dealing with artificial intelligence-enabled products or services within the EU, regardless of their location. This is of utmost importance to ensure that the objectives of the legislative intervention, as mentioned earlier, can be fully accomplished. Without such broad and comprehensive applicability, the desired outcomes may not be realized to their full extent (EU Commission, 2020, 22). Similarly, In the majority of tort cases involving intelligent agents, there will be no justification for assuming negligence due to the 'absence of transparency' (Wischmeyer, Thomas, Rademacher, 2020, 131). The method employed by the Commission could be interpreted as the 'control' requirement, which states that an artificial intelligence agent ought to bear accountability solely for an action or decision if it had power over its own actions.

The Commission's approach is called the 'control' condition, where an artificial intelligence agent is responsible for its actions only if it has control over them. However, this characterization is problematic in view that it is difficult to hold a machine responsible and there is ongoing debate about whether technology can be held accountable (33), also since the characteristics of artificial intelligence models involve the accumulation of knowledge over time, and it might seem excessive to assign full responsibility to a human. However, it's important to acknowledge that humans are the ones who provide the data that's utilized by artificial intelligence models. While some artificial intelligence may be capable of acting or making decisions, they don't possess the ability for moral agency, which means the responsibility for their actions still falls on the human agents who create and utilize the technology. To resolve the delicate boundary between human and artificial intelligence interventions, a hybrid 'distributed agency' strategy has been recommended. This approach comprises distributed accountability, where each party is held responsible for their role in the outcomes and actions of an artificial intelligence application based on a shared ethical framework. However, the notion poses the risk of execution, whereby a party may be deemed ethically responsible but not legally liable. Even if this comprehension is adopted, the reality would remain that accountable cannot be rendered to machines, and thus cannot be declared irresponsible. Humans, on the other hand, can be responsible, and therefore should be accountable for their actions and decisions when developing or employing artificial intelligence. (Bielicki, Damian, 2022, 11-12).

According to Schirmer's contention, *Teilrechtsfähigkeit* (partial legal capacity) can be applied to intelligent agents based on their function as advanced tools that assist humans. They are like 'sophisticated servants' that take on tasks that people cannot or do not want to do. They do not act in their own interest but on behalf of

their masters, such as an autonomous car driving a person to a destination or a trading algorithm trading on behalf of its user. Therefore, intelligent agents should be treated as legal subjects based on their function as servants, which act independently but only on behalf of their masters. Although there may be situations where intelligent agents need protection from their masters, it is not a pressing issue. The focus is on determining how the 'servant' status can solve legal issues related to the 'autonomy risk'. (Schirmer, 2020, 136).

To sum up, there are three crucial factors that must be considered in order to ensure consumer rights are protected during B2C transactions. These factors are transparency, clarity in communication, and holding companies responsible for any negative or harmful outcomes caused by artificial intelligence systems. In B2C transactions, it is important for companies to be transparent about their use of artificial intelligence. This means being clear about what data is being collected, how it will be used, and who will have access to it. Companies should also disclose how their artificial intelligence systems work and any limitations or biases that may exist in the technology. Transparency builds trust between the company and the consumer, and allows consumers to make informed decisions about their interactions with the company. Along with transparency, it is important for companies to communicate clearly and effectively with their customers. This includes providing clear and concise information about the product or service being offered, as well as any relevant terms and conditions. Companies should also communicate any changes to their policies or practices in a timely and explainable manner. Effective communication ensures that consumers have a full understanding of what they are buying and the terms under which they are making the transaction. Lastly, companies must be held accountable for any negative or harmful outcomes caused by their use of artificial intelligence in B2C transactions. If an artificial

intelligence system makes a decision that negatively impacts a consumer, the company should take responsibility for that outcome and work to remedy the situation. This can involve providing refunds, compensation, or other forms of restitution. Holding companies accountable for negative outcomes helps to ensure that they are using artificial intelligence ethically and in a way that respects consumer rights.

7. Conclusion

In conclusion, this research project has explored the complex and rapidly-evolving landscape of artificial intelligence in the context of consumer transactions. The five major sections of the study have each examined a distinct aspect of this topic, including the normative role of law in regulating artificial intelligence, the historical development of consumer rights, the impact of asymmetric information on marketing practices, and the challenges of contractual discrepancies arising from the integration of artificial intelligence. Finally, the project has proposed a triple solution for consumer protection in business-to-consumer transactions that may help mitigate the negative effects of aggressive artificial intelligence deployments by large companies. Overall, this study has shed important light on the critical intersections between technology, law, and consumer rights, and has opened up important avenues for future research and policy development in this area.

In order to address unfair contractual capacity discrepancies in artificial intelligence-driven B2C financial transactions, several recommendations can be proposed. First, it is crucial to develop and enforce standardized disclosure requirements to ensure that consumers are fully informed about the nature and risks of these transactions. This can be achieved by promoting greater transparency and accountability in the design and implementation of artificial intelligence systems used in financial transactions, which includes auditing and reporting requirements. In addition, the use of independent third-party evaluators to assess the fairness

and accuracy of artificial intelligence systems used in financial transactions should be encouraged. Similarly, to further protect the rights and interests of individuals in artificial intelligence-driven financial transactions, consumer-oriented policies should be advocated for, such as mandatory dispute resolution mechanisms and enhanced legal protections for vulnerable populations. It is also important to promote the development of alternative, non-artificial intelligence-driven financial transaction systems that are more transparent, fair, and accessible to consumers of all backgrounds and skill levels. Best practices for the ethical use of artificial intelligence in financial transactions, including guidelines on data privacy, consent, and responsible artificial intelligence development, should be established. Finally, collaboration between stakeholders, including industry, academia, and government, is necessary to develop and implement effective solutions for leveling the playing field in artificial intelligence-driven B2C financial transactions.

8. Notes

- For comprehensive analysis on such multidimensional challenges, see in general: Tzimas, 2021.
- For the purpose of this research, B2C refers to the commercial exchange where businesses sell goods or services directly to individual consumers. On the other hand, financial markets encompass any platform or structure that enables the buying and selling of financial instruments like bonds, equities, currencies, and derivatives. These markets facilitate the exchange of capital between those who require funds and those who possess them for investment purposes.

- For comprehensive relevant discussions see: (Pagallo, Durante, Monteleone, in Leenes, et al, eds, 2017, 59); (Nekit, Kolodin, Fedorov, 2020).
- To find in-depth and pertinent discussions refer to (Franceschi, 2019; Karnouskos, 2017).
- In view of scientism, the 'knowledge obtainable by scientific [empirical] method exhausts all knowledge . . . that whatever is not mentioned in the theories of science does not exist or has only a subordinate, secondary kind of reality'. Ridder, Peels, Woudenberg, eds, 2018, 1.
- In the modern economy, financial markets play a crucial role in the allocation of limited resources across countries. The main types of financial markets include the stock market, bond market, commodities market, and derivatives markets. Additionally, financial markets also give consumers access to insurance contracts, healthcare systems, and banking services. However, the financial products offered on digital platforms are often characterized by complexity and incomprehensibility, making it difficult for consumers to make informed decisions. For comprehensive discussions see: (Bradfield, 2007). According to Haim, consumers 'typically feel defeated when trying to take control of their finances by understanding the products offered in these markets'. This imbalance in bargaining power, combined with significant asymmetrical information, can result in consumers being at a disadvantage when dealing with service providers through artificial intelligence systems. See: (Liran, 2013, 23).
- The current deployment of artificial intelligence into the financial markets has received significant attention of researchers. See for instance (Hamori, Takiguchi, 2020, ix).

- See: Consumer Bill of Rights, available at: <https://www.mass.gov/service-details/consumer-bill-of-rights> [accessed on 18, June, 2022].
- The Treaty of Rome which was signed in 1957 with purport of setting up the European Economic Community (EEC), would not prioritize consumer concerns compared to its effort to facilitate the economic integration of member states. Consumer interests were referred to only in a few provisions in pertinent to the agricultural and competition policies. In this stage celebrating 'an explicit and articulate consumer policy' was not considered to be of significant concern and it remained irrelevant. See: Benöhr, (2013, 12-13).
- According to Article 129(a)(1) EC, the 'Community shall contribute to the attainment of a high level of consumer protection'.
- UN General Assembly, Consumer protection: resolution / adopted by the General Assembly, 16 April 1985, A/RES/39/248, available at: <https://www.refworld.org/docid/3b00f2271f.html>. [accessed 9 July 2022].
- See: Charter of Fundamental Rights of the European Union. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12012P/TXT>.
- Treaty on the Functioning of the European Union. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>.
- See: Legislative Decree 6 September 2005 no.206, Consumer Code, pursuant to Article 7 of Law no. 229 of 29 July 2003.
- Micro-enterprises are described as businesses that have a workforce of fewer than 10 people and generate revenue of less than two million euros.
- For details see: (Jabłonowska and others 2018).
- Generally Significant contributions have been made in this regard by (Nizioł, 2021).
- One study found that emotional analysis technology attributes more negative emotions to individuals of particular ethnicities compared to others. See: (Purdy, and others, 2109) available at: <https://hbr.org/2019/11/the-risks-of-using-ai-to-interpret-human-emotions#>.
- Some might argue that, this issue is related to constitutional principles and public law, but in researcher's perspective freedom of finance or business activities should in its details be regulated within more specific regulations included within private law, as this thesis will demonstrate.
- In this regard see in general: (Slimi, Nora, 2020).
- Recent research reaffirmed that algorithms are not necessarily 'value neutral, but biased and discriminatory'. See: (Ebers, Navas, 2020,71).
- For the same sense see: (Arslanian, Henri, Fischer, 2019 187-89)and Uzialko, at <https://www.businessnewsdaily.com/10203-artificial-intelligence-insurance-industry.html>, 2022 [accessed 26-5-2022].
- On insurance coverage and liability issues arising from artificial intelligence use see: (Ashley E. Cowgill,2019, 35-38).
- For instance, see contributions made by(Carp, 2018).
- See for instance Article (32) of the Constitution of the Italian Republic, *Gazzetta Ufficiale 27 dicembre 1947*, n. 298.
- In this sense thorough discussions have been by a couple of researchers, in N. Helberger et al, "Digital Content Contracts for Consumers," *Journal of Consumer Policy* 36, no. 1 (2013): 37-58.
- Anita K. has brought to discussion sensitive scenarios about certain contracting problems in financial markets. See: (Krug,2016, 5).
- See: Article 146/1 of the Iraqi Civil Law and Article 147 of the Egyptian Civil Law.

- To find information regarding payment provisions in legal discussions, refer to: (Jalal, Rasool, 2017, 330,331).
- Directive 97/7/EC of The European Parliament and of the Council of 20 May 1997 on the protection of consumers in respect of distance contracts, Official Journal of the European Communities No L 144/ 19
- I gained an advantage by suggesting this solution, which was presented in a paper authored by In (Bielicki, D.M. ed., 2022, 3).
- European Data Protection Supervisor, 'Ethics' accessed 27 May
- Jan-Erik Schirmer's research on "Artificial Intelligence and Legal Personality" provides an opportunity for in-depth discussions on artificial intelligence liability. See: (Wischnmeyer, Thomas, and Rademacher, eds, 2020, 123).

9. Bibliography

9.1 First: Books

1. Arslanian, Henri, Fischer, Fabrice, 2019. *The Future of Finance: the Impact of FinTech, AI, and Crypto on Financial Services*, Palgrave Macmillan.
2. Bielicki, Damian M., ed. 2022. *Regulating artificial intelligence in industry*, Routledge.
3. Denise Meyerson, 2007. *Understanding Jurisprudence*, Routledge-Cavendish
4. Ebers, Martin, Navas, Susana, 2020. *Algorithms and Law*, Cambridge University Press.
5. Eilís Ferran, Charles Goodhart, 2001. *Regulating Financial Services and Markets in the Twenty First Century*, Hart Publishing.
6. Franceschi, Alberto De, et al, eds, 2019. *Digital Revolution-New Challenges for Law Data Protection, Artificial Intelligence, Smart Products, Blockchain Technology and Virtual Currencies*, Verlag C. H. Beck.
7. Galitz, W.O., 2007. *The essential guide to user interface design: an introduction to GUI design principles and techniques*. John Wiley & Sons.
8. Gerd Leonhard, 2016. *Technology vs. Humanity; the coming clash between man and machine*, The Futures Agency.
9. Hamori, S. and Takiguchi, T. eds., 2020. *AI and Financial Markets*. MDPI-Multidisciplinary Digital Publishing Institute.
10. Hans-W. Micklitz, Geneviève Saumier eds, 2018. *Enforcement and Effectiveness of Consumer Law*, Springer.
11. Iris Benöhr, 2013. *EU Consumer Law and Human Rights*, Oxford University Press.
12. James Bradfield, 2007. *Introduction to the Economics of Financial Markets*, Oxford University Press.
13. James Bradfield, 2007. *Introduction to the Economics of Financial Markets*, Oxford University Press.
14. Jeroen de Ridder, Rik Peels, René van Woudenberg, eds, 2018. *Scientism: Prospects and Problems*, Oxford University Press.
15. Karnouskos, Stamatis, 2017. *The Interplay of Law, Robots and Society, in an Artificial Intelligence Era*, Umeå University, Master's Thesis.
16. Kelsen, Hans, 1967. *Pure theory of law*, trans. Max Knight, California University Press.
17. Kerrigan, Charles, ed, 2022. *Artificial Intelligence Law and Regulation*, Edward Elgar Publishing Limited
18. Martin, Ebers, Susana, Navas, 2020. *Algorithms and Law*, Cambridge University Press
19. Mathis, Klaus, Tor, Avishalom Eds, 2021. *Consumer Law and Economics*, Springer.
20. Pagallo, Ugo, Durante Massimo, Shara, Monteleone, What Is New with the Internet of Things in Privacy and Data Protection? Four Legal Challenges on Sharing and Control in IoT", in Leenes, Ronald, et al, eds, 2017. *Data Protection and Privacy: (In)visibilities and Infrastructures*, Springer.
21. Rasool, Sanger Ali, 2015. *Consumer's Knowledge of Sale in Iraqi Law; An Analytical Study*, PhD Thesis Dissertation, Alexandria University Faculty of Law.
22. Schirmer, Jan-Erik, 2020, *Artificial Intelligence and Legal Personality: Introducing Teilrechtsfähigkeit: A Partial Legal Status Made in Germany*, in Wischnmeyer, Thomas, and Timo Rademacher, eds. *Regulating artificial intelligence* Heidelberg: Springer.
23. Seidler, Victor, 2009. *Kant, Respect and Injustice (Routledge Revivals): The Limits of Liberal Moral Theory*, Routledge.
24. Slimi, Nora, 2020. *The impact of artificial intelligence on retail banks*, (Morocco, Ibn Zohr University, Master thesis.
25. Tsai-Jyh Chen, ed, 2018. *An International Comparison of Financial Consumer Protection*, Springer Nature Singapore Pte Ltd.
26. Tzimas, T., 2021. *Legal and Ethical Challenges of Artificial Intelligence from an International Law Perspective (Vol. 46)*. Springer Nature.
27. Tzimas, Themistoklis, 2021. *Legal and Ethical Challenges of Artificial Intelligence from an International Law Perspective*, Springer Nature.
28. Virginia, Dignum, 2019. *Responsible Artificial Intelligence: How to Develop and Use AI in a Responsible Way*. Cham Springer.
29. Wagner, Katja, 2021. *Drivers and Barriers of Consumer Behavior Regarding New Technologies and Digital Channels: Investigating the Phenomenon of*

Anthropomorphism and New Online Consumption Forms, Springer Nature.

30. Weatherill, Stephen, 2005. *EU Consumer Law and Policy*, Edward Elgar.
 31. Wischmeyer, T. and Rademacher, T. eds., 2020. *Regulating artificial intelligence*. Heidelberg: Springer.
 32. Wischmeyer, Thomas, and Timo Rademacher, eds, 2020, *Regulating Artificial Intelligence*, Heidelberg Springer.
 33. Woodrow Barfield, 2021. *The Cambridge Handbook of the Law of Algorithms*, Cambridge University Press.
 34. Woodrow Barfield, 2021. *The Cambridge Handbook of the Law of Algorithms*, Cambridge University Press.
 35. Zuboff, Shoshana, 2019. *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*, Profile Books.
- ## 9.2 Journals
1. Agarwal, Sumit, Souphala Chomsisengphet, Neale Mahoney, and Johannes Stroebel, 2014, A simple framework for estimating consumer benefits from regulating hidden fees. *The Journal of Legal Studies* 43, no. 52, pp 239-252.
 2. Ahmed, Mazin Jalal, Rasool, Sanger Ali, 2017. The Consumer and Their Awareness in Electronic Contract *Raparin University Journal*, Year, 4th, No. 11, pp 311-339.
 3. Anita K. Krug, 2016. Uncertain Futures in Evolving Financial Markets," *Washington University Law Review* 93, no. 5, pp 1209-1269.
 4. Bibliography
 5. Coeckelbergh, Mark. 2020. Artificial intelligence, responsibility attribution, and a relational justification of explainability. *Science and engineering ethics* 26, no. 4, pp 2051-2068.
 6. Commission, European, 2019. Consumer vulnerability across key markets in the European Union.
 7. Corday Richard, 2015. Consumer Protection in the Financial Marketplace," *Harvard Law & Policy Review* 9, no. 2, pp, 307-327.
 8. Cowgill, Ashley E., 2019. Artificial Intelligence: A Grayish Area for Insurance Coverage, *The Journal of Robotics, Artificial Intelligence & Law* 2, no. 1, pp 35-38.
 9. EU Commission. 2020. *White Paper on Artificial Intelligence. A European approach to excellence and trust*, COM (2020).
 10. Granados, Nelson, Alok Gupta, and Robert J. Kauffman. 2010. Research commentary information transparency in business-to-consumer markets: concepts, framework, and research agenda, *Information Systems Research* 21, no. 2, pp 207-226.
 11. Grochowski, Mateusz et al, 2022. Algorithmic Price Discrimination and Consumer Protection; A Digital Arms Race? *Technology and Regulation*, 36-47. Available at: <https://doi.org/10.26116/techreg>.
 12. Haim, Liran, 2013. Rethinking Consumer Protection Policy in Financial Markets, *Journal of Law and Commerce*, 32, no. 1, pp, 23-80.
 13. Helberger, N. et al, 2013. Digital Content Contracts for Consumers, *Journal of Consumer Policy* 36, no. 1, pp 37-58.
 14. Helberger, N., Loos, M.B., Guibault, L., Mak, C. and Pessers, L., 2013. Digital content contracts for consumers. *Journal of consumer policy*, 36, pp.37-57.
 15. Jablonowska, A., Kuziemski, M., Nowak, A.M., Micklitz, H.W., Palka, P. and Sartor, G., 2018. Consumer Law and Artificial Intelligence: Challenges to the EU Consumer Law and Policy Stemming from the Business' Use of Artificial Intelligence-Final report of the ARTSY project. *EUI Department of Law Research Paper*, (2018/11), pp 1-79.
 16. Jeremy A. Carp, 2018. Autonomous Vehicles: Problems and Principles for Future Regulation, *University of Pennsylvania Journal of Law & Public Affairs* 4, no. 1, pp 82-148.
 17. Joasia, Luzak, Junuzovic Mia, 2019. Blurred Lines: Between Formal and Substantive Transparency in Consumer Credit Contracts. *J. Eur. Consumer & Mkt. L.* 8, pp, 1-24.
 18. Krug, A.K., 2015. Uncertain futures in evolving financial markets. *Wash. UL Rev.*, 93, pp1209-1269
 19. Magnuson, William, 2020. Artificial Financial Intelligence, *Harvard Business Law Review* 10, no. 2, pp, 338-382.
 20. Maja, Brkan, and Bonnet, Grégory, 2020. Legal and technical feasibility of the GDPR's quest for explanation of algorithmic decisions: of black boxes, white boxes and fata morganas. *European Journal of Risk Regulation* 11, no. 1, pp, 18-50.
 21. Massimo Durante, 2010. Re-Designing the Role of Law in the Information Society: Mediating between the Real and the Virtual, *European Journal of Legal Studies* 2, no. 3, pp 19-37.
 22. Nekt, Kateryna, Kolodin, Denis, Fedorov, Valentyn, 2020. Personal Data Protection and Liability for Damage in the Field of the Internet of Things, *Juridical Tribune* 10, no. 1, pp 80-93.
 23. Nersessian David; Mancha Ruben, 2020. From Automation to Autonomy: Legal and Ethical Responsibility Gaps in Artificial Intelligence Innovation, *Michigan Technology Law Review* 27, no. 1, pp 55-96.
 24. Nersessian, David, Mancha, Ruben, 2020. From Automation to Autonomy: Legal and Ethical Responsibility Gaps in Artificial Intelligence Innovation, *Michigan Technology Law Review* 27, no. 1. pp 56-96.
 25. Nizioł, Krystyna, 2021. The challenges of consumer protection law connected with the development of artificial intelligence on the example of financial services (chosen legal aspects), *Procedia Computer Science*.192, pp 4103-4111.
 26. Pailli, Giacomo, Poncibo, Cristina, 2017. The Transformation of Consumer Law Enforcement: An Italian Perspective, *Comparative Law Review*, 8, no. 2, pp 653-689.

27. Poillot, Elise, 2018. Codification of French and Luxembourg Consumer Law: Are French and Luxembourg Consumer Codes Going the Same Road," *Revista Brasileira de Direito Civil*,17, pp, 125-141.
28. R. Harmon, H. Junklewitz, I. Sanchez, 2020. Robustness and Explainability of Artificial Intelligence' *EUR 30040 ENEUScienceHub*, pp 1-40.
29. Ribana, Roscher, Bohn, Bastian, Duarte Marco F., and Garcke, Jochen, 2020. Explainable machine learning for scientific insights and discoveries. *Ieee Access* 8, pp 42200-42216.
30. Rumi, Tiziana. Ferraro, Angelo Viglianisi, 2020. Consumer Protection and New Contract Law in the European Union and in Italy," *Journal of Liberty and International Affairs*, (JLIA) 6, no. 1, pp 87-99.
31. Shmuel, Becher, 2008. Asymmetric Information in Consumer Contracts: The challenge that is yet to be met. *American Business Law Journal* 45, no. 4, pp 723-774
32. William Magnuson, 2020. Artificial Financial Intelligence, *Harvard Business Law Review*, 10, no. 2, pp, 337-382
33. Yakup, Durmaz, and Kılınç Neslihan, 2007. The Effect of Asymmetric Information on Consumer Trust in E-Commerce and a Field Work. *development*, pp 48-53.
34. Zhu, Kevin, 2004. Information transparency of business-to-business electronic markets: A game-theoretic analysis, *Management science* 50, no. 5, pp, 670-685.

9.3 Official Websites

1. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>.
2. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12012P/TXT>.
3. <https://hbr.org/2019/11/the-risks-of-using-ai-to-interpret-human-emotions#>.
4. <https://www.refworld.org/docid/3b00f2271f.html>.
5. <https://www.businessnewsdaily.com/10203-artificial-intelligence-insurance-industry.html>.
6. <https://www.mass.gov/service-details/consumer-bill-of-rights>
7. <https://www.refworld.org/docid/3b00f2271f.html>.
8. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12012P/TXT>.
9. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012E%2FTXT>.
10. <https://hbr.org/2019/11/the-risks-of-using-ai-to-interpret-human-emotions#>.
11. <https://www.businessnewsdaily.com/10203-artificial-intelligence-insurance-industry.html>,