Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Informatics

Bachelor Thesis

Comparative Analysis of transactions in Stellar and Western Union

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

BACHELOR THESIS ASSIGNMENT

Emerson James Fallah

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Thesis title

Comparative Analysis of transactions in Stellar and Western Union

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Objectives of thesis

The goal of this thesis is to evaluate a comparative analysis of two payment platforms: Stellar and Western Union, to show the similarities and differences between both platforms. It puts forward limitations associated with the Stellar platform and as well the Western Union platform and shows the problems associated with Western Union and the solutions provided by the Stellar platform. The comparative analysis shows that the Stellar platform has a higher reliability factor, effectiveness, and efficiency.

Methodology

The bachelor's thesis is divided into two main parts, the theoretical part and the practical part. The theoretical part gives a general overview of the Stellar and Western Union platforms, what these platforms share, their solutions and how these two platforms offer services to users including their processes. The practical part of the thesis provides calculated data on time, efficiency, and transparency of transactions. Furthermore, the thesis continues by evaluating and comparing the data.

The proposed extent of the thesis

30-40 pages

Keywords

comparative analysis, Western Union, centralization, P2P transaction, Stellar, decentralization, data analysis, data processing

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Recommended information sources

A comparative study: Blockchain Technology Utilization Benefits, challenges and functionalities. IEEE Xplore. (n.d.). Retrieved July 25, 2022, from https://ieeexplore.ieee.org/abstract/document/9317729

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The Bachelor Thesis Supervisor

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Supervising department

Department of Systems Engineering

Prague on 10. 07. 2023

Declaration

I declare that I have worked on my bachelor thesis titled "Comparative Analysis of transactions in Stellar and Western Union" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on ………………………………...   _____

Acknowledgement

I would like to thank Mgr. Ing. Lucie Chytilová, Ph.D and all other persons, for their advice and support during my work on this thesis.

Comparative Analysis of transactions in Stellar and Western Union

Abstract

The subject of this thesis is comparative analysis. Comparative analysis shows the comparison of two or more processes, objects, or platforms. It is also used to distinguish the similarities and differences.

The goal of this thesis is to evaluate a comparative analysis of two payment platforms: Stellar and Western Union, to show the similarities and differences between both platforms. It puts forward limitations associated with the Stellar platform and as well the Western Union platform and shows the problems associated with Western Union and the solutions provided by the Stellar platform. The comparative analysis shows that the Stellar platform has a higher reliable factor, effectiveness, and efficiency.

Komparativní analýza transakcí v Stellar a Western Union

Abstrakt

Předmětem této bakalářské práce je srovnávací analýza. Srovnávací analýza slouží
k porovnání dvou či více procesů, objektů nebo platforem. Používá se tedy k identifikování
podobností a rozdílů.

Cílem této bakalářské práce je vyhodnotit srovnávací analýzou dvě platební platformy:
Stellar a Western Union. Ukázat podobnosti a rozdíly mezi oběma platformami. V práci jsou
předkládána omezení spojená jak se Stellar platformou, tak i s platformou Western Union.
Nicméně srovnávací analýza ukazuje, že Stellar platforma má vyšší spolehlivý faktor,
efektivitu a efektivitu. Jsou zde prezentovány problémy spojené s Western Union platformou
a řešení, která poskytuje právě Stellar platforma.

Klíčová slova: komparativní analýza, Western Union, centralizace, P2P transakce, Stellar,
decentralizace, analýza dat, zpracováni dat

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List of abbreviations

PoA	Proof of Agreement
SCP	Stellar Consensus Protocol
API	Application Programming interface
SDF	Stellar Development Foundation
MTCN	Money Transfer Control Number
KYC	Know Your Customer
AML	Anti Money Laundering
SBA	Small Business Administration
PPP	Payment Protection Program
CeFi	Centralized Finance
DeFi	Decentralized Finance
US	United States
ATM	Automatic Teller Machine
ID	Identification
USD	United States Dollar
WUBS	Western Union Business Solution
FEC	Forward Exchange Contracts
LSO	Leveraged Structure Option
NDFs	Non-Deliverable Forwards
CFD	Contracts for Difference
IDE	Integrated Development Environment

1 Introduction

Transaction as we know it has experienced extensive growth from using cattle, land, precious metal to normal day cryptocurrency. Financial systems were based on centralization, where an entity is backing the value of a currency, with a big force at their back. With the introduction of blockchain and it been decentralized, reliable and permissionless, an imputable currency is introduced. Decentralized systems embrace most of the available products or services in centralized systems: stable coins, asset exchanges, loans, trading services but as well leverages these products and rapidly expand to more complex services, such as options and derivatives. Financial platforms are the most promising industry and are growing rapidly with the support of cutting-edge technologies. The traditional Centralized Finance (CeFi) ecosystem is confusing because most users are not aware of the underlying terms and conditions or agreement of financial assets. Decentralized Finance (DeFi) on the other hand, is an ecosystem that offers transparency, control, and accessibility to the global market.

Centralized Finance is the traditional way of banking or conducting business as we know it. In centralized finance, all business transactions are handled through a central body. Funds are managed by specific individuals, which means during the time of conducting the transaction, users or customers have no information about the overall cost, no exact time as to when it will be completed.

Decentralized Finance is an alternative financial infrastructure, whose principal purpose is to replicate existing financial services in a more open, interoperable, and transparent way. In decentralized finance, financial services and functions are provided through a blockchain without involving centralized intermediaries. Core components of decentralized finance includes distributed ledger systems and smart contracts, which pose an alternative to current financial system.

This thesis provides a comparative analysis of two of the biggest financial platforms as research objects – Stellar and Western Union. The analysis compares their similarities and differences in efficiency, transparency, cost, and time of each transaction. Analysis further shows how users could benefit from the solutions debuted by the Stellar platform and Western Union platform.

The theoretical part gives a general overview of the Stellar and Western Union platform, what these platforms share, their solutions and how these two platforms offer

services to users including their processes. The practical part of the thesis provides calculated data of time, efficiency, and transparency of transactions. Furthermore, the thesis continues by evaluating and comparing the data.

2 Objectives and Methodology

2.1 Objectives

This thesis examines a comparative analysis between The Stellar Network and Western Union platform. A comparison to show the similarities and differences between these two platforms. It also identifies the limitations of these two ways of conducting transactions. While Western Union method is well known, this thesis argues that Stellar platform provides many possibilities that Western Union does not have and does not seem to provide in the future.

2.2 Methodology

The methodology of this thesis commences with the introduction of the concept of transactions and how it has developed overtime. The theoretical part is based on analysis of available scientific information sources. In the practical part, an online survey will be conducted, analysed, and backed with a simple application used purposefully for testing and proving data given by Stellar. Based on the synthesis of the gained knowledge, the main problems and barriers that prevent the public from accessing and taking advantage of decentralized platforms would be identified. To assert services from a decentralized platform, a prototype using a software tool will be developed. A possible recommendation will be described for centralized and decentralized platforms.

3 Theoretical Part

The theoretical part of this thesis compares the two chosen financial platforms (Stellar and Western Union). We further look at a general overview of the two platforms, how they came into existence, their solutions and how these two platforms offer services to customers. In the later part, it illustrates the processes of both platforms, their similarities, and differences and if necessary, suggests areas in which each platform could improve.

3.1 Stellar Network

Stellar is an open-source network for currencies and payments. Stellar network makes it possible to create, send and trade digital representations of all forms of currency, enabling them to operate under one single network. Stellar network was launched in 2014. Since then, it has recorded over 2 billion operations over 6.5 million individual accounts. The software runs across a decentralized, open network that handles millions of transactions each day. Stellar network relies on blockchain to maintain the network in sync. The Stellar network has its own digital currency called "lumen". This currency is required in small amounts for activating accounts and making transactions. The Stellar network is known to be the fastest, cheapest and more energy-efficient than most blockchain-based systems.

Stellar network has no owner. It is public. One can say it is own by the public, this means:

- ❖ No entity, including Stellar Development Foundation (SDF), can control the activities or data on the network.
- ❖ SDF is unable to stop or reverse any transaction on the network.
- ❖ SDF does not maintain the consumer-facing products built on the network.

3.1.1 Who / What is Stellar for

End-users mostly utilizes the Stellar network because of it been fast, efficient, savings and using digital currency. For institutions and developers, its an open financial infrastructure, accessibly by anyone. Stellar has been cryptocurrency adjacent but the

software itself is intended to enhance the existing financial system rather than supplanting the existing financial system. It is a decentralized system that enables the interoperation of any kind of digital currency in a transparent and efficient way. The Stellar network makes money borderless.

In addition to the Stellar network been open-source and public, anyone can issue an asset on the network. For instance, A business owner can create a digital representation "dollar token" of the U.S dollar currency and uses it as a form of payment or conducting transactions. The business owner can tell their customers that they can use this digital currency as a form of payment to conduct business and that it holds the same value as the traditional dollar. And if they need to, they can always exchange back the dollar token for the traditional dollar. This process can be graphically seen in Figure 1.

Traditional Dollar   "Dollar Token"
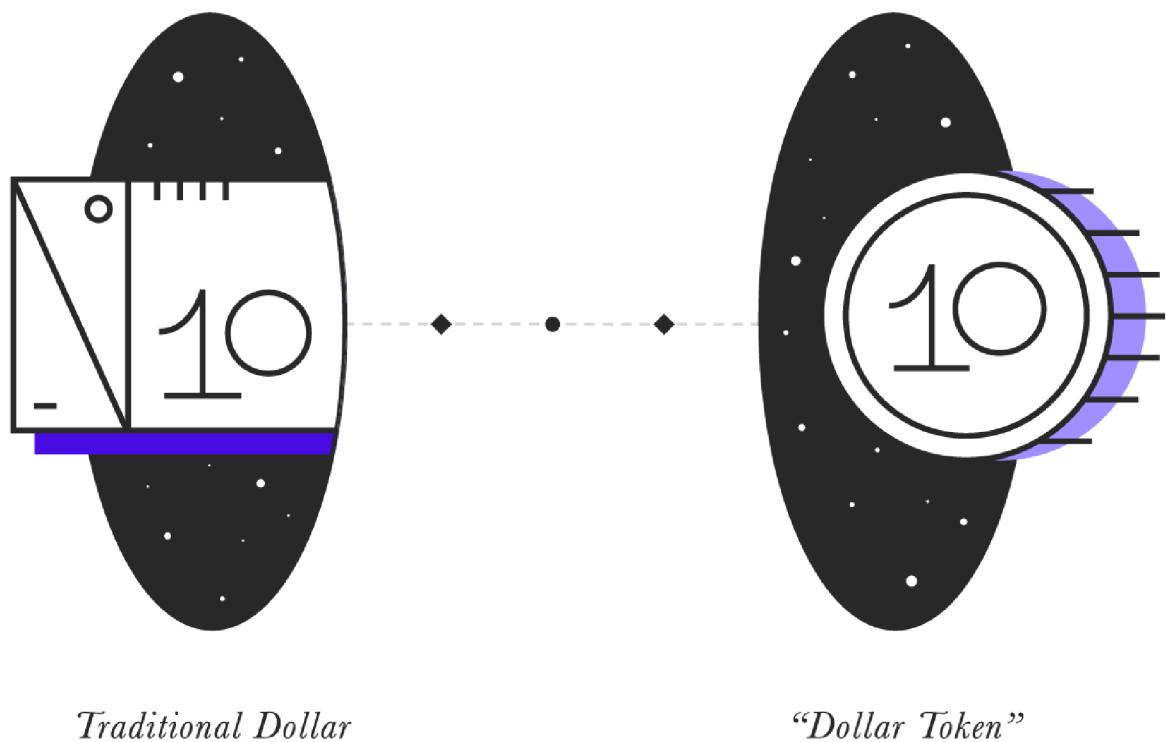
Figure 1: Exchangable token illustration - Token Illustration

3.1.2   How does Stellar works

Stellar network system tracks ownership. The system is without a central authority – meaning no one can stop the network or secretly manipulate the data. Yet, the ledgers

are verified and updated every five seconds. A unique algorithm called Stellar Consensus Protocol (SCP) makes this possible and keeps everything in sync through the so-called Proof of Agreement (PoA).

With decentralized systems, coming to an agreement is referred to as "consensus". To achieve consensus, Stellar network uses the Proof of Agreement and Stellar Consensus Protocol.

PoA and SCP strives to be better by being configurable, fast, and highly energy efficient. Stellar ledger stores two main information:

- ❖ Asset an account holder owns.
- ❖ What the account holder wants to do with their asset.

The entire network is resolved every five seconds with all the operations and balances. Computers all around the world called "nodes" runs the "Stellar Core" software and then publish and resolve the ledger. Several nodes across the globe verifies the network. Their communication process and operations are all publicly available.

Above the core layer lies an API called the "Horizon". The network contains simple and well-documented functions which makes it easy to transact between accounts, issue assets etc.

3.1.2.1 Stellar Core

Stellar Core is the backbone of the Stellar network and does the hard work of validating and agreeing on the status of every transaction with other instances of the core through the Stellar consensus protocol.

3.1.2.2 Horizon

Horizon is the powerful API for the Stellar ecosystem. It acts as an intermediary or interface between Stellar core and the application that want to access the Stellar network. Horizon serves as an intermediary in this process as shown in Figure 2.
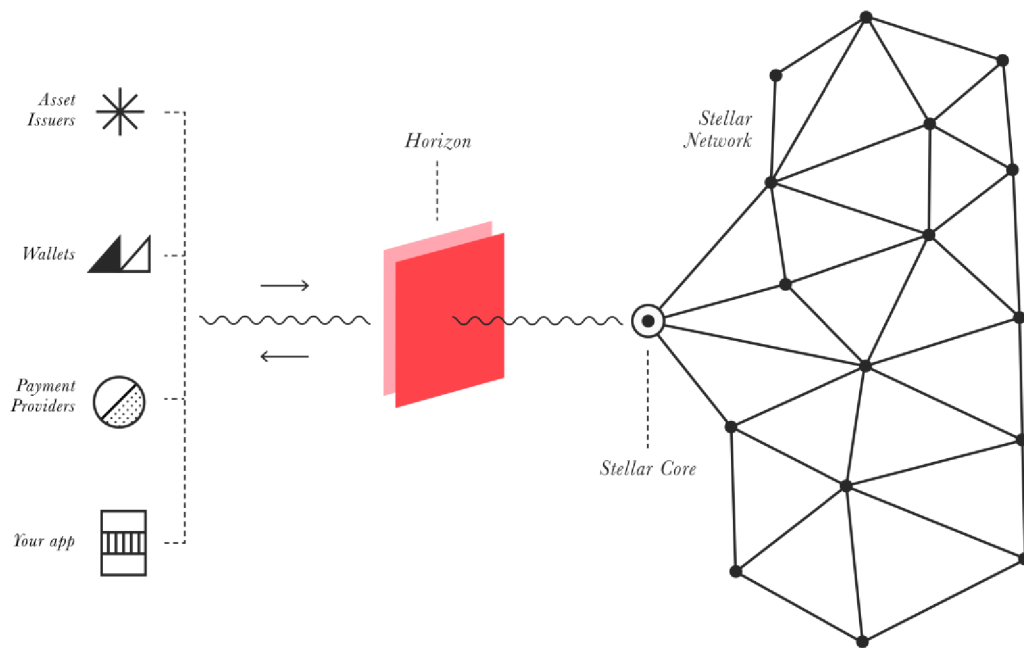
Figure 2: Stellar stack diagram - stellar stack

3.2 Western Union

The Western Union started around 1856 with the name "Western Union Telegraph" with the aim of monopolizing telegraph services. Since 2006, this was no longer rendered. The word - Western Union signifies the - Union of the Western Lines. The Western Union is an American based company that operates on financial services around the world. Western Union operates in 200 countries with over half a million branches. Transfers can be made in almost 130 currencies. The company strives to be a world leader in non-banking financial operations. It boasts that in 2018 it managed to make over 800 million money transfers.

Its main service is non-bank money transfer, but it has also invested in the use of electronic channels for transactions, such as Western Union connect and online money transfer services, through ATM machines, and with mobile phones. These services combined accounted for 3% of the company revenue in 2011. Their rate is fixed at USD 6.00 per transaction online.

3.2.1 How do Western Union money transfer works

Western Union provides express money transfers either in cash or online for an additional fee. Money transfers can be done both abroad and within the home country – limited to certain areas. The transfer process involves filling in a form at their centre. At the branch, the amount to be sent should be in the currency of the home country. The name of the sender and recipient, the country of delivery, personal address and phone number must be included in the form presented with a valid ID.

This process takes about 1 – 2 hours before the money is ready to be paid out in the delivery country. The recipient can only withdraw in the local currency at their branch. To withdraw, the recipient must have a 10-digit MTCN number, know the name of the sender, how much money they are to receive and from which country the money was sent. They must also present an ID and provide their phone number when making a withdrawal. The illustration in Figure 3 shows how the transaction process is handled.

3.2.2 Sending process

Western Union is known to be incorporating different methods of doing transactions such as by phone, mobile application or In-Person. The In-Person process of executing transaction is described in the follow steps below:

- ❖ Choose an agent location. Amount to be sent should be in cash. Fill in the appropriate form and present a valid ID.
- ❖ You will pay the amount to be sent, including the fee, and you will receive a copy of the form showing the Money Transfer Control Number (MTCN).
- ❖ Inform the recipient about the transfer details including the MTCN.
- ❖ Within 1 – 2 hours, the money will be ready to be paid to the recipient at any branch in the country specify.
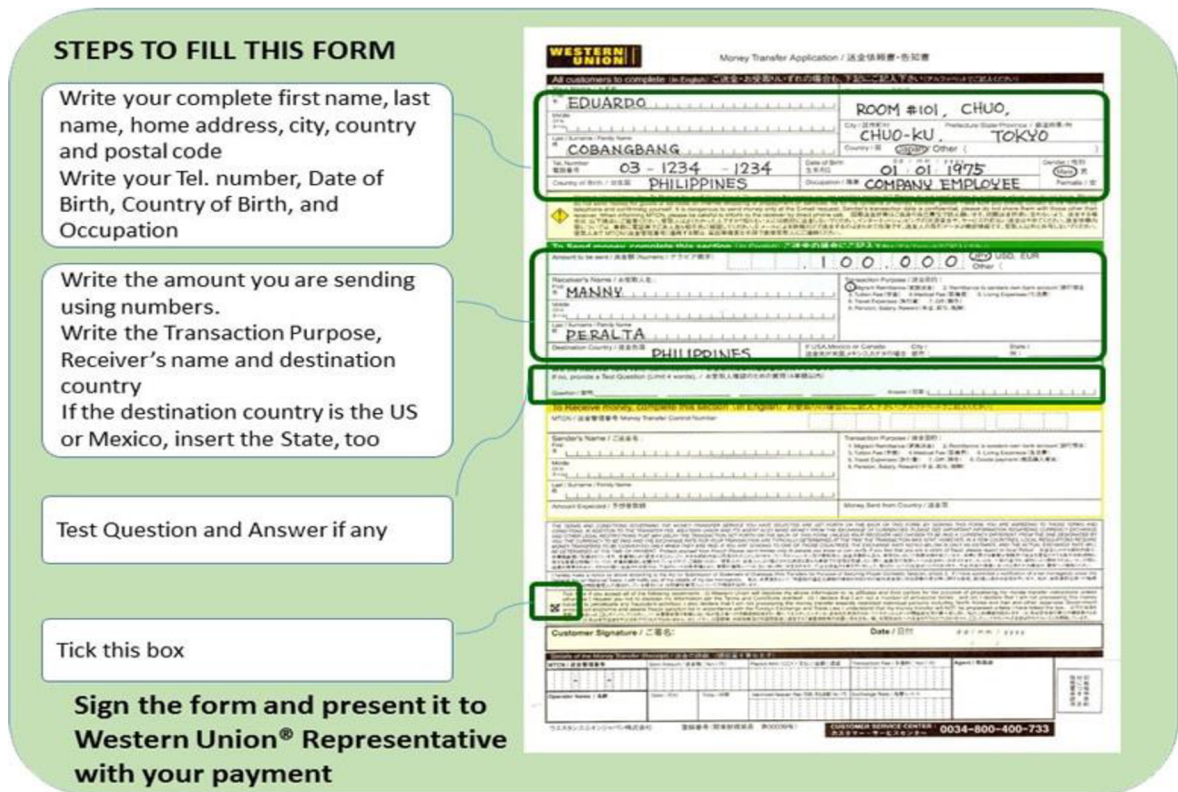
Figure 3: Western Union money transfer form - WU money transafer

3.2.3 Receiving process

The receiving process with Western Union could be referred to as tedious as the sending process. When receiving with Western union, the client still needs to fill in a form providing personal data with the MTCN code and as well provide some form of identification as described below:

❖ **Choose an agent location.**

Find and visit your nearest Western Union agent location in home country.

❖ **Provide money transfer details.**

Fill in the receiving form with transfer details, including sender's name, country, and the amount. In some cases, a security question and answer may be required.

❖ **Show your ID.**

Show your valid personal ID and 10-digit Money Transfer Control Number (MTCN) to the agent.

❖ **Collect the money.**

The agent will pay out the money and give you a copy of a receipt.

3.3 Similarity Analysis

Both platforms provide several financial services, allowing users to perform several activities: borrowing or lending, payment transfer, paying bills, derivatives, connectivity.

3.3.1 Lending and Borrowing

Western Union accepts loan applications online and provide financial assistance to eligible agents and business solution clients through the U.S. Small Business Administration Paycheck Protection Program (SBA PPP). Across the U.S, Western Union has collaborative relationships with more than 10,000 small business owners. On the other hand, Stellar uses smart contracts powered by blockchain technology to provide a safe and convenient way for investors to securely loan out their lumen (XLM) tokens and earn passive income in return. Lending Stellar on a platform is almost risk-free as lumen token borrowers, put up a sizable collateral in the form of other asset to take up the Stellar loan.

3.3.2 Derivatives

Derivatives in Western Union are handled by the Western Union Business Solution – WUBS. A specialist that creates solutions to assist business payments and foreign exchange process challenges that manage risk and cost. Western Union offers derivatives like Forward Exchange Contracts (FEC), Leveraged Structure Option (LSO), Non-Deliverable Forwards (NDFs).

Stellar provides two unique procedures. The first one includes buying and holding Stellar in a secure lumen wallet, which can then be sold after a longer period of time or with the increase in value. The second procedure is day-to-day trading, where you bet on the value of XLM through financial instruments. Steller's financial instruments or tradable derivatives are Contracts for Difference (CFDs), Futures, Options.

3.3.3 Payment Transfer

Western Union and The Stellar Network offer users the ability to transfer money from one person/business to another. Though both platforms conform to different payment process and transaction fee, the underlining goal remains the same.

3.3.4 Connectivity

Stellar uses anchors to connect the Stellar network to traditional banking rails. This way, the assets can interoperate on a single, seamless platform. By providing access to local on/off ramps, they empower the apps and services built on Stellar to enable borderless access to financial infrastructure.

Western Union on the other hand, introduced the "Western Union Connect" service in 2015/2016, partnering with two major instant messaging applications WeChat and Viber. The partnership allows WeChat users to send up to $100 to the US, China and 200 other countries. For $3.99 plus exchange rate fees, Viber users can send up to $100.

3.4 Differences Analysis

Major difference between a decentralized system and a centralized system is the fact that centralized systems are regulated while its exactly the opposite in relation to decentralized systems. Though a consistent definition of what differs a CeFi from a DeFi has not been realized, the decision tree tries to clarify this, as shown in Figure 4.
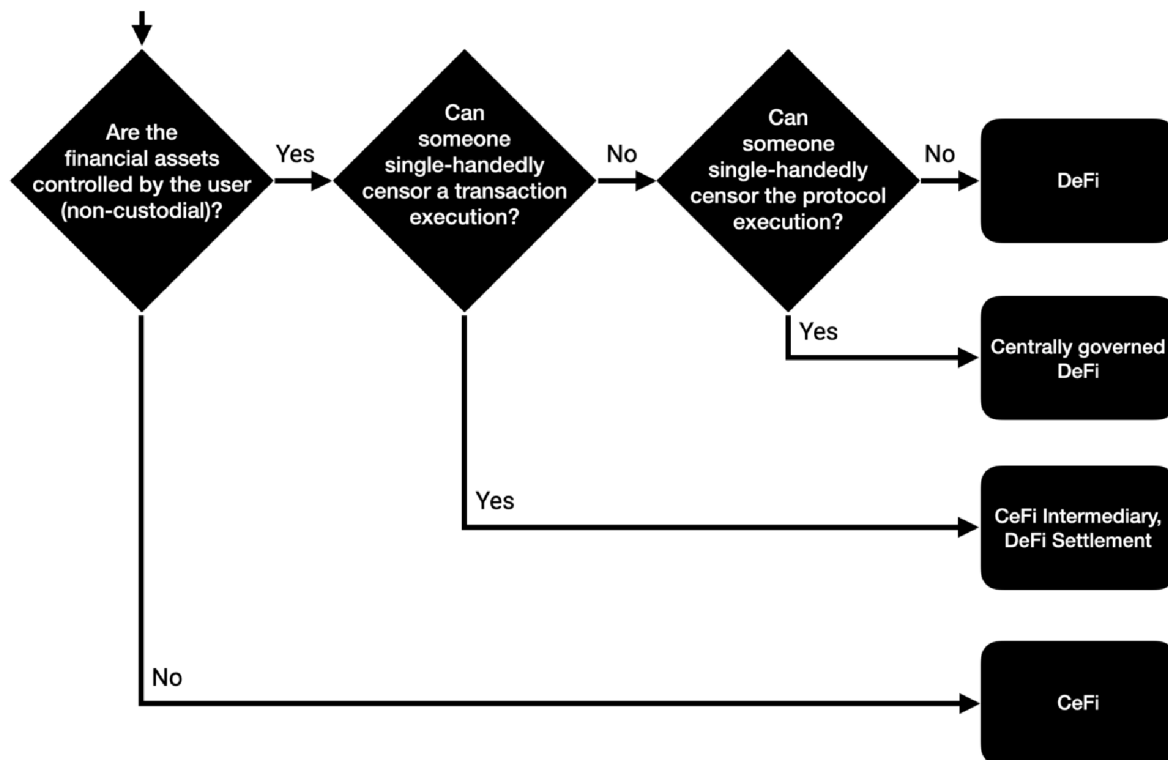
Figure 4 : Decision tree differentiates CeFi and DeFi – illustration

Though, decentralized systems utilize almost all the existing services in centralized systems, there exists as well other sections that shows clearly, differences that exist between these two systems. Below we try to explain this.

3.4.1 Centralization

Centralized systems own and control all transactions conducted on the platform. This means a single entity handles and decides how services are rendered. Decentralized systems aim to decentralize ownership to a community owned. With this approach, every user has a say in the development of the system and its maintenance is handled by the community rather than a single entity or a corporation.

3.4.2 Transparency

In this context, right to access. Data on a decentralized system is stored in a public blockchain that is accessible to everyone and its information be audited. On the other hand, in a centralized system, users cannot check every information about their assets. All access is restricted or limited to only a member or group of members, that act as admins.

3.4.3 Trust

Trust is regarded as the biggest factor that differentiates CeFi and DeFi. CeFi users are forced to trust the platform and the entity controlling it. Users are dependent on the entity without fully understanding how their assets are governed or controlled or circulated.

Meanwhile, DeFi takes advantage of the decentralization and transparency in blockchain technology. You never have to trust anyone with your assets. Users have full knowledge of the system's functionality and not dependent on anyone for access.

3.4.4 Transaction Timeframe

With Western Union, sending personal remittances is far from simple and not a borderless experience. Each transaction endures long processing time and high fees, taking up to 2 hours to complete.

In a decentralized system – Stellar, transactions are simple and borderless. The network average transaction time is 5 seconds, which means a single person can expect their transaction to be completed within 5 seconds. If several transactions are being made at the same time, the length of the transaction queue in a blockchain will increase and transactions made at that time will take longer to finish.

3.4.5 Transaction Cost

Centralized platforms – Western Union, charges high fees in other to maintain the platform, handle employee payments and improve their products. This is of course understandable if the conducted transaction has more value than the fees.

This on the other hand puts a big toll on small transactions, as the average cost is up to 8% of the remittance total. Transaction cost in DeFi in general are essential for the prevention of spam but also an advantage to its customers, as this drastically drops down the cost as shown in Figure 5. However, financial institutions have the option to offer their service at little or no cost, because of the ability to rely on KYC/AML verifications of their clients.

CoinMarketCap Top 10, Platform Performance

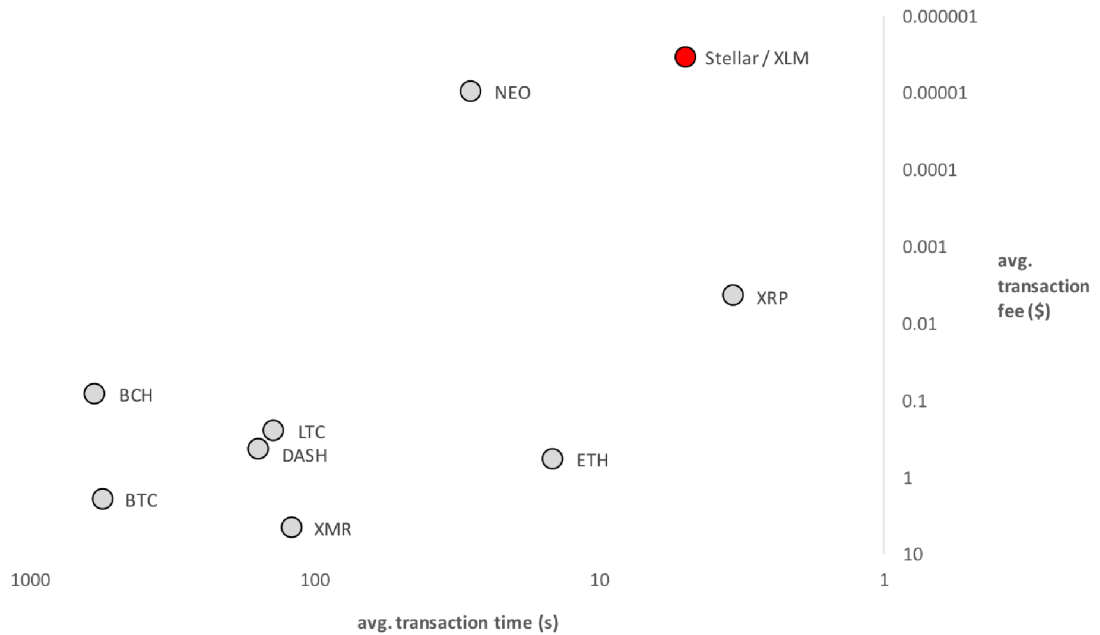(platforms that have been deployed for >12 mo. – as of Feb 28 2018)

Figure 5: Stellar-Network-Performance - Defi transaction fees

3.4.6   Security

Centralized exchanges like Western Union are responsible for security and strive to maintain a high level of security. However, there are still situations where the platform can be hacked, and funds are stolen. The Stellar network has no such risks as it does not store user funds. The system is more secured. Transactions on the network are atomic. Meaning if one operation in a transaction fails, all operations fail, and the entire transaction is not applied to the ledger. The code and the consensus algorithm are maintained regularly.

3.5   Literature Review

Stellar is a decentralized network that enables the interoperation of any kind of digital currency in a transparent and efficient way. The system is without a central authority – meaning no one can stop the network or secretly manipulate the data. To achieve consensus, Stellar network uses the Proof of Agreement and Stellar Consensus

Protocol. Western Union and The Stellar Network offer users the ability to transfer money from one person/business to another.

Stellar uses smart contracts powered by blockchain technology to allow investors to securely loan out their lumen (XLM) tokens and earn passive income in return. Stellar uses anchors to connect the Stellar network to traditional banking rails. Western Union introduced the "Western Union Connect" service in 2015/2016, which allows WeChat and Viber users to send up to $100 to the US, China and 200 other countries for $3.99 plus exchange rate fees. With Western Union, sending personal remittances is far from simple and not a borderless experience. With Stellar, transactions are simple and borderless.

Western Union charges high fees in other to maintain the platform, handle employee payments and improve their products. This on the other hand puts a big toll on small transactions, as the average cost is up to 8% of the remittance total.

Both platforms offer impressive services and although Stellar Network is introducing and using innovative solutions, Western Union is also improving and catching up with the modern way to doing transactions. Western Union's services and solutions might improve in the upcoming future and probably offers better solutions, but this thesis focuses on the Trust, Transparency, Transaction Time, and Cost that both platforms have to offer.

The application developed proves the trust, transparency and low transaction fee provided by the Stellar network. The other part of the practical involves the filing of a survey by customers that have used either the Western Union platform or the Stellar platform to share their experience. With the results from the survey and proven facts with the application, I can conclude on my recommendation for both platforms.

4 Practical Part

The practical part of this thesis involves developing a wallet application using the Stellar network only for calculating transaction time in real time and a customer satisfactory survey of both platforms will be used to get the views of customers. The first part of the practical work introduces the application software, the tools and technologies that will be used. The other part of the practical part shows result of the survey and using this data for conclusion.

4.1 Development overview

This development part describes and illustrates the communication between classes, the environment used for the development and its implementation. The resulting software application will be intended only for testing purposes and calculating the transaction time frame in real time. Transaction cost is a constant data as shown in Figure 5.

4.2 Development Environment and File Structure

NetBeans is an Integrated Development Environment which is used for this project. An IDE specifically made for such developments and projects. The illustration in Figure 6 shows the file structure of the different classes. Communication between these classes is shown in the UML diagram in Figure 7.
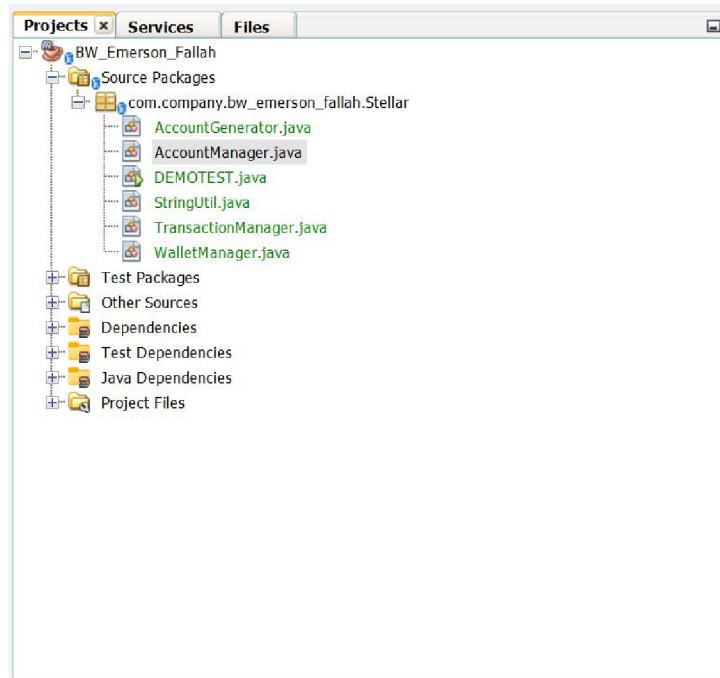
Figure 6: File structure of the project

4.3 UML Diagram

The Unified Modelling Language (UML) is a language for visualizing, specifying, constructing, and documenting the system of a software – a system could be a website, an App, or a business process. As shown in Figure 7, I have used a UML diagram to better describe the process of the system in a graphical representation that shows how the different components communicate.

Wallet

- accountID : String
- secretSeed : String
- key : KeyPair

+ Wallet(key : KeyPair)
+ Wallet()
+ getAccountID() : String
+ getSecretSeed() : String
+ setAccountID() : void
+ setSecretSeed() : void

AccountGenerator

+ AccountGenerator()
+ createStellarAccount(keyPair : KeyPair) : WalletManager
+ generateKeyPair() : KayPair

Transactions

- destination : KeyPair
- source : KeyPair

+ Transactions(sourceKey : String, destinationKey : String)
+ Transactions()
+ getSource() : KeyPair
+ getdestination() : KeyPair

AccountManager

~ amount : String
~ sourceKey : String
~ destinationKey : String
~ manager : WalletManager
~ transaction : TransactionManager = new TransationManager(sourceKey, destinationKey)

+ createAccount() : void
+ activateAccount() : void
+ checkAccountBalance() : void
+ sendTransaction() : void
+ checkSourceBalance() : void
+ checkDestinationBalance() : void
+ menu() : void

WalletManager

- account : Accountresponse
- SERVER : Server = new Server(link : String)
- STELLAR_BOT : String
- wallet : Wallet

+ WalletManager(key : KeyPair)
+ WalletManager()
+ activateAccount() : void
+ checkAccountBalance() : void

TransactionManager

- SERVER : Server = new Server(link : String)
- account : AccountResponse
- transactions : Transactions

+ TransactionManager()
+ TransactionManager(sourceID : String, destinationID : String)
+ doesAccountExist() : Boolean
- setUpTransaction()
- submitTransaction(amount: String) : void
+ sendTransaction(amount : String) : void
+ checkDestinationBalance() : void
+ checkSourceBalance() : void

Figure 7 : UML Diagram of project

4.4 Survey Overview

The other part of the practical of this thesis is the survey. The survey was shared among people of different age and background. The survey was in the form of a questionnaire and held through the means of an online platform - Google forms.

The result from the questionnaire helps to identify differences, similarities of both platforms and points of areas where each platform could improve to render better services to its customers. The form was shared to all forms of group and community online and to target different users anonymously. The questionnaire was fully anonymous to discourage the burden of personal identification and for the sake of easiness of answering and no confidential data was collected.

4.4.1 Data Understanding

There were distinct pieces of information gathered. The dataset mostly contained qualitative variables. These are all data that cannot be represented numerically. However, "The rate of the customer satisfaction" and "likelihood of recommendation" are quantitative variables. The questionnaire was shared on different social network, such as Telegram, WhatsApp, Instagram, and other crypto communities.

4.4.1.1 Respondents Insights

The total of 44 respondents of different age groups and backgrounds have replied to the survey. The survey was not limited in terms of gender, age, or ethnicity as anyone can use these transaction platforms. Hence, the responses based on gender significantly varies, with a clear distribution of 40.9% female and 59.1% male respondents as shown in Figure 8.
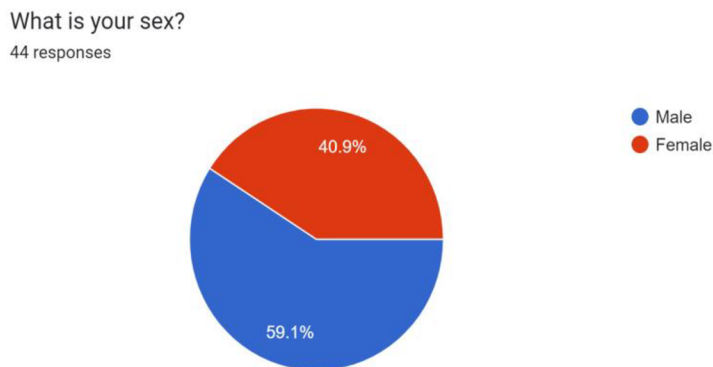
Figure 8: piechart – responses sex

As mentioned earlier, the survey is not limited by age, gender, or background. As aforementioned, these platforms can be accessed by anyone. The first question in the survey was aimed at collecting basic information about the respondents while been anonymous with no overview of any personal information.

4.4.1.2 Customer preferences

Platform used vs Satisfaction.

From Figure 9, we had 41 Western Union users accounting for 95.3% of the survey respondents, 2 Steller users accounting for 4.7% accounting for the remaining respondents.
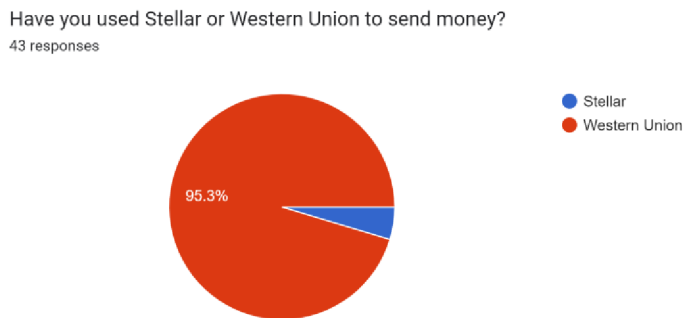

Figure 9: piechart - platform usage

The result of the questions on the customer satisfaction "Have you used Stellar or Western union to send money" and "How satisfied were you with the overall service provided by Stellar or Western union" also show intriguing frequencies as shown in Figure 10 and Figure 11, we can examine that most customers are just "satisfied" with the overall services and transaction speed provided by Western Union compared to stellar users that are "very satisfied", though the ratio is higher with Western Union:
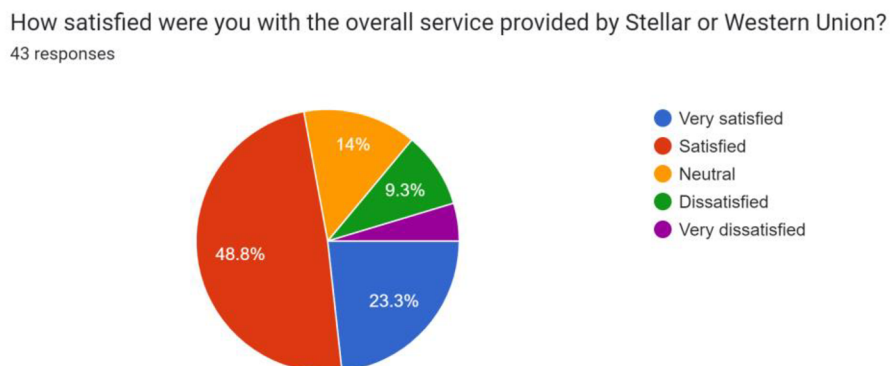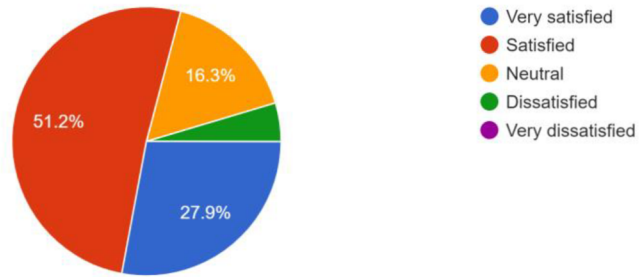

Figure 10: piechart - customer satisfaction on platform services

How satisfied were you with the speed of the transaction when using Stellar or Western Union?

43 responses

Legend:
- Very satisfied
- Satisfied
- Neutral
- Dissatisfied
- Very dissatisfied

16.3%
51.2%
27.9%

Figure 11: piechart - customer satisfaction on transaction speed

5 Results and Discussion

Based on the survey, we can observe that most of the respondents have used Western Union as well as its services, with only a few Stellar respondents. As it appears, Western Union is the more widely used money transfer service compared to Stellar. Overall, the satisfaction level of the respondents with Western Union is mostly "Good", with some being "Satisfied" and some being "Dissatisfied" or "Very dissatisfied". On the other hand, those who have used Stellar have mostly given positive feedback, with some being very satisfied and some being satisfied.

Looking at a probable reason for the dissatisfaction among the Western Union users, it appears that the high fees and exchange rates are the main concerns. Customers expressed the desire for a reduction in interest rates and better options for transferring money to their desired banks or saving system. Meanwhile, those who have used Stellar have not mentioned any major significant issues or concerns unless the lack of familiarity with the service. Nonetheless, one crucial factor which affect the choice for Stellar among users is awareness. Marketing is a very powerful tool, which can affect not only the decision-making process of the person, but also shape the societal opinion of any business or platform.

While Western Union appears to exist as a more widely used platform and received higher customer satisfaction ratings compared to Stellar, there happens to be still room for improvement, particularly with regard to fees and exchange rates. The feedback provided by respondents could prove to be useful for Western Union in addressing these issues and improve their service. On the other hand, Stellar has received positive feedback from those who have used it but the sample size is relatively small and for Stellar to gain more popularity, the platform needs to focus on increasing their brand awareness and promoting their unique features that differentiate them from other money transfer services.

6 Conclusion

Stellar and Western Union are two companies whose operations are mainly in the financial services industry, but they differ significantly in their business models, target markets, and technologies used as we have shown.

Stellar as a non-profit organization aims to facilitate low-cost cross-border transactions using its decentralized blockchain technology. Western Union is a for-profit company that offers a variety of financial services, including money transfer, bill payments, and money orders. Stellar's target market is primarily individuals and businesses in developing countries who lack access to traditional banking services or are underserved by the existing financial system. Stellar aims to provide these customers with a low-cost, secure, and easy-to-use platform for cross-border transactions while Western Union, targets a broader range of customers, including both individuals and businesses. Western Union's services are significantly popular among workers who need to send money back to their home countries.

Based on the survey, although some customers did not mention which system they used, Western Union is the dominant money transfer service, with few respondents having used Stellar. Most respondents are satisfied with Western Union, with many ratings it as "Very good" or "Good". Some customers have also expressed interest in exploring other money transfer services, such as Stellar, but they may not have access to it in their area. Satisfaction with transaction fees seems to be a common issue, with some respondents noting that the rates are too high or that the exchange rate is not good. Ease of use, speed, and reliability also vary across respondents with some rating Western Union highly and others expressing dissatisfaction.

Suggestions for improvement include reducing fees, improving exchange rates, and transferring money directly to a specified bank of the receiver's choice. Some customers also wanted more transparency around the fees or wanted them to be reviewed.

Overall, the qualitative analysis of the data suggests that while most respondents are satisfied with Western Union, there are still areas for improvement. Respondents seem to be particularly concerned about the fees charged by Western Union, which suggests that the company could benefit from reviewing its pricing strategy. Additionally, some respondents noted that they would prefer to transfer money directly to a bank account rather than using Western Union, which could be an area for expansion for the company.

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8 Attachments

Survey Link: https://forms.gle/RXXYpFPxK6arj4wK9

How satisfied were you with the speed of the transaction when using Stellar or Western Union?

- ○ Very satisfied
- ○ Satisfied
- ○ Neutral
- ○ Dissatisfied
- ○ Very dissatisfied

How would you rate the user experience when using Stellar or Western Union?

	1	2	3	4	5	
worse	○	○	○	○	○	best

How likely are you to recommend Stellar or Western Union to a friend or family member?

	1	2	3	4	5	
worse	○	○	○	○	○	best

Which service did you find to be more cost-effective?

- ○ Stellar
- ○ Western Union
- ○ Neither

In which of these systems did you encounter the most technical issues?

○ Stellar

○ Western Union

○ Neither, They were all great

Which service did you find to be more convenient to use?

○ Stellar

○ Western Union

How would you rate the customer support provided by Stellar or Western Union?

○ Excellent

○ Very good

○ Good

○ Fair

○ Poor

Are there any other comments or feedback you would like to provide about your experience using Stellar or Western Union?

Your answer

Submit   Clear form