

Electronic Payment and Consumer: Benefits and Risks with a Focus on the Situation in Algeria

Hadj Ali Adnane ¹, Bencheikh le houcin Ahmed ²

¹ University of Badji Mokhtar, Annaba (Algeria), International Finance and Governance and Emergence Studies (LFIEGE). adnane.hadjali@univ-annaba.dz

² Higher School of Management Sciences, Annaba (Algeria),
ahmed.bencheikh@essg-annaba.dz.

Received: 04/09/2024

Accepted: 08/12/2024

Published:22/12/2024

Abstract:

This research paper aims to highlight both advantages and inherent risks associated with electronic payment systems for consumers, with a particular focus on the Algerian context. Employing a descriptive research methodology, we have leveraged an array of sources including scholarly books, dissertations, and journal articles pertinent to electronic payments, as well as official websites of regulatory entities like the "SATIM" company overseeing these transactions in Algeria.

We deduce that the adoption of electronic payment systems is an essential progression, driven by the rapid advancement in various sectors via information and communication technologies that offer substantial benefits. Nonetheless, these technologies are accompanied by risks that could precipitate financial losses through either inadvertent misuse or deliberate exploitation by others. Consequently, it is crucial for regulatory bodies to fortify consumer protection in electronic services by enhancing information security measures to thwart the unauthorized access to personal data.

Keywords: Electronic Payment; Consumer; Benefits; Risks.

JEL Classification Codes: O33, D18, G29, E59.

1. INTRODUCTION:

The proliferation of information and communication technology has profoundly transformed the landscape of economic transactions, both within national borders and on a global scale. Transactions are increasingly processed electronically via the internet, facilitating the transfer of funds through diverse electronic means and channels. This evolution has given rise to the concept of electronic banking, which extensively employs cards and digital devices, allowing access to banking services at any time and from any location, thus eliminating the necessity for physical visits to bank branches.

In response to these technological advancements, the Algerian banking sector has recognized the imperative to evolve, to maintain its competitiveness against foreign banks in an era characterized by financial and banking openness that abolishes traditional barriers and restrictions in banking activities. This adaptation involves strategizing to remain relevant in the banking market by enhancing the electronic infrastructure to improve the delivery of banking services and safeguarding consumers against potential fraud and deception.

In a bid to modernize its banking infrastructure, Algeria has collaborated with international entities, initiating this transformation with the establishment of the "SATIM" company. This endeavor aims to amplify the adoption of electronic payment methods, which remain underutilized, predominantly due to the prevalent electronic illiteracy among segments of the Algerian population, especially the elderly.

Moreover, the novelty of these technologies means that many bank customers are unfamiliar with their nature, operational methods, and associated risks. Additionally, the underdeveloped state of e-commerce necessitates that banking and postal authorities intensify efforts to educate the populace about these technologies, expounding on their functional principles and articulating strategies to mitigate the risks they pose. This inquiry is guided by the central question:

What are the advantages and risks of electronic payment for consumers?

From this central question, the following sub-questions emerge:

- _ What is the current state of electronic payment usage in Algeria?
- _ What benefits and risks do these payment methods pose to consumers?

- Study Hypotheses:

- _ Various factors have spurred the growth and development of electronic payment systems in Algeria, paralleling trends observed in e-commerce.
- _ While electronic payment systems offer conveniences such as transactional ease, they also introduce risks related to financial losses.

- Study Objectives:

Through this study, we aim to:

- _ Illuminate the current state of electronic payment usage in Algeria;
- _ Highlight the benefits of electronic payment systems for consumers;
- _ Detail the risks consumers might encounter as a result of utilizing electronic payment methods.

- Study Significance:

This study derives its importance from the pivotal role that information and communication technologies (ICTs) have assumed in a world transitioning towards digitization. This shift has firmly established itself in contemporary society, bearing both positive and negative implications.

It is imperative to safeguard users from potential damages arising from either a lack of understanding of these technologies or from unintentional errors. The exploration of electronic payment systems is crucial in this context, as it offers insights into mitigating these risks while harnessing the benefits of digital transitions.

- Methodology:

To fulfill the objectives of this research, we adopted a descriptive analytical approach. This methodology enabled us to articulate the theoretical aspects comprehensively, alongside the analysis and presentation of various data, statistics, and empirical results, providing a

robust framework for understanding the nuances of electronic payment systems.

2. The Reality of Electronic Payment Use in Algeria:

The inception of electronic payment systems in Algeria was marked by the establishment of significant infrastructural components such as the Automatic Cash and Interbank Relations Company, which oversees the interbank cash processing center. This development was complemented by the creation of the Algerian Company for Electronic Banking Services and the Automatic Cash Consortium.

These entities play a crucial role in supervising and regulating electronic payment systems in Algeria, ensuring they evolve in line with global advancements and are protected by appropriate legislative and legal frameworks.

Before delving deeper into the realities of electronic payment usage and the regulatory landscape in Algeria, it is essential to define what electronic payment entails. According (Safar, 2008, p. 20), electronic payment is "the use of computer devices or the Internet network, along with modern computer or telecommunications technologies, as essential means in executing payment operations."

Similarly, (Karwi, 2018, p. 74) defines it as "a process of settling transactions electronically via computer devices or through an electronic carrier, which are the technical devices and means used as tools for conducting cash payments among the parties involved."

The rise of e-commerce has significantly influenced the development and adoption of electronic payment systems, akin to its impact on traditional financial practices. "The emergence of e-commerce has spawned new financial needs that traditional payment systems are ill-equipped to address, prompting stakeholders to explore various forms of electronic payment systems and digital currencies" (Belkella & Abdallah El Hirts, 2012, p. 7).

This era, particularly the 21st century, is characterized by a transition from a tangible to an intangible society and economy, marking a profound shift in how financial transactions are conducted (Merbouhi & Hadid, 2017, p. 20).

2.1. Regulatory Bodies for Electronic Payment in Algeria:

In Algeria, the regulation and oversight of electronic payments are managed by several key institutions. A primary entity in this framework is the Automatic Cash and Interbank Relations Company, commonly known as "SATIM." Established in 1995 through an initiative by the banking community, SATIM is affiliated with seven major banks in Algeria, which include:

- _ Agricultural and Rural Development Bank;
- _ National Fund for Savings and Reserve;
- _ Algerian Popular Credit;
- _ National Bank of Algeria;
- _ External Bank of Algeria;
- _ Local Development Bank;
- _ Additionally, the "CNMA" insurance institution is part of this consortium. SATIM serves as the sole operator for electronic payments among these banks, catering to both local and international card transactions. Its role extends beyond transactional operations as it supports the overarching program for the development and modernization of the banking sector, particularly focusing on enhancing card payment methods. SATIM's membership in the interbank electronic payment network is extensive, comprising 19 members that include 06 public banks and 12 private banks, alongside Algeria Post

The following diagram visually represents the members of SATIM:

Fig.1. Members of the Automatic Cash and Interbank Relations company



Source: The official website of the Automatic Cash and Interbank Relations Company, available at: <https://www.satim.dz/index.php/fr/activite-monetique/membres-du-rmi>, accessed on 20/07/2024.

A- Their Tasks: The tasks and responsibilities of SATIM are multifaceted and critical for the smooth operation of the electronic payment system in Algeria. Key tasks include:

Electronic Payment and Consumer: Benefits and Risks with a Focus on the Situation in Algeria

- Developing and enhancing the use of electronic payment methods across the banking sector.
- Establishing and managing a technical and regulatory platform that ensures full interoperability among all stakeholders within the electronic banking network. This includes participation in setting interbank rules for managing electronic payment products.
- Assisting banks in the creation and development of electronic payment products. This encompasses customizing checks, and payment and cash withdrawal cards, along with implementing regulations that govern the operations of the electronic payment system and its various components.
- Providing communication and management services for ATMs.
- Expanding the interbank electronic banking services network to include cash withdrawals, involving shareholder banks and other significant institutions such as Algeria Post, Société Générale Algeria, BNP Paribas Algeria, Housing bank, Algeria Gulf Bank, Natixis, Fransabank, Hong Kong & Shanghai Banking Corporation “HSBC,” Arab Banking “ABC,” Arab Bank, and Bank Al Salam.

B- Their Services: The Automatic Cash and Interbank Relations Company "SATIM" provides a comprehensive suite of services:

- **National Services:** (Automatic Cash Consortium, n.d):
 - Routing transactions and withdrawals from ATMs and payments on electronic payment terminals;
 - Online payments (e-commerce), monitoring cash activity, combating fraud, and managing disputes;
 - Customizing "CIB" cards and printing secret codes (PIN and electronic payment passwords);
 - Customizing checks, a service provided since 1996, which was the first activity of "SATIM" offering all banking institutions standardized and secure checkbooks of various types tailored for clients of private

and governmental banking agencies, for individuals and companies nationwide.

- **International Services:** (Automatic Cash Consortium, n.d):
 - _ Routing transactions to international networks and handling the flow and issuance and customization of MasterCard cards;
 - _ Withdrawals from ATMs and payments on electronic payment terminals;
 - _ Combating fraud and recovering costs.

Secondly, the Interbank Cash Processing Center "RMI":

"SATIM" oversees the Interbank Cash Processing Center, working to connect distribution centers with various institutions participating in the withdrawal function. This center links the ATM to the service provider via lines across the national network and a center for intercepting lost or counterfeit cards.

The withdrawal process requires authorization directed to the agency's licensing center. If accepted, the center monitors the permitted limit for each client, the secret signal, and at zero hour, the center processes all transactions conducted that day and organizes them according to each bank in the network, recording the operations at all banks. The clearing is conducted at the postal check center, which holds all the bank accounts (Harkat & Benghida, 2020, p. 69).

Thirdly, Algeria Electronic Banking Services "AEBS":

This company, established in January 2004, initially focused on development and support operations, directing its efforts primarily towards modernizing banking services and electronic payment systems.

It resulted from a partnership agreement between the French group "DIAGRAM EDI," a leader in software related to electronic banking and the security of information and financial data exchange, and three Algerian institutions: "MAGACT MULTIMEDIA," "SOFT ENGINEERING," and the Research Center in Scientific and Technical Information "CERIST."

This partnership led to the creation of a mixed institution named Algeria Electronic Banking Services "AEBS: Algeria E-Banking Service," which provides its services related to remote banking, offering a range of services with a high degree of security and safety. The company also manages the financial data exchange for all banks and financial institutions (Harkat & Benghida, 2020, p. 74).

Fourthly, the Automatic Cash Consortium:

Comprising 19 active members, including 18 banks and Algeria Post, the consortium is instrumental in supervising the automatic cash system. Although the Bank of Algeria is not a member, it participates to ensure compliance with current regulatory standards and payment methods. The consortium's key functions include: (Automatic Cash Consortium, n.d):

- _ Managing specifications, characteristics, and standards in the field of automatic cash;
- _ Defining bank cash products and rules for their practical application;
- _ Managing the technical platform for routing;
- _ Authentication;
- _ Security management.

2.2 Electronic Payment Systems in Algeria:

The Bank of Algeria implemented two payment systems in 2006, marking significant milestones in the advancement of electronic payments. These include the Real-Time Gross Settlement (RTGS) for large amounts and the Electronic Clearing System, both critical for the ongoing developments in the electronic payment field.

Firstly, the Real-Time Gross Settlement System (RTGS):

Algeria Real Time Settlements (ARTS)," this system was established by the Bank of Algeria to facilitate the interbank settlement of high-value and urgent payments via bank or postal transfers. Participants in this system can

initiate transactions that are processed in real time, ensuring prompt settlement of large transactions (Bank of Algeria, 2006, p. 29).

Secondly, the Electronic Clearing System:

Operated by the Bank of Algeria under the name "Algérie Télé-Compensation Inter-bancaire (ATCI)," this system handles the electronic clearing of checks, bonds, transfers, and automatic deductions, as well as withdrawals and payments using bank cards.

The ATCI system processes transfers with a nominal value of less than one million dinars; transactions exceeding this threshold must be routed through the RTGS to handle large amounts and urgent payments efficiently. The management of the ATCI system is entrusted to the Pre-Bank Clearing Center, a stock company and subsidiary of the Bank of Algeria (Bank of Algeria, 2006, p. 24).

2.3 Legal Protection of Electronic Payments in Algeria:

The legal framework governing electronic payments in Algeria is designed to enhance user confidence within the virtual transaction space. The Algerian legislature has made significant amendments to the Penal Code with Law 04-15, dated November 10, 2004, which introduced a new section titled "Offenses Against Automated Data Processing Systems" in Article 12. This section, spanning Articles 394 bis to 394 bis 7, outlines penalties for various offenses targeting these systems:

- "Imprisonment from three months to one year and a fine from 50,000 to 100,000 DZD for anyone who fraudulently enters or remains in part or all of an automated data processing system or attempts to do so" (Algeria; Law 04-15, 2004);
- "Imprisonment from six months to three years and a fine from 500,000 to 2,000,000 DZD for anyone who fraudulently inputs data into an automated processing system or deletes or alters data contained within" (Algeria; Law 04-15, 2004);
- "Imprisonment from two months to three years and a fine from 1,000,000 DZD to 5,000,000 DZD for anyone who intentionally and fraudulently

designs, researches, compiles, provides, publishes, or trades in data stored, processed, or transmitted by an information system that could be used to commit the crimes stipulated in this section, and for possessing, disclosing, publishing, or using for any purpose the data obtained from any of the crimes specified in this section" (Algeria; Law 04-15, 2004);

- "Penalties stipulated in this section are doubled if the crime targets national defense or public law entities, without prejudice to the application of more severe punishments" (Algeria; Law 04-15, 2004);
- "Retaining the rights of bona fide third parties, it is ruled that devices, software, and means used, along with the closure of sites that were the location of a crime punishable under this section, as well as the closure of the premises or place of exploitation if the crime was committed with the owner's knowledge" (Algeria; Law 04-15, 2004).

2.4 Statistics on Electronic Payments in Algeria:

Electronic payment systems in Algeria have witnessed substantial growth, particularly from 2016 to the present, encompassing online payments and ATM usage for cash withdrawals and payments via electronic payment terminals. The data presented below illustrates a clear trend of increasing transaction numbers and amounts over the years.

Table 1. Total Number of Online Transactions and Their Aggregate Amounts in Algeria from 2016 to July 2024

Year		Total Number of Transactions	Total Amount (DZD)
2016		7 366	15 009 842,02
2017		107 844	267 993 423,40
2018		176 982	332 592 583,28
2019		202 480	503 870 361,61
2020		4 593 960	5 423 727 074,80
2021		7 821 346	11 176 475 535,68
2022		9 048 125	18 151 104 423,96
2023		15 351 354	32 196 672 024,03
2024	January	1 069 088	3 007 423 813,89
	February	911 440	2 731 025 550,91
	March	1 275 788	3 608 383 466,57
	April	1 178 069	3 666 012 667,57
	May	1 121 859	3 718 620 152,02
	June	1 072 062	3 525 863 073,77
	July	1 899 313	4 295 160 745,83

Source: Automatic Cash Consortium, available at: <https://giemonetique.dz/ar/qui-sommes-nous/activite-paiement-sur-internet/>, accessed on 28/07/2024.

From the table, we observe a continuous annual increase in the number of transactions, highlighting the growing use of electronic payment in Algeria. The number of transactions in 2016 was 7,366, rising to more than 4,500,000 transactions in 2020. It should be noted that the data from Algeria Post has been included in the statistics starting from 2020, following its joining of the Automatic Cash Consortium, while statistics prior to 2020 were exclusively from banks.

Table 2. Total Number of ATM Withdrawal Transactions and Their Aggregate Amounts from 2016 to July 2024

Year		Total Number of Withdrawal	Total Amount (DZD)
2016		6 868 031	98 822 524 500,00
2017		8 310 170	126 398 291 000,00
2018		8 833 913	136 233 452 000,00
2019		9 929 652	164 116 233 000,00
2020		58 428 933	1 073 004 953 000,00
2021		87 722 789	1 728 937 064 000,00
2022		128 035 361	2 182 896 695 000,00
2023		174 415 895	3 262 245 367 500,00
2024	January	14 660 304	265 629 378 000,00
	February	13 607 499	257 026 998 000,00
	March	17 638 807	336 833 721 500,00
	April	17 121 303	315 985 060 000,00
	May	16 857 795	301 063 087 500,00
	June	16 666 860	328 062 265 000,00
	July	16 335 627	301 551 273 500,00

Source: Automatic Cash Consortium, available at: <https://giemonetique.dz/ar/activite-paiement-sur-tpe/>, accessed on 30/07/2024.

The same observation applies to this table as well, noting an increase in the number of ATM withdrawal transactions from year to year, which justifies the growing reliance on electronic payment methods.

Table 3. Total Number of Transactions via Electronic Payment Terminals (TPE) and Their Aggregate Amounts from 2016 to July 2024

Year		Total Number of Payment Transactions	Total Amount (DZD)
2016		65 501	444 508 902,40
2017		122 694	861 775 368,90
2018		190 898	1 335 334 130,76
2019		274 624	1 916 994 721,11
2020		711 777	4 733 820 043,01
2021		2 150 529	15 113 249 499,92
2022		2 712 848	19 343 056 538,17
2023		3 997 165	31 518 739 249,37
2024	January	422 782	3 374 064 529,05
	February	420 763	3 367 573 343,46
	March	472 457	3 647 797 574,76
	April	418 558	3 292 375 246,61
	May	455 361	3 483 253 985,07
	June	375 546	2 964 305 403,72
	July	444 145	3 698 403 119,11

Source: Automatic Cash Consortium, available at: <https://giemonetique.dz/ar/activite-paiement-sur-tpe/>, accessed on 30/07/2024.

The consistent year-over-year increase in transactions through electronic payment terminals signifies a shift towards more digital payment options, reflecting broader trends in consumer behaviour and technological adoption in Algeria.

3. Benefits and Risks of Electronic Payment:

The conveniences and advantages of electronic payment systems are widely recognized, making them a prevalent choice in all transactions during this technological era. However, these benefits do not come without potential downsides, harms, or defects, which could arise from misuse or potential errors.

Despite the significant services that technology offers to modern humanity, like any other invention, it possesses many virtues and serious downsides if not properly understood and managed.

For instance, considering banking technologies through electronic banking services reveals that although these services are designed to simplify the lives of bank clients and serve them efficiently across various platforms, such as ATMs and point-of-sale systems, they also carry inherent risks that could lead to the loss of customer funds (Chayeb, 2017, p. 2).

3.1 Advantages of Electronic Payment:

Electronic payment systems derive numerous advantages from the methods they employ, characterized by the following attributes (Barkat & Tayebi, 2019, p. 130):

- _ It provides several benefits to its users, the most significant being ease and convenience of use, enhanced security over carrying cash thus avoiding theft and loss, opportunities for obtaining interest-free credit for specified periods, and the ability to complete transactions instantly.
- _ It offers the strongest guarantee of seller's rights, contributes to increased sales, and alleviates the burden of monitoring customer debts, as this responsibility falls on the bank and issuing companies.
- _ Interests, fees, and penalties are profits made by banks and financial institutions.

Additional advantages include (Zahoufi & Zemali, 2018, p. 256):

- _ No need to leave a cash deposit in commercial transactions that require a guarantee such as hotel reservations or at car dealerships;
- _ Avoid dealing with counterfeit money;
- _ Avoid currency declaration issues while traveling;
- _ Avoid the need to count cash and handle it;
- _ Ability to track all completed transactions;
- _ Avoiding customer congestion at counters for payments and withdrawals.

Furthermore, electronic payment allows for the settlement of financial obligations without disruption or absence from work. Previously, an

employee might have needed to leave their workplace to withdraw their salary or settle bills, especially since the operation of these financial institutions is limited to specific times like other businesses. With electronic payment, individuals can manage their financial obligations outside of traditional working hours without needing to leave their workplace.

3.2 Risks of Electronic Payment:

Electronic Payment Risks: Despite its advantages, electronic payment systems are not without their flaws and risks. Here are some highlighted (Barkat & Tayebi, 2019, p. 131):

- One of the risks associated with using these methods is the potential for increased borrowing and spending beyond one's financial means, which could lead to non-payment and the cardholder's name being blacklisted;
- Any non-compliance or violations by the merchant can lead to the bank terminating its dealings with them and blacklisting the merchant, which can significantly hinder their business operations, as they too rely on these electronic services.

As diverse as electronic payment methods are, from cards and commercial paper to electronic bank transfers and digital currencies, they are plagued by similar kinds of risks, which are largely electronic in nature and categorized into regulatory or security risks. These might arise due to operational failures of the payment instrument or external factors, or even consumer actions (Chayeb Pacha, 2018, p. 31). Here are the following: (Chayeb Pacha, 2018, pp. 38-40)

A. Regulatory or Security Risks:

- These risks vary from operational failures that can accidentally occur or from losing a payment instrument to misuse;
- Risks arising from operational failure of a payment tool: Consumers suffer from functional deficiencies in the payment tool, such as losing electronic cash balances due to maintenance failures leading to system outages;

- Loss of payment instrument: This can occur through theft of the physical card or theft of data offline, or obtaining such data via online means, with the perpetrator using the stolen card to make unauthorized online purchases;

B. Legal Risks:

Legal Risks of Electronic Payment: In addition to security concerns, electronic payment systems face substantial legal risks, which primarily focus on privacy and money laundering issues:

- **Privacy Risks:** Privacy is closely related to data protection, as personal or nominal data tied to electronic contracts are directly linked to the contracting parties, including consumers. Protecting consumer privacy in electronic payments necessitates the safeguarding of customer data, ensuring the confidentiality of their personal and financial information. This protection is critical to prevent the unauthorized publication, broadcast, or misuse of such data, which could lead to monitoring or misdirection of consumers without their knowledge. In the digital realm, the privacy and secrets of individuals are vulnerable to infringement and deception, which can escalate as electronic payment usage increases.
- **Money Laundering:** The rapid advancement in technological tools used for money transfers and conversions across borders has facilitated the rise of money laundering activities. With the evolution of monetary transfer systems and the use of computer networks to link various markets, it becomes easier to move large sums of money, thus increasing the risk of money laundering. This risk is compounded by the proliferation of e-commerce, which obscures the origin of funds which could be derived from illicit activities such as drug transactions, hostage ransoms, human trafficking, and smuggling of alcohol, drugs, tobacco, weapons, and other illegal goods.

Additionally, there are risks associated with multiple charging, where a merchant may intentionally swipe a card multiple times on a reader to record extra items at the consumer's expense (Chayeb, 2017, p. 9).

Specifically for Algerian consumers, there are barriers to the widespread adoption and generalization of electronic payments, one of which is the prevalence of digital illiteracy. This significant barrier is compounded by a general reluctance to use electronic means, whether due to a lack of familiarity with the technology, especially among older individuals, or a fundamental distrust in the banking system overall.

This distrust leads to an aversion to engaging with these systems. Furthermore, the degree of societal sophistication is a crucial factor in the use and spread of electronic payments. Consumers who have not kept pace with technological advancements also represent a barrier to the proliferation of these systems. It is unreasonable to compare populations accustomed to using technology from a young age with those for whom technology use is still in its early stages. Additionally, the legislative aspect demands greater protection amid the rising tide of cybercrimes.

4. CONCLUSION:

Throughout our discussion on the advantages and risks associated with electronic payment for consumers, we have elucidated its numerous benefits that advocate for its widespread adoption, as well as the potential risks that stem from errors or malicious actions, necessitating continued caution and vigilance. Despite these risks, the advantages of electronic payment significantly overshadow the potential drawbacks, underscoring the imperative for embracing this payment modality. We have deduced the following conclusions:

- _ Electronic payment facilitates and speeds up work processes.
- _ It aims to ease and accelerate financial transfer processes between accounts using modern mechanisms, reducing the risks of theft and loss and lowering costs.
- _ The developments in various sectors require the financial and banking sector to keep pace.

- _ Information and communication technology imposes itself and casts its influence on the financial and banking sector.
- _ Electronic payment is not without risks, including hacking and weaknesses in information systems and infrastructure.

Given these benefits, we advocate the following recommendations:

- _ Promoting the widespread use of electronic payment methods through raising awareness of their importance.
- _ Encouraging e-commerce to facilitate the use of electronic payments.
- _ Providing information security to protect payment systems and reassure users.
- _ Promoting financial technology culture.
- _ Integrating the telecommunications sector with the financial sector.

In addressing the risks, we suggest the following preventive measures:

- _ Never sharing your PIN with anyone.
- _ Quickly entering your PIN during ATM use to prevent others from memorizing it.
- _ Standing close to the ATM during use to cover the keypad while entering your PIN.
- _ Being cautious of fake websites online and not providing them with personal data.
- _ Regular maintenance of electronic payment devices and network enhancements to avoid outages that frustrate users.
- _ Prompt reporting in case of lost cards to prevent unauthorized use.

5. Bibliography List:

Algeria; Law 04-15. (2004). Official Gazette of the Algerian Republic (71), 11.

Automatic Cash Consortium, n.d. (s.d.).

<https://giemonetique.dz/ar/qui-sommes-nous>. Retrieved July 20, 2024, from <https://giemonetique.dz>: <https://giemonetique.dz>

Bank of Algeria. (2006, January 15). Regulation n° 05-04 concerning Algeria Real Time Settlements "ARTS" for Large Amounts and Expedited Payment. Retrieved March 10, 2024, from Official Gazette of the Algerian Republic: <https://www.joradp.dz/FTP/jo-arabe/2006/A2006002.pdf>

Bank of Algeria. (2006, April 23). Regulation n° 05-06 concerning the clearing of checks and other public payment instruments. Retrieved March 12, 2024, from Official Gazette of the Algerian Republic: <https://www.joradp.dz/FTP/jo-arabe/2006/A2006026.pdf>

Barkat, I. E., & Tayebi, H. (2019, June). Electronic payment means and their role in activating e-commerce. *Journal of Law and Local Development* , 01 (02), p. 130.

Belkella, B., & Abdallah El Hirts, H. (2012, Mai). Risks of electronic payment means: online payment through a case study of eBay transactions. (u. o. meliana, Éd.) *Revue nouvelle economie* (03), p. 7.

Chayeb Pacha, K. (2018, December). Mechanisms for protecting against risks of electronic payment in Algerian legislation. *Algerian Journal of Public Policy* , 07 (02), p. 31.

Chayeb, M. (2017, December). Mechanisms for protection against fraud in electronic payment means in the French economy (2002-2016): The case of the bank card. *Namma Journal for Economics and Commerce* (02), p. 02.

Harkat, S., & Benghida, S. (2020, July). The infrastructure for electronic transactions in Algerian banks: Reality and challenges. *Journal of Economic and Financial Research* , 07 (01), p. 69.

Karwi, A. (2018). Electronic banking as a mechanism to enhance the performance of Algerian banks: A field study at the public banking agencies in Guelma. Annaba: University of Annaba.

Merbouhi, S., & Hadid, N. (2017). Electronic payment in Algeria: Economic and financial crimes. *Revue Nouvelle Economie* , 01 (16), p. 20.

Safar, A. (2008). Electronic payment systems. Beirut: Ahl al-Bayt Legal Publications.

Zahoufi, N., & Zemali, O. (2018). Electronic financial transfer: Transaction mechanisms and risks in the modernization era of payment nmeans. *International Journal of Economy and Globalization* , 01 (01), 256.