



# The roles of cash management systems (CMS) in the use of banking services at Universitas Islam Negeri Alauddin Makassar

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## ABSTRACT

This study explores the role of the Cash Management System (CMS) in banking services at Universitas Islam Negeri (UIN) Alauddin Makassar through qualitative research using a case study approach. Data was collected from 7 key individuals at UIN, including administrative and financial leaders, IT staff, lecturers, and students, utilizing interviews, documentation, observation, and literature. The findings indicate that implementing CMS significantly influences the selection and use of banking services at UIN Alauddin. CMS simplifies financial management for treasurers, ensuring practical, secure, and efficient handling of duties. Moreover, CMS effectively organizes digital data and financial records, aligning with UIN Alauddin's support for national non-cash initiatives and anti-corruption efforts. The study suggests optimizing CMS to maximize benefits for UIN Alauddin. Decisions regarding banking services and financial management require in-depth analysis to prevent overlapping financial services from different institutions, ensuring efficient resource allocation and avoiding potential harm to the institution's infrastructure and costs.

**Keywords:** Cash Management System (CMS); technology; effective; efficient; banking services

## 1. INTRODUCTION

Speed, convenience, and security are essential aspects of service. With the advancement of information and communication technology, information systems play a crucial role in the business world. Companies and organizations often utilize these systems as a key element of their business strategy. This trend is particularly prominent in financial institutions, such as banks, which are responsible for managing public financial

services. To meet customer expectations and remain competitive, banks must implement efficient information system management and employ sophisticated technology.

In the current fast-paced technological landscape, almost all companies conduct administrative and payment activities through computerized accounting systems. Recognizing the diverse needs of customers, financial institutions offer a range of products and services. One such service is Cash Management, a pivotal factor in a company's financial success. Cash Management, an internet-based banking solution, allows corporate customers to monitor financial transactions online, providing them with the flexibility to manage funds and maximize returns at any time.

When technological advancements intersect with religion, it's undeniable that the Qur'an not only establishes fundamental guidelines for human life in relation to God, interactions with fellow beings, and actions toward the natural world, but also outlines the purpose of human existence. The Qur'an delves into the creation of living beings, including humans, encouraging their curiosity and stimulating their minds to explore the world around them. In the verses of the Al-Qur'an, Allah SWT gives His guidance by giving examples of what can be observed and for what purpose the observations are made, so that humans always make observations to look for bright spots from what Allah has, because the universe and the processes that occur in it are often stated as "the verses of Allah". So, researching the cosmos or the universe can be interpreted as "reading the ayatollahs". In the Al-Qur'an letter Al 'Alaq verses 1-5:

إِقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ ۝ خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ ۝ إقْرَأْ وَرَبُّكَ الْأَكْرَمُ ۝ الَّذِي عَلَّمَ بِالْقَلَمِ ۝ عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ ۝

Translation: "Read by (saying) the name of your God who created, He has created man from a clot of blood. Read, and your Lord is the Most Glorious, Who teaches (mankind) with a pen. He teaches people what they do not know".

God has hinted that people want to learn to gain knowledge. God's command is in his words: "read by (mentioning) the name of your God who has created. He created man from a clot of blood, read it and God is the Most Merciful. Who teaches people through the medium of the pen. He taught man what he did not know." What to read? What should be read is this universe created by God which contains a lot of knowledge. God deliberately created this universe to be studied by humans as a science. God has also given knowledge to humans since the beginning of human creation as a differentiator from other creatures. This can be seen in Surah Al Baqarah verses 31-33:

وَعَلَّمَ آدَمَ الْأَسْمَاءَ كُلَّهَا ثُمَّ عَرَضَهُمْ عَلَى الْمَلَكِ فَقَالَ أَتَدْعُونَ بِأَسْمَاءِ هَؤُلَاءِ إِنْ كُنْتُمْ صَادِقِينَ ۝ قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ ۝ قَالَ يَا آدَمُ أَنْبِئْهُمْ بِأَسْمَائِهِمْ ۝ فَلَمَّا أَنْبَأَهُمْ بِأَسْمَائِهِمْ قَالَ أَلَمْ أَقُلْ لَكُمْ إِنِّي أَعْلَمُ الْغَيْبِ السَّمُوتِ وَالْأَرْضِ وَأَعْلَمُ مَا تُبْدُونَ وَمَا كُنْتُمْ تَكْتُمُونَ ۝

Translation: *And He taught Adam the names (objects) of all of them, then He showed them to the angels, saying, "Tell Me the names of all of these (objects), if you are correct!" They replied, "Glory to You, we know nothing but what You have taught us. Indeed, You are the All-Knowing, the All-Wise." He (God) said, "O Adam! Tell them the names!" After he (Adam) mentioned their names, He said, "Did I not tell you that I know the secrets of the heavens and the earth, and I know what you reveal and what you hide?"*<sup>1</sup>

In these verses, it is explained that God teaches (gives) knowledge to humans that is not given to angels. God knows everything that is born and hidden (in the heart) and God's knowledge is very broad, covering all the secrets that exist in the heavens and on earth. The knowledge that God has given to humans is only a small part of God's entire knowledge, as reflected in God's words: "... and you were not given knowledge but a little." and study or seek knowledge. Knowledge will bring people to the recognition of the greatness of Allah SWT and only knowledgeable people who easily accept the reality of the greatness of Allah SWT.

Apart from the verses of Allah related to the development of science and technology mentioned above, in the hadith of the Prophet, he has also provided instructions regarding the use of time so that time. The Prophet Muhammad always taught his people to make the best use of time. Because "time" is often overlooked as something valuable, except when it runs out or the opportunity is lost. He said: "There are two advantages that many people neglect unless they are gone: health and free time." (HR Bukhari)<sup>2</sup> This Islamic perspective emphasizes the responsible use of technology. It is hoped that people utilize technology to its fullest potential in spreading knowledge and goodness, especially in enhancing work effectiveness for greater efficiency. The Cash Management System (CMS) is an online cash management application accessible via the Internet, designed for companies to conduct banking transactions. This service empowers customers to handle transactions and manage finances easily, quickly, accurately, and securely. It comes with various advanced features supporting business management, including domestic and global financial transactions, online registration, and digital tax payments. CMS caters to non-individual customers (companies/institutions), enabling cashless payments through the application using a mobile phone or laptop connected to the internet. The transaction process is flexible and highly secure with multiple layers of protection.<sup>3</sup>

In principle, the banking Cash Management System (CMS) aims to manage the finances of institutional/company customers which include; Collection Management, Liquidity Management Solution, Trade services and supply Chain Financing, and Payment Management. 1) Payment acceptance system services (Collection Management) include; money pick-up services (Cash Pick), Virtual Account (VA) payment systems, Auto Debit payments, electronic payment systems (electronic transfers) such as ATMs, mobile

<sup>1</sup> Ministry of Religion of the Republic of Indonesia, *the Koran and its translation*, PT. Dynamics of Light Library: 2017, p.6

<sup>2</sup> Lungit Marsudi Wening, S. Kom, *"Islamic Views on Technology and the Utilization of Social Media"*, in <https://dppai.uir.ac.id/pandangan-islam-tangan-on-technology-dan-peuntungan-media-social/> (12 December 2021)

<sup>3</sup> PT. Bank Negara Indonesia (Persero) Tbk, *"Cash Management"*, BNI Official Website. In <https://www.bni.co.id/id-id/bisnis/perbankan-bisnis/services/cash-management>, (5 September 2021).

banking, Internet banking, SMS banking, and others. 2) Liquidity management solutions (Liquidity Management Solution) include; Auto Sweeping and Range Balance Account. 3) Trade financing services and supplier relations (Trade Services & Supply Chain Financing) include; Bank Guarantees, Letters of Credit (LC), and Supplier/Distributor Financing. 4) Payment system services (Payment Management) consist of; Integrate Payment Management (ERP), E-Tax (Corporate Income & Value Added Tax Payment), E-Tax Customs (Import/Export/Excise Duties Payment), Payment of bills (payment of electricity, telephone, insurance, etc.), Payment wages, domestic remittances (Domestic Funds Transfers), and International Funds Transfers.<sup>4</sup>

The Cash Management System (CMS) for educational institutions is an integrated solution provided to schools, colleges, and universities. It includes a range of solutions designed to streamline education payments, generate accurate reports, and simplify payments for various purposes within educational institutions. This system facilitates payments to third parties, including employee salaries, tax payments, vendor transactions, and partnerships with other educational institutions.

The study was conducted to maintain consistency in research and focused solely on issues related to the role of the Cash Management System (CMS) in the use of banking services at state Islamic universities in Makassar City. As there is only one state Islamic university in Makassar, namely UIN Alauddin Makassar, the research delves deep into examining the role of the Cash Management System (CMS) specifically at UIN Alauddin Makassar. The variables under consideration are related to the CMS's role in banking services, its application, and decision-making strategies for selecting banking services, especially at UIN Alauddin Makassar.

Based on the aforementioned research problem, this study aims to understand the Role of the Cash Management System (CMS) in the Use of Banking Services at UIN Alauddin Makassar. The research serves two primary purposes: first, theoretically, it aims to contribute to the body of knowledge concerning the Cash Management System (CMS) in the Use of Banking Services at UIN Alauddin Makassar. Second, from a practical standpoint, it is expected to serve as valuable information for readers and as a reference for Islamic Financial Institutions, aiding them in enhancing their efforts and financial transaction services to the public, especially within state Islamic universities.

## **2. METHODS**

This type of research includes field research. Field research is a careful and critical examination or test in finding facts, or principles of diligent investigation to ascertain something.<sup>5</sup> Thus, this field research aims to accurately describe the conditions and the characteristics that exist there. The target and location that will be used as a research location is the Alauddin Makassar State Islamic University (UIN) campus as the only State

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<sup>4</sup>PT. Bank Negara Indonesia (Persero) Tbk, "BNI Integrated Cash Management Solution", (Jakarta: Transactional Banking Services Division, 2021), h. 6

<sup>5</sup>Husein Umar, *Research Methods for Business Thesis and Thesis*, (Jakarta: Rajawali Pers, 2009), p.3

Islamic University in Makassar City. The nature of this research is descriptive qualitative research according to Sumadi Suryabrata stating that descriptive research is research conducted for systematic, factual, and accurate descriptions of situations or events.<sup>6</sup> Based on the explanation above, descriptive qualitative research in writing this proposal is to systematically describe or describe facts and phenomena regarding the role of the cash management system in the Use of Banking Services at UIN Alauddin Makassar.

The source of data is one of the most vital in research. By using data sources, it will be known where the data was obtained. There are two types of data sources that the authors use in this study, including: Primary data sources are data sources that directly provide data to data collectors.<sup>7</sup> Thus, the primary data source can be said to be a data source that comes from the original or first source. The primary data sources in this study were Vice Chancellor II, the Head of the Bureau, the Head of the Finance Section and one of the treasurers and the Head of Pustipad at the tertiary institution which was the object of research. Secondary data sources are the second data source after the primary data sources. The data generated from this data source is secondary data.<sup>8</sup> Data Secondary data can be obtained from literature related to the Cash Management System as well as Islamic banking books such as: Banks and Other Financial Institutions written by Kasmir 12th printing published in 2013, Islamic Financial Institutions written by Nurul Huda and Mohammad Heykal 3rd printing in 2015, Banking and Islamic Financial Institutions by Djoko Muljono edition 1 of 2014, Fund Management of Islamic Banks written by Muhammad 3rd printing of 2017, Marketing Management of Islamic Banks by Herry Sutanto and Khaerul Umam printed 1 of 2013, Sharia Commercial Bank by Mia Lasmi Wardiah printed 1 of 2018, Islamic Banks From Theory and Practice by Dr. Muhammad Syafii Antonio print 1 of 2001, Islamic Financial System by International Shari'ah Research and Asyraf Wajdi Dusuki print 1 of 2015, as well as other books related to this research.

Data Collection Techniques are carried out by means of; firstly with interviews, interviews (interviews) are the process of obtaining information for research purposes by means of questions and answers while face to face between the interviewer and the respondent or the person being interviewed.<sup>9</sup> The form of interview that the researcher will use is a free guided interview, this free-guided interview is carried out freely. However, this freedom is still inseparable from the subject matter that the respondent will ask and has been prepared in advance by the interviewer. Interviews in this study were conducted together with the head of the finance department and the treasurer in order to find out what banking services are being used by the campus. The second is by means of documentation, documentation is looking for available data in the form of letters, diaries, memorabilia, reports and so on.<sup>10</sup> This documentation is necessary to obtain data related to institutional profiles, vision, and mission, as well as research-related matters, such as

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<sup>6</sup>Sumadi Suryabrata, *Research Methodology*, (Jakarta: PT. Raja Grafindo Persada, 2008), h. 75

<sup>7</sup>Sumadi Suryabrata, h. 39.

<sup>8</sup>Burhan Bungin, *Social and Economic Research Methodology*, (Jakarta: Kencana Persada Media Group, 2013), h. 129.

<sup>9</sup>Burhan Bungin, h. 133.

<sup>10</sup>Burhan Bungin, *Social and Economic Research Methodology*, (Jakarta: Kencana Persada Media Group, 2013), h. 154.

proof of student UKT payments transfers through banking services and receipts for employee salary payments via banking services. In line with the aforementioned data collection techniques, interviews and documentation methods will be employed to gather information for the research on the cash management system. These techniques will serve as tools to explore decisions regarding the use of banking services, including identifying which banks institutions have utilized for their services.

**Data Analysis Techniques** Data analysis is an effort made by working with data, finding patterns, sorting them into manageable units, finding out what is important and what was learned and deciding what to tell others.<sup>11</sup> The data, gathered from interviews and institutional documentation, is processed and analyzed using qualitative analysis. This analysis forms the basis of a discussion that explains the role of the Cash Management System in the use of banking services, utilizing an inductive approach. Inductive thinking involves drawing conclusions based on specific statements or facts, leading to general insights derived from field observations or empirical experiences. This specific data is compiled, processed, and studied to derive general meanings, forming statements or conclusions that are broad and applicable. In this analysis, the author employs an inductive approach, starting with specific information about the Cash Management System's use in banking services. These specifics are then generalized, leading to specific conclusions regarding the role of the Cash Management System in the researchers' use of banking services at UIN Alauddin Makassar.

### **3. RESULTS AND DISCUSSION**

#### **Cash Management System (CMS) application used by UIN Alauddin Makassar**

##### **a. Student Payment Center (SPC) Application**

UIN Alauddin Makassar manages student finances using the BNI Student Payment Center (SPC) application. The utilization of the BNI Student Payment Center (SPC) initiates with an institutional collaboration between UIN Alauddin as an educational institution and BNI as a bank, which oversees the payment acceptance system. This collaboration is formalized through a cooperation agreement (PKS). The process commences with proposals and offers from banks, who act as providers of the Student Payment Center (SPC) payment system service.

Mr. Nur Afif, ST. MT., Head of the UPT Center for Information Technology and UIN Alauddin Database, elucidated this process during an interview conducted by the author: "The collaboration process for using SPC begins with the collaboration agreement between the university and the bank. The application and cooperation procedures are managed through Deputy Chancellor 4, responsible for collaboration. The technical implementation follows, overseen by Vice Chancellor 2, who is in charge of the financial

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<sup>11</sup>Lexy J. Moelong, *Qualitative Research methodology*, (Bandung: PT. Remaja Rosdakarya, 2009), p. 248.

sector. Due to the technical nature of the SPC collaboration, coordination with the Information Technology Center and Database is crucial."

After formalizing the cooperation agreement to use the Student Payment Center (SPC) between UIN Alauddin Makassar and PT State Bank Indonesia (Persero) Tbk, the subsequent step involves UIN coordinating with the UPT Information Center and Database to establish technical communication with the Transactional Banking Services Division (currently renamed Div. WHS). For the implementation process, UIN Alauddin is mandated to have a Billing System, enabling educational institutions to manage their bills and provide billing data to Collecting Agents/Banks. Additionally, an integrated Academic System linked to the Billing System is essential.

The university's technical requirements include preparing a centralized student database encompassing data from all faculties, indispensable for the Student Payment Center (SPC) implementation. The communication framework employs Host to Host (from Host BNI to Host UIN Alauddin Makassar), utilizing WSDL (XML-Based) communication and SSL (https protocol) 1024-bit encryption for security. VPN connectivity on Public IP serves as the primary connection between Bank BNI and UIN Alauddin.

Prior to database synchronization, the university must set up a Linux server, either using an existing UIN server or performing a fresh installation. The institution must assign a public IP address directed to the server and provide SSH access credentials (username and password). Once all these prerequisites are met, BNI will install and configure MySQL, if necessary, and implement a database scheme tailored for BNI payment purposes. The setup includes service configuration for database synchronization between UIN Alauddin and BNI, along with the required security system adjustments. Subsequently, a joint trial is conducted, involving data insertion, updating, and deletion on both UIN Alauddin's and BNI's sides to confirm the seamless exchange of information."

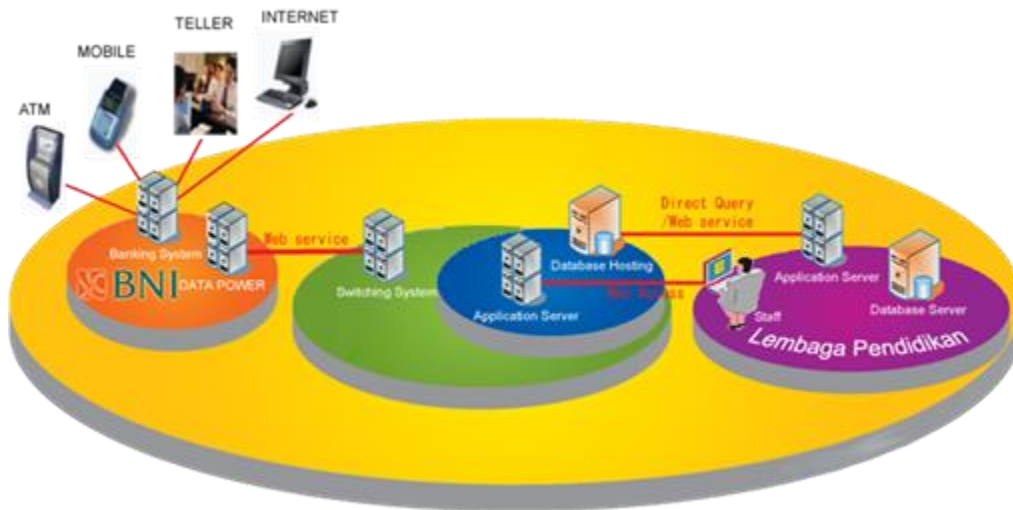


Figure 1. SPC Database Synchronization Flow of UIN Alauddin Makassar

The utilization of the Student Payment Center (SPC) significantly enhances the experience for prospective students and UIN Alauddin Makassar students. This system offers a wide array of BNI services, networks, and online channels, providing unparalleled convenience and flexibility for prospective students to complete registration payments. Payment services are accessible through various BNI channels, including Tellers, ATM/CRM, Internet Banking, and Mobile Banking. This service spans across all regions of Indonesia where internet services and networks are available. The primary appeal of this service lies in its affordability, simplicity, speed, and efficiency, establishing a payment system that is both seamless and cost-effective.

Furthermore, UIN Alauddin benefits from this system in multiple ways, including streamlined reporting and easy reconciliation of admissions data, ensuring comprehensive access to all information related to new student admissions. The selection of the BNI Student Payment Center (SPC) service by UIN Alauddin Makassar is highly rational. PT. Bank Negara Indonesia (Persero) Tbk, as a state-owned bank, consistently delivers services and contributes to the development of the Education Financial Ecosystem. Their efforts were acknowledged with an award at the 2021 Research and Technology Higher Education Award.<sup>12</sup>

## **b. Registration and Acceptance of New Students**

### ***1) Pre-Registration and Acceptance of New Students***

UIN Alauddin Makassar employs six registration pathways to admit new students: the National Selection for National Higher Education Entrance (SNMPTN), Joint Selection for National Higher Education Entrance (SBMPTN), National Academic Achievement Selection for State Islamic Religious Universities (SPAN-PTKIN), Entrance Examination for State Islamic Religious Universities (UM-PTKIN), Independent Entrance Examination (UMM), and Special Entrance Examination (UMK). These pathways provide students with the opportunity to select options that align with their academic abilities. New student registration at UIN Alauddin Makassar is conducted online using the Cash Management System (CMS) service.

The pre-registration phase for new students involves preparing necessary data, and checking hardware and software devices for the registration process. This stage significantly impacts the registration process's efficiency, serving as its initial framework. Universities must anticipate potential challenges and intricacies during this stage. After ensuring data, hardware, and software readiness, student data collection begins based on nominal payment. This data is uploaded into the payment system or application, acting as the master data for new student registration. The accuracy of uploaded student data, including payment details, hinges on validation and verification processes.

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<sup>12</sup>Inkana Izatifika R. Putri, BNI Wins Campus Financial Ecosystem Award from the Ministry of Education and Culture and Research and Technology, DetikNews, January 13, 2022, via <https://apps.detik.com/detik/https://news.detik.com/berita/d-5896815/bni-raih-award-campus-financial-ecosystem-from-kemendikbud-ristek>



The subsequent stage involves data synchronization with the BNI Student Payment Center (SPC) system. This synchronization aims to establish seamless data flow between servers, ensuring correct transmission without any collisions. It also updates and synchronizes data between university and BNI servers, who collaborate in managing and accepting new students at UIN Alauddin Makassar. The technical process of synchronizing student data for new student admissions at UIN Alauddin is conducted by the Information Technology and Database Center (PUSTIPAD) in collaboration with BNI, specifically through the Wholesale Division (WHS).

Communication between university units supporting the new student admissions system and BNI is highly efficient, facilitated by advanced communication facilities. The head of PUSTIPAD commented: 'The communication process between the university, particularly the PUSTIPAD team, and the BNI technology team regarding new student admissions is excellent and seamless. With advancements in communication facilities, coordination has become effortless. We can easily conduct data synchronization and pre-acceptance testing through various BNI channels such as tellers, internet banking, mobile banking, and ATMs.<sup>13</sup>

## ***2) Admission and Registration Process***

To register as a student at UIN Alauddin Makassar, follow the registration process according to the desired pathway. Registration for the SPAN PTKIN pathway, an academic achievement selection for state Islamic religious tertiary institutions, is by invitation. This selection is attended only by PTKIN campuses. Similar to this, selection for UM PTKIN pathway, an Entrance Examination for State Islamic Religious Colleges, is open for individual registration. Participants must pay a registration fee and complete the process online at [www.um-ptkin.ac.id](http://www.um-ptkin.ac.id).

SNMPTN route, although UIN Alauddin is a PTKIN, is part of the national selection for state universities. Participants need school approval and a login code to register at [www.snmptn.ac.id](http://www.snmptn.ac.id). For the UTBK SBMPTN route, create an LTMPT account via Portal.Ltmpt.ac.id. After filling out the online form, log in to SBMPTN.ac.id, complete biodata, and check results at [Announcement.SBMPTN.ac.id](http://Announcement.SBMPTN.ac.id).

For UIN Alauddin's independent entrance, register at <https://umm.uin-alauddin.ac.id>. Pay the registration fee at Bank BNI according to the schedule for a PIN. Use the PIN and password obtained from the bank to complete the registration form at the official website. Ensure all requirements, like a health certificate, are met. After submission, print the test card required for the independent selection exam. Check results at <https://siadin.uin-alauddin/umm/>.

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<sup>13</sup> Nur Afif ST.MT. (45 years), Head of UPT Information Technology Center and Database, Interview, Makassar 25 May 2022.

### **3) Channels and Registration Payment Techniques**

UIN Alauddin's new student admissions occur through six channels: the National Selection for National Higher Education Entrance (SNMPTN), Joint Selection for National Higher Education Entrance (SBMPTN), National Academic Achievement Selection for Higher Education State Islamic Religion (SPAN-PTKIN), State Islamic University Entrance Examination (UM-PTKIN), Independent Entrance Examination (UMM), and Special Entrance Examination (UMK). Pathways requiring a registration payment process collaborate with banks as Cash Management System (CMS) providers. Payment processes primarily utilize teller service channels, ATM machines, Mobile Banking, and SMS Banking.

Considering UIN Alauddin's partnership with BNI in using the Cash Management System (CMS), the registration payment process for each BNI channel will be described in detail. Payment of the SBMPTN UTBK fee via a teller channel or BNI Agen46 can be completed at the nearest BNI or BNI Agen46 office. Participants bring the pay code and NISN for processing, receiving proof of payment afterward.

Mobile banking payments involve several steps: log in to BNI Mobile Banking, select the payment menu, choose the tuition fee option, pick the registration service type (UTBK LTMPT at the institution), input the payment code and NISN, await payment confirmation, and save transaction proof. BNI SMS Banking payments are processed through the BNI SMS Banking application. Participants navigate to the Payment menu, select UTBK LTMPT, input the payment code and NISN, and proceed. An SMS response with payment details, including a pay code, name, NISN, date of birth, and amount, is received. Respond with PIN 1 & 2. A confirmation SMS follows, containing a reference number for the transaction, serving as proof of payment. ATM channel payments entail inserting the ATM card, selecting the payment menu, then choosing University, UTBK LTMPT, inputting the Pay Code and NISN, confirming payment information, and selecting YES to process the payment. A receipt is issued.

For the Independent Entrance Examination (UMM) acceptance pathway, registration fee payments can be made through various BNI channels. Participants can visit the nearest BNI office to purchase a UMM PIN via the teller channel. Alternatively, PIN purchases can be made at a BNI ATM. Insert the ATM card, select language, choose the payment menu, university, and Student Payment Center (SPC) menu. Enter the university code (UIN Alauddin code: 8012) followed by the registration package code (IPA = 01, IPS = 02, and IPC = 03). For instance, to purchase an IPA package, type --> 801201, confirm the bill amount, select 'yes pay,' and complete the transaction. PIN purchases can also be made via BNI Mobile Banking. Access the BNI Mobile Banking application, select Payment, tuition fees, the source of funds account, university (UIN Alauddin Makassar), billing number, confirm the bill amount, click process, and save the transaction proof, which can be downloaded later from the BNI Mobile Banking application's transaction proof menu.

#### **4) Reconciliation and Transfer**

Reconciliation and balance transfer represent the final stages in using the Student Payment Center (SPC) application. Reconciliation serves as the foundation for generating settlement reports and transferring funds, with obligations for both the Bank and Billers. During this phase, UIN Alauddin and BNI will align the registration payment data received. Reconciliation aims to ensure that the payment receipt data received by BNI from all payment channels matches the registration data at UIN Alauddin. This reconciliation process occurs daily and is followed by the transfer of payment balances one day after the payment receipt date (H+1). The entire balance of appropriate payment receipts will be transferred from the Alauddin UIN SPC escrow account to the UIN Alauddin Makassar Acceptance account.

#### **c. Payment of Student Tuition Fees (UKT)**

##### **1) Pre-Payment Stages**

The payment of student tuition fees or UKT occurs every semester as a requirement for students to attend lectures in the current term. Before the tuition payment process takes place, there is a pre-payment stage, which is the initial preparation phase to facilitate the smooth payment or receipt of the tuition. The pre-payment process for tuition is similar to the process for registering new students, with the difference being that the tuition payment process does not involve registration stages. Therefore, the tuition payment process is simpler and shorter.

The pre-payment process for tuition at UIN Alauddin Makassar begins with the preparation and entry of payment data, including the names and payment amounts for each student. Subsequently, data synchronization is performed with the BNI SPC system. This synchronization aims to update data and connect the UIN Alauddin system with the bank's SPC.

Apart from data preparation as the primary material for receiving UKT payments, during the pre-payment stage, administrative correspondence is also conducted to fulfill institutional cooperation requirements, particularly related to the financial management stages of receiving student payments through the Student Payment Center (SPC). The university notifies BNI, its partner, through an official letter, which contains information about the tuition fee (UKT) payment schedule. BNI, as the university's partner bank, utilizes this information to prepare for the payment reception process. Both BNI and the university disseminate the payment schedules internally and externally using available communication channels.

Concerning the dissemination of information about the tuition payment schedule, the university uses its online platforms and information announcements. BNI, as the banking partner responsible for ensuring smooth payment processes, communicates payment schedules through announcements. To maintain uniformity in information and

services, BNI disseminates announcements to all service offices and uses internal communication facilities accessible online.

During a direct interview with the head of the finance section, it was mentioned that, "For the process of receiving student tuition payments, the university sends an official letter to BNI each time a payment is made. This letter provides information and notification, allowing BNI to prepare for the payment reception process. Typically, BNI assists in preparing information such as announcement banners and BNI mobile service cars if necessary."<sup>14</sup>

## ***2) Receiving Payment For Tuition Fees***

The process of receiving payment for tuition fees or UKT at UIN Alauddin utilizes the Host to Host BNI Student Payment Center (SPC), which can be completed online 24 hours a day at all BNI banks in the country and abroad. These payments are applicable to all S1, D3, and Professional students, except for Postgraduate tuition payments, which are made using a Bank Mandiri Virtual Account (VA). Students who fail to pay tuition according to the schedule set by UIN Alauddin are automatically placed on academic leave by the university, except for students who are ill and can provide a medical certificate.

Tuition payments through the Host to Host BNI Student Payment Center (SPC) do not incur transaction fees; they are free. This information was conveyed by Deputy Rector 2 of UIN Alauddin Makassar: "Tuition payments are processed through BNI. Students are not charged any fees, so they only pay the actual amount of each tuition payment. In normal circumstances, there would be fees, but due to our collaboration and the provision of free services stated in the cooperation agreement, the foundation is clear"<sup>15</sup>. This explanation clarifies that the student tuition payment process, facilitated through the BNI Student Payment Center (SPC) Host to Host collaboration, does not incur any transaction fees imposed by BNI. As a result, each student is only required to pay the tuition fee.

## ***3) Channels and Tuition Payment Methods***

Tuition payments can be made through various BNI bank channels, including tellers, ATM/CRM, Agen46, BNI Internet Banking, BNI Mobile Banking, and BNI SMS Banking. Payments made via tellers involve visiting the nearest BNI branch office, sub-branch office, cash office, or payment point. To make tuition payments at a student teller, simply provide the Student Identification Number (NIM). The teller will process the transaction, inform the tuition payment amount, and upon receiving the payment, provide a payment receipt to the student.

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<sup>14</sup> Asniati, SE. (56 years), Head of the finance department of UIN Alauddin Makassar, Interview, Makassar 29 October 2022.

<sup>15</sup> Prof.DR.Wahyuddin Naro M.Hum (56 years), Deputy Chancellor 2 for general administration and finance at UIN Alauddin Makassar, Interview. Makassar September 29, 2022.

Aside from tellers, tuition payments can also be made through ATM/CRM channels. To make a payment via ATM/CRM, insert the ATM card, select the language (Indonesian/English) on the main menu, choose the payment option, select the university, pick the Student Payment Center (SPC) menu, enter the university code (8012), followed by your NIM/REGISTRATION NUMBER. For example, if your number is 60200106017, the format would be -> 801260200106017. Confirm the billing amount displayed on the screen and proceed with the payment. Save your transaction receipt as proof of payment; photocopies are sufficient and do not require a stamp from a BNI officer.

Tuition payments can also be conveniently made through BNI Mobile Banking. This method is easy, effective, and efficient, allowing payments from anywhere with an internet connection. To pay via BNI Mobile Banking, enter the BNI Mobile Banking application, select Payment on the main menu, then choose Education Fees. Adjust the debit account, change the service type to Payment, select UIN Alauddin Makassar as the college, enter the billing number according to your NIM/REGISTRATION NUMBER, and confirm the billing amount displayed on the screen (ensure it matches the current semester). Enter your Transaction Password, then press Continue to complete the payment. Save the Successful Transaction Display, either by taking a screenshot or downloading the proof of transaction through the settings menu, and use it as proof of payment.

Furthermore, tuition payments can also be made using the BNI Internet Banking channel with the following steps: access [www.bni.co.id](http://www.bni.co.id), select Personal Internet Banking, enter User ID and password, choose the transaction menu, click Purchase/Payment, then select bill payment and education fee. Pick UIN Alauddin as the college, enter your NIM as the billing number, confirm the transaction using the eight-digit number displayed on BNI E-Secure (token), and click pay. Upon successful completion, a confirmation screen will appear automatically. Choose the file format for printing or download the proof of payment as evidence of tuition payment.

#### ***4) Reconciliation and Balance Transfer***

Reconciliation and balance transfer are the final stages of the payment receipt process. Before the delegation of reconciliation is carried out, BNI will carry out a data reconciliation process, the data reference is Bank data. If the Bank is unable to send reconciliation data, the educational institution data will be used as the reference data. This reconciliation aims to ensure the conformity of university data and payment acceptance data at the Bank. Reconciled data is data between Educational Institutions (Billers) and Bank data to ensure there are no data discrepancies. The reconciliation result data will be used as the target for making Settlement reports or the transfer of funds by the Bank (Bank Obligations) and Billers (Biller Rights). The follow-up to the results of data reconciliation is to make a Flag (Force Payment) or UnFlag (Cancel Payment) on the Biller data to finalize the UKT payment receipt data for UIN Alauddin students through the BNI Student Payment Center (SPC).

#### **d. Payment of Employee and Lecturer Salaries**

One feature of the Cash Management System (CMS) is the payroll system. BNI utilizes the Cash Management System (CMS) for UIN Alauddin's salary payments in two ways. Firstly, for routine salary payments, the payroll process is conducted by the center through the State Treasury Service Office (KPPN). Adhering to the Ministry of Finance regulations, the salary payment process involves submitting a Master Salary Payment Order (SPM) no later than the 15th of the month prior to the payment month. UIN Alauddin employee salaries are credited to their respective BNI accounts on the 1st of each month. Additionally, payments for Lecturer Certification (SERDOS) are processed through the center. These payments are made every month in the first week.

Secondly, UIN Alauddin directly handles the payment of remuneration for its employees using the BNI Cash Management System (CMS). Through the treasurer, remuneration payments are processed online and in real time. During the remuneration payroll process, the treasurer can upload payment data according to the specified format either directly on the payment schedule or through the scheduled options. The scheduled payment options facilitate easier input and upload of payment data before the payment schedule. The Cash Management System (CMS) automatically schedules payments according to the specified times.

According to the treasurer's explanation: "Employee remuneration payments occur in two stages: P1 remuneration payments are made in the 2nd week of each month, while P2 remuneration payments are made in the 3rd week of each month. Salary payments and certification of UIN Alauddin lecturers are handled by the center through the KPPN, whereas remuneration and other payments are processed online by ourselves using BNIDirect. This ensures that all salary and remuneration payments are made promptly and securely.<sup>16</sup> The process of paying UIN Alauddin's salaries has been streamlined through the implementation of a Cash Management System (CMS), ensuring the effectiveness and timeliness of payments to employees and lecturers. By utilizing an online Cash Management System (CMS), the university achieves significant time and cost efficiencies. The treasurer is no longer required to physically visit the bank; salary processing can now be conducted from anywhere and even on a scheduled basis.

#### **e. Non-Academic Financial Management**

UIN Alauddin Makassar is a public service university, also known as a BLU (Badan Layanan Umum). In simple terms, UIN Alauddin has a certain degree of flexibility in managing its organization, particularly in budget and financial management. This flexibility allows UIN Alauddin to efficiently handle all potential sources of financial income, including managing non-academic finances. The university possesses non-academic financial resources such as hotels, polyclinics, and campus canteens. Utilizing the existing BNI Cash Management System (CMS) to its fullest potential, UIN Alauddin can effectively manage all income sources by employing various supporting devices and

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<sup>16</sup> Dewi Syahadatina, SE. (46 years), treasurer of UIN Alauddin Makassar, Interview, Mkassar 24 September 2022.

facilities that facilitate smooth payment processes. Currently, UIN Alauddin manages its income sources through payment channels such as direct transfers via tellers, Mobile Banking, SMS Banking, Agen46, EDC machines, and QRIS. All revenues generated by UIN Alauddin are channeled into the university's BLU account.

## **f. Tax Management**

Regarding tax management, UIN Alauddin falls under the Compulsory Collection category (WAPU). The term "Wapu" applies to government treasurers, business entities, or government agencies designated to collect, deposit, and report VAT owed by PKP upon submission of BKP/JKP to the respective government agency or agency.<sup>17</sup> The head of finance explained, "UIN Alauddin pays a considerable amount of taxes, so we often have to put in extra effort, especially towards the end of the year. Previously, we made tax payments manually by visiting BNI tellers with billing payments. However, now we process them online using BNIDirect, which greatly enhances time efficiency and helps manage archives of proof of tax payments."<sup>18</sup>

The process of paying taxes collected by UIN Alauddin is fully conducted online through the BNI Cash Management System (CMS). It was previously done manually, involving stages such as creating billing through the tax website and then making payments through bank tellers. Presently, UIN tax payments have become more streamlined as they are done entirely online using the BNI Cash Management System (CMS) with the MPN G3 e-TAX feature. This service used by UIN Alauddin is an advanced feature of BNI's Cash Management System (CMS), providing a fully online service in collaboration with the Director General of Taxes.

The online tax payment process through the Cash Management System (CMS) BNI is carried out by UIN Alauddin employees designated to manage taxes. They access BNI Direct via <https://bnidirect.bni.co.id>, verify the taxpayer number (NPWP), create the billing, validate billing data, pay taxes, and generate SSP Payment Billing. Proof of state revenue, along with the state revenue transaction number (NTPN), is generated instantly, allowing for automatic, real-time reporting and delegation (H+0).

The primary objectives of utilizing a Cash Management System (CMS) for institutions or companies are time efficiency, accuracy, streamlined administration, and flexibility. The implementation of an online tax payment system as a BNI Cash Management System (CMS) feature has significantly simplified UIN Alauddin's tax payment process when compared to manual methods. Tax payments through the Cash Management System (CMS) can be completed without visiting the bank, offering the convenience of anytime, anywhere transactions without constraints of space and time.

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<sup>17</sup> Government of the Republic of Indonesia, "Ministry of Finance : Directorate General of Taxes" in <https://www.online-pajak.com/about-ppn-efaktur/wapu>.

<sup>18</sup> Asniati SE, (56 years), Head of the finance department of UIN Alauddin Makassar, interview, Makassar 29 October 2022.

## **CONCLUSION**

In conclusion, the implementation of the Cash Management System (CMS) at UIN Alauddin Makassar has revolutionized various aspects of the university's financial processes, leading to efficiency, accuracy, and convenience in handling diverse transactions. Here are the key takeaways from the comprehensive analysis of UIN Alauddin's CMS utilization:

- a. **Student Payment Center (SPC) Implementation:** UIN Alauddin's partnership with BNI through the Student Payment Center (SPC) application has streamlined student payment processes. This collaboration formalized through a cooperation agreement, involves meticulous coordination between the university's IT department and BNI. The online SPC system has significantly enhanced the student experience, offering various payment channels and ensuring affordability, simplicity, and speed in the payment process.
- b. **New Student Admissions:** The university's meticulous approach to new student admissions involves comprehensive pathways and intricate registration processes. The collaboration with BNI for payment, facilitated through various channels such as tellers, ATMs, Mobile Banking, and SMS Banking, ensures smooth registration fee payments. The synchronization of data between university and BNI servers guarantees accurate information exchange.
- c. **Tuition Fee Payments (UKT):** The pre-payment stages for tuition fees are efficiently managed, encompassing data preparation, synchronization with the BNI SPC system, and administrative correspondence. The payment process itself is simple and transparent, facilitated through various BNI channels without incurring any transaction fees. Reconciliation and balance transfer stages finalize the payment receipt process.
- d. **Employee and Lecturer Salaries:** UIN Alauddin's payroll system, a feature of the CMS, operates seamlessly through collaboration with BNI. Routine salary payments, certification of lecturers, and remuneration payments are processed efficiently through scheduled online transactions, ensuring timely and secure payments.
- e. **Non-Academic Financial Management:** UIN Alauddin's flexibility as a public service university enables it to effectively manage non-academic finances, including income from sources such as hotels, polyclinics, and campus canteens. The CMS, in conjunction with various payment channels, facilitates streamlined management of these financial resources.
- f. **Tax Management:** UIN Alauddin's tax management, categorized as Compulsory Collection (WAPU), has been significantly enhanced through the CMS. Online tax payments, managed through the BNI CMS, have replaced manual methods, providing time efficiency, accuracy, and flexibility. The integration of MPN G3 e-TAX feature ensures real-time reporting and delegation, simplifying the tax payment process.



In essence, the CMS implementation at UIN Alauddin Makassar stands as a testament to the university's commitment to leveraging technological advancements for efficient financial management. Through strategic collaborations with BNI and meticulous coordination within its internal departments, UIN Alauddin has achieved a seamless and effective financial ecosystem that benefits students, staff, and the institution as a whole.

## REFERENCES

- Abdurrahman, Nanan Hardiana (2015). *Marketing Strategy Management*. CV. Faithful Library: Bandung.
- Adara, John. (1997). *Effective leadership*. (The ultimate guide to developing leadership skills). Dahara Prize: Semarang.
- Adam Al Kausar, Toddy Aditya, Dini Aulia Rizky, *Application of a non-cash transaction system in implementing direct shopping at the Tangerang City Social Service*, Journal of Accounting and Financial Research, Volume 9 no.1 (year 2021) h.1; in <http://ejournal.upi.edu/index.php/jrak>, (12 September 2012).
- Akbar Juliansyah, "Calculation of the Tangible Benefits of Implementing a Cash Management System at Regional Banks", National Seminar on ICT and Social Sciences (socio tech) STIMIK Bumigoro, (10 October 2017); in <https://journal.universitاسbumigoro.ac.id>, (12 September 2021).
- Alfin Andrianto Saputra, Rinda Hesti Kusumaningtyas, Nita Alfiani, "Identification of Factors Determining Consumer Decisions in Choosing Banking Products (Case Study: Student of UIN Syarif Hidayatullah Jakarta)", Informatics Studies: Journal of Information Systems, p.1 (2017), in <https://onesearch.id/Record/IOS553.article-7746>, accessed on 19 September 2021.
- Amelia, Rizky, *Analysis of the Factors Influencing Customers' Decisions to Use Islamic Banking Services*, in <http://scholar.unand.ac.id/6376/>, (12 September 2021).
- Antonio, Muhammad Shafii. (2001). *Sharia Bank (Theory and Practice)*. HumanGem: Jakarta.
- Ascarya, (2013). *Sharia Bank Contracts and Products*. Rajawali Press: Jakarta.
- Badeni. (2014). *Leadership and Organizational behavior*. Alfabet: Bandung.
- Bisnis.com, *BNI Wins Euromoney Version of Cash Management Services*, in <https://mbisnis.com/amp/read/20201229/90/1336549/bni-jadi-juara-layanan-cash-management-versi-euromoney>, (31 October 2021).
- Dude, Burhan. (2013). *Social and Economic Research Methodology*. Kencana Persada Media Group: Jakarta.
- Creswell, John W. (2019). *Research Design (Qualitative, Quantitative and Mixed Methods Approach)*. Student Libraries: Yogyakarta.
- Darmawan, Rizky. (2013). *Decision Making*. Alfabet: Bandung.
- Sit down, Ashraf Wajdi. (2015). *Islamic Financial System (Principles & Operations)*. PT. Raja Grafindo Persada: Jakarta.

- AL-Hahid, (2017). *Koranulkarim*. PT. Dynamics of Library Light: Bekasi.
- Herawaty, Etta Mamang., Andry and Liling Listyawati. *Determinants of the Decision of Muslim and Non-Muslim Customers Choosing Sharia Bank Services in Surabaya*, Journal of Administrative Sciences, Volume XIV no.2 (2017); in <http://jia.stialanbandung.ac.id>, (12 September 2021).
- Hermansyah, (2011). *Indonesian National Banking Law*. Kencana Prenada Media Group: Jakarta.
- Huda, Nurul and Mohammad Heykal. (2015). *Islamic Financial Institutions (Theoretical and Practical Review)*. Prenamedia Group: Jakarta.
- Husayn Umar. (2009). *Research Methods for Business Thesis and Thesis*. Rajawali Press: Jakarta.
- Idri, H. (2017). *Economic Hadith (Economics in the perspective of the prophet's hadith)*. Kencana: Jakarta.
- Indonesian Bankers Association (IBI). (2016). *Understanding the Bank Business*. Gramedia Main Libraries: Jakarta.
- Ishmael. (2011). *Sharia Banking*. Kencana Prenada Media Group: Jakarta.
- Big Indonesian Dictionary (Online). <http://kbbi.web.id/> (1 January 2022)
- Cartoni, Kartini. (2002). *Leaders and Leadership*. PT. Raja Grafindo Persada : Jakarta.
- cashmere. (2013). *Banks and Other Financial Institutions*. Rajawali Press: Jakarta.
- cashmere. (2008). *Banking Basics*. Rajawali Press: Jakarta.
- cashmere. (2014). *Banking Management*. Rajawali Press: Jakarta.
- Khotibul Umam, Khotibul. (2016). *Sayriah Banking Fundamentals and Dynamics of Its Development in Indonesia*. Rajawali Press: Jakarta.
- Kotler, Philip. (2003). *Marketing Management*. PT Index: Jakarta.
- Ma'arif, Saiful. (2021). *Factors Influencing Customers' Decisions to Make Transactions at Islamic Banks*, in <http://eprints.ums.ac.id/43421/>, (12 September 2021).
- Macmud, Amir. (2017). *Islamic Economics for a Better World*. Salemba Empat: South Jakarta.
- Mia Lasmi Wardiyah, Mia Lasmi. (2018). *Sharia Commercial Bank*. Faithful Library: Bandung.
- Misbahuddin. (2012). *E-Commerce and Islamic Law*. Alauddin University Press: Makassar.
- Moelong, Lexy J. (2009). *Qualitative Research Methodology*. PT. Rosdakarya Youth: Bandung.
- Muhammad Syafi'i Antonio. (2001). *Islamic Bank from Theory to Practice*. Gema Insani, h. 123: Jakarta.
- Mohammed. (2017). *Sharia Bank Fund Management*. PT. Raja Grafindo Persada: Depok.
- Muljono, Joko. (2015). *Islamic Banking and Financial Institutions*. Ando Offset: Yogyakarta.
- Musafa'ah, Suqiyah. *Interpretation of Verses of Islamic Economic and Business Law*. UIN Sunan Ampel Surabaya: Government of Indonesia (Gol) and Islamic Development Bank (IDB).
- Patriana, Ela and Nurismalatri, *Analysis of Factors Determining the Decision of Muslim Consumers in Choosing Banking Services: Islamic Banks Vs Conventional Banks*, Al-Masraf (Journal of Financial and Banking Institutions), Volume 3 no.1 (2018); in <https://journal.febi.uinb.ac.id>, (12 September 2021).

- Permadi, KSP 1996. *Leaders & Leadership in Management*. Jakarta: Publishing Rineka Cipta.
- Praja, Juhaya S. (2013). *Sharia Bank Marketing Management*. Faithful Library: Bandung.
- Prananda Ayu Agitha & Datu Cristian, (2016). *The Role of Management Accounting Information Systems in Making Fixed Asset Investment Decisions at PT. Etmieco Bitung Sea Facility*. <http://ejournal.unsrat.ac.id> (12 December 2021).
- PT. Bank Negara Indonesia (Persero) Tbk. (2021). *BNI Integrated Cash Management Solution*, (Transactional Banking Services Division): Jakarta.
- PT. Bank Negara Indonesia (Persero) Tbk. (2021). *Cash Management*, BNI Official Website. <https://www.bni.co.id/id-id/bisnis/perbankan-bisnis/services/cash-management>, (5 September 2021)
- Sahroni, Oni. (2019). *Contemporary Muamalat Fiqh (Discussing Contemporary Economics)*. Republika Publisher: Jakarta.
- Salsabilah, Shofiyah. (2019). *Factors Influencing Undergraduate Students in Islamic Economics Not Using Sharia Banks as the Main Tool in Conducting Transactions (Case Study of Undergraduate Students of Brawijaya University Class of 2015-2016)*, Scientific Journal (2019); in <http://docplayer.info/178297940-Jurnal-ilmiah-disusun-oleh-shofiyah-salsabila.html>, (12 September 2021).
- Sangadji and Sopiah. (2013). *Consumer Behavior*, p.121. Andi: Yogyakarta.
- Sari, Imelda, "Analysis of the Implementation of the Cash Management System in Regional Financial Management at PIK Pulogadung", *Journal of Economics & Management*, University of Bina Sarana Informatika, vol 18 no.1 (March 2020). <https://repository.bsi.ac.id/index.php>, (12 September 2021).
- Shihab, Quraysh. (2021). *Sharia Economics Business and Bank Interest*. Lantern Heart Publisher: South Tangerang.
- Sudjana, Nana. (2011). *Guidance on the Preparation of Scientific Work*. Bluelight: Bandung.
- Sugiono. (2015). *Understanding Qualitative Research*. Alfabet: Bandung.
- Sugiyono. (2016). *Quantitative Research Methods, Qualitative, and R&D*. Alfabet: Bandung.
- Suryabrata, Sumadi. (2008). *Research methodology*. PT. Raja Grafindo Persada: Jakarta.
- Suryanto, Dasep. (2019). *Effective Leadership Communication*. PT. Gramedia Main Libraries: Jakarta.
- Tri Wahyudi. (2021). "Virtual Account-Based Cash Management at PT. PLN (Persero) West Java Power Plant UPP", *Journal of Scientific Accounting at Pamulang University*, Volume 9 no.2; in <http://openjournal.unpam.ac.id>, (12 September 2021).
- Triyanto, Damasmika Windu, Supri Wahyudi Utomo, Farida Styaningrum. (2018). "Analysis of the Effectiveness of Implementing a Cash Management System (CMS) in Increasing Value Added Activity at Bank Rakyat Indonesia Madiun Branch", *Journal of the Scientific Forum for Accounting Education*, vol 6 no.2. <http://prosiding.unipma.ac.id>, (12 September 2021).
- UIM Makassar, "Smart Campus", UIM Official Website <https://pmbuimmakassar.ac.id/> (5 September 2021).
- Umam, Khotibul. And Setiawan Budi Utomo. (2017). *Sharia Banking*. PT. Rajagrafindo Persada: Jakarta.

Republic of Indonesia Law Number 21 of 2008.

Muhammadiyah University (Unismuh) Makassar, "*See Unismuh-Muhammadiyah University Makassar*"; UNISMUH official website <https://simak.unismuh.ac.id>, (5 September 2021).

Wardiyah, Mia Lasmi. (2018). *Sharia Commercial Bank*, CV. Faithful Library: Bandung.

Wening, Lungit Marsudi, S. Kom, "*Islamic Views About Technology and Utilization of Social Media*", <https://dppai.uii.ac.id/pandangan-islam-entang-technology-dan-peuntungan-media-social/> (December 12, 2021)

Widyaningsih Titi. (2015). "*Cash Receipt and Cash Disbursement Information System at the Bukit Asri Hotel, Semarang*". <http://jornalstiesia.ac.id> (5 September 2021).

Wirapradnyana, Gede Adi, "*Factors Influencing Consumer Decisions to Become Customers of PT Bank Syariah Mandiri Buleleng Sub-Branch Office*", in [http://onsearch.id/Record/IOS1584.article2063?widget=1&repository\\_id=54](http://onsearch.id/Record/IOS1584.article2063?widget=1&repository_id=54), (12 September 2021).