



GlobeMerchant White Paper

An introduction to the features, vision
and technology of the GlobeMerchant

Globe Merchant Exchange is a terminal that centralizes global cross-border capital in a risk-adjusted terminal, providing a safe, secure, and fast terminal for advanced investments, benefitting capital providers and companies in need of capital. This paper describes the terminal, the functions, technology behind it, security protocols, methodology, research, and the thoughts behind the product.

Globe Merchant Exchange is designed and created to connect capital and projects throughout the world, with no cross-border limitations, as the centralized terminal makes it possible for users to share information and work together via a standardized investment model, called the Cross-Border Grid (CBG), connecting projects and capital in one terminal. Globe Merchant Exchange will simplify, standardize and optimize international and national business finance, for the benefit of financiers, companies, and countries.

An introduction to Globe Merchant Exchange (GMEX)

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Globe Merchant: An overview

Idea behind the terminal

Globe Merchant Exchange was born with the vision of connecting cross-border capital throughout the world with companies and projects in need of capital. A centralized terminal that allows a broader investment outlook for capital providers and easier, faster, and more secure access to capital for companies seeking financing. The connectivity between capital providers and finance seekers through the Globe Merchant Exchange terminal allows safe, professional, and controlled investments and advancing economies, countries, and the world to grow unitedly.

A centralized, stabilized and risk-adjusted terminal for capital providers and finance seekers has been a missing piece of the equation to a closer and more connected world, creating jobs, improving our way of living, and advancing our world into a future with growing relations and collaboration across countries, companies, and financiers. Globe Merchant Exchange is the first and only centralized and risk-adjusted terminal for capital providers making it safe, secure, and reliable to invest, lend and finance projects across the entire globe. Without the concern of security breach, authentication processes, or loss of capital, Globe Merchant Exchange is the one-stop solution for capital providers looking to expand their exposure safely across emerging markets and support growth and prosperity. With a focus on expanding cross-border investments including trade finance, asset finance, and commercial finance, the terminal is aimed at connecting international companies operating within the global supply chain, with available capital for a better and more connected world.

Investors, banks and institutional investors

The terminal provides a one-stop solution for verified investors, banks, and institutional investors (type 1 users) who are looking to invest in projects across the world. Type 1 users gain access to a centralized exchange and marketplace where companies post projects/finance requests, which gives the financier an edge concerning the allocation of funds to alternative investments. The project/finance requests are overseen, vetted, and quality controlled by the terminal and the team behind Globe Merchant Exchange. Type 1 users will through the terminal be able to review, offer/counter and invest in projects that are available in the terminal and keep track of their historical investments within their portfolio. A type 1 user will be able to offer against other financiers on a project, where they can either improve on the interest rate or terms. Type 1 users will be

able to see the different offers on a project, but not who has offered, to ensure security while maintaining transparency.

Companies and finance seekers

The terminal provides a one-stop solution for companies seeking finance (type 2 users) to back their trades, asset acquisitions, and commercial/operational expenses. The terminal simplifies the loan acquiring process and optimizes the loan terms and capital availability for almost any company. While the registration process to access the platform, requires a necessary amount of documentation from the company, it will make it easier, faster, and cheaper for companies to require finance in the future, as their profiles will be shown as lender profiles for financiers, that will eliminate much of the approval process and let financiers determine creditworthiness and offer on projects within minutes. When the type 2 users create a finance application and publish it into the exchange, it will be available for type 1 users to offer on. The process is easy, fast, highly secured, and gives the type 2 user access to capital providers throughout the world having a much larger chance to get the project realized to the best terms and interest rate possible. By refining and building upon the tested traditional approach to financing, the terminal supports new projects and makes sure that the finance seeker receives as many financing options as possible. By getting a finance project/request out to several interested financiers at once, it ensures that the final terms and interest rate is the best obtainable amongst financiers, which gives the company confidence in their choice of finance and the potential to ultimately save millions over time.

Privacy and verification of the identity of users

The system quality control and validate all requests to access the terminal for both type 1 users and type 2 users, making the terminal safe, secure and controlled. To gain access to the terminal users must provide a list of required documentation proving the authenticity of the user. After all required documentation has been provided by the user, an assigned quality control personnel will review the request and either confirm, request more documentation to support the intentions of the user, or decline the request in case of lack of missing documentation and unwillingness to provide the requested documentation.

All documents and information will safely be stored within the encrypted servers of the terminal to ensure the quality and continued authenticity of the user. Documents that are not necessary or expired will be deleted immediately to offload dispensable documentation and replace it with the new valid and necessary documentation.

The documentation requested by Globe Merchant Exchange is for the guarantee of a professional terminal, that only registered and documented companies will get access to. The success of the platform relies upon the trust and learning of the users, that only serious business professionals that can act on behalf of the registered companies, navigate and use the terminal. With full transparency, legitimate documentation, and reliable information about the counterpart, Globe Merchant Exchange will improve the speed and efficiency of cross-border finance.

The terminal is built on a secure system that makes sure that the communication and data between users are encrypted and safely sent and received to the assigned counterparts without the risk of tampering by a third party.

Security protocols, stress test and awareness

Globe Merchant Exchange implements layers of security, including infrastructure and network security, as well as high-end application, cloud, and information security to ensure that users can navigate the terminal unobstructedly without concern.

We follow and integrate guidelines from cybersecurity experts, to constantly improve upon the technologies we use. With reliable identity and access management (IAM), we verify that only allowed professionals will be given access to the terminal, and we can immediately detect users/IP addresses trying to enter restricted functions. Through security information and event management (SIEM), we employ advanced detection methods, such as user behavior analytics and artificial intelligence (AI), to automatically detect and prioritize potential security threats before they happen. Everything is eventually centralized and analyzed in our fully integrated data security terminal, which allows us to track the real-time data and vulnerabilities across all functions. As another step to ensure the importance and security of our users' data, we run encrypted systems to keep all stored data safe.

Under our business continuity planning, we constantly run breach and pen-testing to ensure the maximum security of the system and always improve upon our security measures, making it safe, easy, and fast to share data and invest through the exchange. Our perpetual stress testing allows us to analyze the behavior of the system to prevent a breakdown and ensure that the system is always 100% operational. The system controls how the terminal works under abnormal conditions, and it verifies that potential threat signals will not cause a security breach.

Our team control and monitor the activity in the terminal via established boundless security protocols and threat signals. It ensures quality and security without the risk of loss of capital, terror financing, and/or interaction with sanctioned persons, entities, and countries.

We strive to team up with industry leaders within cybersecurity such as IBM Security, which will allow Globe Merchant Exchange to implement efficient solutions for the management of incidents and operate reliable AI/Machine learning tools that will enable high-speed transactions and security threat detection at once.

We understand the importance of a safe, reliable, and crash-safe terminal that is needed to become the industry standard for alternative investments and financing. We value the security of the terminal at the core of its success and commit to 100% functionality with 0 breaches and 0 system failures.

Globe Merchant Exchange (GMEX) for investors, banks and institutional investors

Introduction to Globe Merchant Exchange for investors, banks and institutional investors

Capital providers also classified as type 1 users will through the terminal gain access to a list of functions and modules. The terminal is centralized around the exchange module where type 1 users have an overview of all available projects with essential data and information to examine and offer on any project. The terminal is carefully designed in a structure that allows type 1 users to navigate the modules and execute commands in layers that are connected to the projects and advisors within the terminal.

The Exchange

The exchange is the nerve of the terminal which gathers all data and projects to construct a centralized transferring system, allowing type 1 users and type 2 users to interact by publishing, reviewing, and offering on projects.

The type 1 user will have an overview of three main fields including asset finance, trade finance, and commercial finance. The exchange module consists of 3 areas including the exchange, current offers, and ongoing projects. The exchange includes various filtration fields giving the type 1 user an advanced first-hand overview of the projects/finance requests which has been listed. The advanced filtration fields allow type 1 users to navigate through projects within the exchange and structure the risk profile of the user to only display projects that fit their appetite and execute commands in a safe, fast, and secure manner.

The type 1 user will also be able to view the current pending offers on which the user has placed a bid. If the bid has been declined the user will have 24 hours or a number of hours that are left for open offers to re-offer before the offer disappears and end up in the offer history. The type 1 user can re-offer on a project and see the details of the project by clicking on the 'pending' button in case of offer has not been declined or approved, see the approved offer by clicking on the 'approved' button or re-offer in case of the offer being declined by clicking on the 'declined' button. The type 1 user has an overview of current and ongoing projects which has not yet been offered but are still being reviewed by the advisor appointed and the type 1 user. Here the type 1 user has an overview of the project and whether any action is required. To see more details the type 1 user can see the details by pushing the 'case' button on the right side.

Asset Finance

Each finance type has a specific model which has been developed to match the complexity and scale of the project.

Financing of assets is critical for any business and its maintenance, expansion, or survival. While many companies have established reliable banking relations for the financing of their hard assets, some still struggle to find the capital to grow their business. Our terminal makes it possible for any company with a plan and a realistic idea to find a good finance partner.

The asset finance module includes projects for hard assets such as commercial vessels and infrastructure projects. The type 1 user can review and invest in projects which have been posted by the type 2 user and vetted by the system. The asset finance category is being recognized as a medium to long-term financing with projects that vary in period depending on the terms of the financier. Examples of asset finance types include:

- Commercial vessels
- Infrastructure projects
- Other hard assets

Trade Finance

Trading companies contribute as one of the core elements of the global supply chain and economy today. While a lot of the trades are done by big multinational companies, SMEs still hold a significant size of the market, and many believe they will continue to do so. SMEs can be old established companies, but there is also a lot of newly established traders by industry veterans and others, that have found a niche trade they can benefit from. It can be hard for a new trader to find trade finance; our terminal makes it easier for the trader to find a financier based on their risk level that can help him/her to conclude their first trade and expand their business.

The trade finance module includes projects for trading such as finance for commodities, products, and goods. The type 1 user can review and invest in projects which have been posted by the type 2 user and vetted by the system. The trade finance category is being recognized as ultra-short or short-term financing with projects that vary in length from hours to weeks/months.

Commercial Finance

Commercial finance or operational finance consists of a long list of duties that a company can have difficulty paying, but with expected cash flow, would be able to pay later. To not slow the business activities down, it can sometimes make more sense to find capital from a financier, to pay back later.

The commercial finance module includes projects for commercial matters such as expansion plans, spare parts, or inventory purchases. The type 1 user can review and invest in projects which have been posted by the type 2 user through our standardized finance application system. The commercial finance category is being recognized as short to long-term financing with projects that vary in length from months to years. Examples of trade finance types include:

- Financing to expand a current business
- Spare parts trading
- Inventory procurement

Portfolio

The portfolio page gives the type 1 user a clear overview of active and historic investments with complete finance and investment metrics showcased under every project. The type 1 user can use the advanced filtering system to search for specific investments within a set period, financing category, risk, and amount. The portfolio interacts directly with the exchange and the Cross-Border Grid (CBG) securing the individual user's positions in the portfolio and governed by a Role-Based Access Control (RBAC) within the organization of the user. Every sub-user within the organization is linked to a block (organization-ID) which is dedicated to the specific organization and has various roles set for the sub-users (User ID), to ensure structure and a quality environment within every organization.

Intelligence

The intelligence page is administered directly by OceanEXL Intelligence and provides the type 1 users an overview of the various markets and segments within maritime-related investments such as tankers, bulk carriers, and container vessels including market summary, market indicators, asset prices for various sizes and age classes, chartering rates and fleet statistics.

The Insights and Analytics module within the Intelligence page provides the most needed analytics and data in a quick, easy, and accessible way. Insight and Analytics gives a simplified overview of the users' segment of expertise. The data provided consists of entries from market experts as well as OceanEXL data inputs.

The Risk Management module within the Intelligence platform exhibition a live intelligence feed that monitors and analyses recent risk events and cases and displays each event in their respective risk categories with a given risk level. The instrument is useful for anyone with an interest in recent events that can alter and change their operations. The module is developed for and addressed to professionals within the commercial and operational maritime sector.

Account

The account page displays all information about the user, the user type, and affiliated organizations. The account page also presents the current validity of the account and if not approved, the state of the account and the status of the application, and further required documents if not already provided. The documents and additional information can be directly uploaded to ensure safe, fast, and secure information sharing through the dedicated servers using SFTP and SSH protocol which a connection will be established in a secure environment to prevent password sniffing attacks and ensure data integrity with cryptographic hash functions and data encryption. The user will have access to all stored

documents that are currently necessary for the user to remain active and request to either change or delete documents if deemed unnecessary to maintain the validity of the user.

Users can change their username and password via the account page and must go through a double authentication process to make any changes to ensure safety and prevent fraud. Type 1 users can directly see the team user IDs within their respective organization that has access to the terminal via the same license and the admin can remove or add more team members, which must undergo the same authentication process.

Advisory

The terminal offers advisory to all clients whether type 1 or type 2 users to ensure further safety, quality, and guidance to successfully complete every project. Advisors are assigned to projects if the client request one and can be a preferred advisor or a new advisor based on the client's preferences and previous history. Advisors will gain access to the project sheet and any information available through the projects page if appointed by the user to manage and advise on the specific projects. All advisors are directly linked to OceanEXL and will be provided upon request.

Projects

Type 1 users can view and access current projects which have not yet been offered and work on the project together with their advisor before the offering stage. Within the projects page, type 1 users and advisors can share documents, analyze and communicate directly through the unique project ID. Data sharing within the projects page will run through a dedicated server using SFTP and SSH protocol to ensure safe, fast, and secure data sharing without the risk of third-party access. Type 1 users can create a new project which will be linked to the specific project ID and showcase detailed metrics of the project which can be further analyzed and calculated by the type 1 user and the advisor.

Current Offers

Type 1 users can view their current offers and see the status of their offering together with the details of the project and finances behind the offer. Each project has a time limit for the offering and application period which will be displayed through the offering page and must be approved or declined by the counterparty within the deadline of the project. The current offers page is directly connected to the Cross-Border Grid (CBG) which via the security protocols and methodology monitors the progress of the project to detect any abnormalities and prevent fraud and/or unethical behavior through the platform.

Escrow services

Globe Merchant Exchange provides dedicated escrow accounts that are linked to our network and system to ensure a safe, secure, and fast transaction, without

the risk of loss of capital and/or delayed transactions having an impact on the project. The escrow services are being provided by our partner bank which will handle the incoming and outgoing funds through a token provided by the system, so the partner bank is always aware of the funds' origin, destination, and reason of transaction to prevent fraud, terror financing or interaction with sanctioned persons, entities and countries. Since KYC and AML have been cleared and stored in the registration process, our integrated escrow accounts remove the additional paperwork usually required. Furthermore, Globe Merchant Exchange aims to cut deposit costs by up to 75% of the current market prices while increasing the level of security, transactional speed, and transparency.

Secure Contracts

All contracts and agreements that have been signed through the system will be given a dedicated contract ID, which will be stored under the contracts page making it easy and accessible to search for previous contracts and agreements. The Contract Management System (CMS) which is implemented within the terminal and secured by the systems multi-layer security will be safely stored, but also available for downloads in PDF format. Every contract ID is linked to the project posted by the finance seeker and structured from the terms and conditions agreed during the offering and agreement stage. Contracts can either be digitally signed through a Public Key Infrastructure (PKI) or manually signed and uploaded to the project successfully.

Globe Merchant Exchange (GMEX) for companies and finance seekers

Introduction to Globe Merchant Exchange (GMEX) for companies and finance seekers

Finance seekers also classified as type 2 users can via the terminal gain access to a large list of capital providers by creating new finance projects which will be accessible to capital providers (type 1 users) to offer on. The process is easy, fast, and secure giving finance seekers the ability to finance their projects by filling a simple digital application form and publishing their projects, which they will then receive the best obtainable terms for their specific financing project.

Finance application

The finance application on Globe Merchant Exchange provides finance seekers with the easiest, most transparent, the only way to let lenders compete on financing projects.

Type 2 users can through the finance application, create new projects and apply for finance by filling out the digital application form and provide requested details. Given that the type 2 user already has provided much of the information in the

registration process, the only additional documents/information that is mandatory to prepare is an updated financial statement, name and address of any other parties involved in the project, and a clear description of the project. The more documentation/information a type 2 user provides, the higher the chances of receiving a good finance offer. The type 2 user can limit the documents visible to the financiers on the exchange and mark documents 'upon request'. We encourage users to share as much as possible from publishing the finance application, as our internal ranking system factors in the transparency and completeness of the application. Every financier on the terminal is subject to strict rules, that allow them only to use your documentation/information for verification and due diligence procedure.

Type 2 users can restrict their application, to be visible only for your preferred financiers or published to the whole exchange. They can create groups of financiers that they have established relations to and post projects for this exclusive group only. The financiers will only be able to see that they are in the exclusive group but will not be able to see the other members.

Applications and Projects

Type 2 users can through the finance application page, create new projects and apply for finance by filling out the digital application form and provide requested details and documents supporting the project. The application is built to make it easy, fast, secure, and reliable to publish projects to the exchange which will be available for type 1 users to view and invest in. Every project has an ID that can be set to only be visible to a specific and preferred capital provider or published to the market, which will then be open for offers by all type 1 users. Type 2 users can create groups of capital providers and only post projects which will be viewed by the specific group(s) only.

Before type 2 users can create new projects, their user id and account must be verified and authorized by the terminal and can be so by providing the necessary documentation and information to ensure good intentions and prevent fraud and unethical behavior. If the user id has not yet been verified and authenticated, it will not be possible for users to create new projects.

Intelligence

The intelligence page is administered directly by OceanEXL Intelligence and provides the type 2 users an overview of the various markets and segments within maritime-related investments such as tankers, bulk carriers, and container vessels including market summary, market indicators, asset prices for various sizes and age classes, chartering rates and fleet statistics.

The Insights and Analytics module within the Intelligence page provides the most needed analytics and data in a quick, easy, and accessible way. Insight and Analytics gives a simplified overview of the users' segment of expertise. The data provided consists of entries from market experts as well as OceanEXL data inputs.

The Risk Management module within the Intelligence platform exhibition a live intelligence feed that monitors and analyses recent risk events and cases and

displays each event in their respective risk categories with a given risk level. The instrument is useful for anyone with an interest in recent events that can alter and change their operations. The module is developed for and addressed to professionals within the commercial and operational maritime sector.

Account

The account page displays all information about the user, the user type, and affiliated organizations. The account page also presents the current validity of the account and if not approved, the state of the account and the status of the application, and further required documents if not already provided. The documents and additional information can be directly uploaded to ensure safe, fast, and secure information sharing through the dedicated servers using SFTP and SSH protocol which a connection will be established in a secure environment to prevent password sniffing attacks and ensure data integrity with cryptographic hash functions and data encryption. The user will have access to all stored documents that are currently necessary for the user to remain active and request to either change or delete documents if deemed unnecessary to maintain the validity of the user.

Users can change their username and password via the account page and must go through a double authentication process to make any changes to ensure safety and prevent fraud. Type 2 users can directly see the team within their respective organization that has access to the terminal via the same license and the admin can remove or add more team members, which must undergo the same authentication process.

Brokers

The terminal offers a list of available and qualified brokers, which can be appointed either by the type 1 or type 2 user. The broker will help locate the right project for the type 1 user or help the type 2 user find the right finance partner for their project. The broker provides full assistance with contractual knowledge as well as guidance throughout the project. The brokers' work will be subject to a commission which is a percentage of the project and will only receive remuneration after the project is completed. All brokers are verified and approved by Globe Merchant Exchange.

Advisors

The terminal offers advisory to all clients whether type 1 or type 2 users to ensure further safety, quality, and guidance to successfully complete every project. Advisors are assigned to projects if the client request one and can be a preferred advisor or a new advisor based on the client's preferences and previous history. Advisors will gain access to the project sheet and any information available through the projects page if appointed by the user to manage and advise on the specific projects. All advisors are verified and approved by Globe Merchant Exchange.

Secure Contracts

All contracts and agreements that have been signed through the system will be given a dedicated contract ID, which will be stored under the contracts page making it easy and accessible to search for previous contracts and agreements. The Contract Management System (CMS) which is implemented within the terminal and secured by the systems multi-layer security will be safely stored, but also available for downloads in PDF format. Every contract ID is linked to the project posted by the finance seeker and structured from the terms and conditions agreed during the offering and agreement stage. Contracts can either be digitally signed through a Public Key Infrastructure (PKI) or manually signed and uploaded to the project successfully.

The technology and methodology

Cross-Border Grid (CBG)

The Cross-Border Grid (CBG) is the core of the terminal and provides all users the access to safely interact and transact through a model which will drastically enhance the effectiveness of cross-border capital investments through a chain of procedures and protocols including security, risk assessment, risk adjustment, and a scenario formulation - all happening within the terminal. The methodology behind the grid is purely based on security procedures and financial modeling operating together to make it faster, safer, and more efficient for capital providers and finance seekers to cooperate. The CBG is where our role as market makers steps in. The CBG will connect finance seekers, with available business, with trusted financiers around the world. The most important part of the CBG is that both parties have been verified and authorized by the system, which ensures that users are dealing with a serious counterpart. The CBG takes globalization one step further.

Financial modelling

Our financial model is developed around the principle of providing understandable metrics to users via an advanced but logical methodology creating a formulation for type 1 users to have a detailed overview of the specific project with all decisive factors taken into consideration.

At the formulation stage of each project, the model will include various assumption variables including, flag assumptions, macro assumptions, profit & loss assumptions, current assets & liabilities under balance sheet assumptions, and the share capital under equity. Using data and intelligence from the OceanEXL Intelligence database, the formulation will include current market variables and asset details, ensuring that the investment metrics provided will include actual market charter rates, asset prices, vessel and asset details as well as forecasted scenarios creating a reliable and certain case for the type 1 user to base their decision on.

The theory behind the model is to create a scenario in which a capital provider can estimate the value of the project in terms of the current value of the asset, depreciable value, residual value, opportunity cost, and return functions.

Throughout the development of the model, the most important factor was to recreate the model via a sustainable, scalable, and data-centric framework that can handle large sets of data, complex mathematical models, and functions to support the formulation of scenario-based investments.

Technological applications

The framework the system is written in is Python and Django which is ideal for prototyping and rapid, iterative development supporting large quantities of data and the perfect structure for financial analysis and computing through Pandas (DataFrame and Series objects) and NumPy (ndarray). The strings of data and records that must be processed through the system and the automated statistical models give access to analyze large and complex datasets through sophisticated statistical calculations. Our financial framework and trading technology are built for a high activity environment without losing any data or being at risk for security breaches. The framework and infrastructure of the Globe Merchant Exchange will run on our servers and network to ensure that quality and performance always exceed the demand, for the satisfaction of the client. The terminal infrastructure uses Public Key Infrastructure (PKI) which includes a set of roles, policies, software, and procedures needed to create, manage, use, store and revoke digital certificates and manage public-key encryption to ensure safety and quality without compromising with the effectiveness or products of the terminal. Our trading technology eliminates unnecessary latency and provides users with a smooth and reliable exchange. Globe Merchant Exchange will also consider the implementation of known and high-performing trading server software, such as Stratus Open VOS if it corresponds with customer demand. While the popularity among decentralized exchanges is growing with a special focus on the cryptocurrency industry, we understand the absolute importance of a centralized and secure exchange when it comes to global debt financing. While Globe Merchant Exchange is looking into the potential of blockchain technology to enhance the security and efficiency of the terminal, we have not yet decided how and if it will be implemented in the trading technology. Our Public Key Infrastructure (PKI) technology will allow users to share, sign and finalize contracts and agreements through the exchange. PKI technology is legally approved and available in most countries and is the technology that all digital signatory companies use today.

Globe Merchant Exchange roadmap and phase stages

Phase 1 – Research

The research phase had the goal to collect data and information and examine the need and potential for such a product in the current financial and transactional industry. Other aspects such as legal restrictions, availability of cross-border capital, and the user traction from both type 1 users and type 2 users were

examined and discussed. The research phase also included financial modeling, scientific methods, potential breach, and risks for such products and technological opportunities within and outside the terminal. At last, the cost and investments needed for such a product to be successful were carefully estimated.

Phase 2 – Launch of GMEX 1.0

Phase 2 included the launch of the first version of the terminal (GMEX 1.0), which had the most necessary functions implemented to provide a working and secure exchange. The Cross-Border Grid (CBG) was developed and implemented to the terminal. The goal of the launch of version 1.0 was to test the functionality, implications, and overall effectiveness of the terminal. The UI/UX was tested in real-time with live accounts to obtain feedback and enhance the design and experience. The functions within version 1.0 included the first version of the exchange (asset finance and trade finance) providing type 1 users and type 2 users the opportunity to interact via the Cross-Border Grid (CBG) system i.e., for type 1 users to offer on projects which have been posted by type 2 users and have been processed through the security protocols and model. Furthermore, the functions included advisory, broker, intelligence, portfolio, and projects.

Phase 3 – Launch of GMEX 2.0

The functions within the terminal (GMEX 2.0) have been enhanced to meet the new implementations, handling the growing activity, and have been prepared to be fully scalable, via own servers, technical team, and continuous security improvements. The terminal now offers Contract Management System (CMS) which gives the users access to directly execute contracts, which can be stored and managed within the terminal's direct servers. With the optimized and improved reliability and security measures of the terminal, new markets can be onboarded such as wind, solar, and other infrastructure projects giving access to high finance.

Phase 4 – Launch of GMEX 3.0

The 4. Phase (GMEX 3.0) includes implementation of a Transaction Processing System (TPS), providing users full access to execute the project from A to B with now providing escrow services and direct transfers via the Infrastructure Payment System (IPS). The escrow accounts and verification of funds through the terminal will provide faster, cheaper, and more secure transaction possibilities, advancing the process of funds being transferred from one user to another from anywhere in the world.

Phase 5 – Launch of GMEX 4.0

The launch of GMEX 4.0 includes a fully functional exchange providing investors, banks, and institutional investors to trade single medium-sized debt obligations as tradeable securities. The volume of trades will require a high-volume operational system such as Stratus Open VOS.

Security protocols and verification of user identity

Security protocols

To ensure ultimate prevention of DDoS, the terminal uses different security protocols on different layer levels which will secure the data integrity and protect sensitive data, financial data and allow file transfer using the cryptographic method.

The implementation of Application Layer Filtering (ALF) provides a high degree of protection towards the Internet Payment Gateway, Server Based Wallet (Account), and the dedicated Payment Server to ensure a complex security layer. The filters are implemented as a dedicated firewall. The server application is located on a private network behind our firewall. In contrast to the filter circuit level, application-level intermediaries allow only packets that they were assigned to work. Application-level intermediaries check the contents of each packet passing through the gateway. To secure the data at the network level the Internet Protocol Security (IPsec) will authenticate and encrypt the packets to ensure secure encrypted communication between two users through the internet protocol network. The IPsec supports network-level peer authentication, data origin authentication, data integrity, data confidentiality, and replay protection. The sharing of files within the servers through SFTP will be secured by SSH protocol which a connection will be established in a secure environment to prevent password sniffing attacks and ensure data integrity with cryptographic hash functions and data encryption. When users communicate through the terminal on the internet the Transport Layer Security (TLS) ensures privacy and prevents third party tampering of the message.

Identity of users and applicants

To ensure safe authentication of users and applicants the users will have to go through an application protocol retrieving information and data (documentation) on the user for the terminal to control the identity and be vetted by an assigned quality control personnel. Various decisive factors will be taken into consideration when authenticating a user identity such as IP address, OAuth, Role-Based Access Control (RBAC), Policy-Based Access Control (PBAC), and Rule Set Based Access Control (RSBAC) to ensure a streamlined identity control with minimum risk of unwanted access and breach.

This and more also helps to ensure reliable identity and access management (IAM) for cybersecurity, to verify that only allowed professionals will be given access to the terminal, and the system can immediately detect users/IP addresses trying to enter restricted functions.

As part of the authentication and documentation process, user 2 will be required to fill out a standard Globe Merchant Exchange know your customer (KYC) form, anti-money laundering (AML) form. When a type 2 user creates a finance request, they will in addition to the information given in the registration process, be asked to provide a bank statement, prove of collaterals (if any), and which other parties are involved in the project, which user 1 can request user 2 to review before or after giving a finance offer. This is required as a presetting for creating finance requests, to ensure professionalism, faster and easier financing, and help user 1 determine the creditworthiness of a type 2 user.

User 1 will be required to fill out a standard Globe Merchant Exchange know your customer (KYC) form and anti-money laundering (AML) form. A user 1 might require additional information from a user 2 on which project they wish to finance, however, this should all be included in the subjects of the financiers' offer.

Risk category of user identity

Every user must undergo a validation and authentication procedure rule integrated within the system to ensure good intentions and to prevent fraud, terror financing, and interaction with sanctioned persons, entities, and countries. When users sign up through the terminal, they will be requested to safely upload the required documents directly to the system through the dedicated servers using SFTP and SSH protocol which a connection will be established in a secure environment to prevent password sniffing attacks and ensure data integrity with cryptographic hash functions and data encryption. The documents and information shared by the user will be carefully analyzed by the system and overlooked by a human to cross-check all details and ensure a precise risk assessment of the specific user. The data collected will be always available to the user and will be deleted in case of expiration or deemed unnecessary for the ongoing validation of the user. Based on the data provided by the user an internal score will be given from 0.1 to 100 (only visible to system administrators) to decide the risk of the user and will be defined through a list of decisive factors including:

- Company age
- Company registration country
- Financial statements for the past 3 years (if available)
- Fresh bank statements
- Certificate of incorporation
- Service license
- Memorandum of Association and Articles of Association
- Board resolution
- Ultimate Beneficial Ownership
- Reputation and digital information
- Passport photo of principal with banking power

If the user receives a score above 75% the user will be acknowledged as a valid user and authenticated and given access through a tokenized system ensuring that the user can access the account without the risk of being breached or tampered with. User scores can change over time having in mind the activity of the user and historical projects and agreements.

Research and findings during creation

Scientific research

Simplified for whitepaper

Bringing global finance to SMEs - One of the driving forces behind the Globe Merchant Exchange, was to understand the need for cross-border financing. Are the returns great enough for investors to expand their cross-border finance operations, is there a need for finance among active companies that primarily operate and run the global supply chain, is there still room for small companies in the global supply chain sector and how do they acquire finance. The research takes aim at whether companies could obtain better finance solutions and even finance in the first place, and whether financiers could receive better returns, by centralizing the finance seekers and finance counterparts in one global exchange.

Findings - Multinational companies run over half of the global trade and supply chain companies around the world. Multinational companies enjoy good relations with their finance counterparts, and the financiers receive a medium to low returns on financing these projects. Multinational companies have a rejection rate on finance requests of 17% while on the other hand, SMEs have a rejection rate of 45% globally. This is a very clear difference and one of the biggest issues to the inefficiency remaining in the global supply chain. SMEs today account for about 37% of global trade finance demand, and while a lot of SMEs eventually find alternative finance, as 18% find informal finance and 16% find formal financing alternatives, there is still a lot of companies that fail to even access finance and therefore miss out on business. The biggest obstacles for increasing cross-border finance are KYC, AML, failure to show financial statements, failure to provide collateral, and lastly, there is the cost of international transfers and currency exchange. Finance providers often don't have the capacity or interest in financing SMEs either, due to the high operational cost that is the due diligence process of SMEs and new clients. There is reason to believe that digitalization will work in SMEs favour, by helping to provide more accessible data for financiers and could eventually generate savings of up to USD 2.5 - 6 billion due to increased accuracy of credit risk assessments.

Would a centralized terminal, containing pre-filed documentation, increased visibility, and risk-adjusted functionalities improve the financing available for SMEs? The variable to consider is whether eliminating much of the operational cost from the financier will increase the available finance for SMEs.

From the previously discussed data that is retrieved from a survey by the Asian Development Bank, including over 300 firms, in 70 countries, including 112 banks, 50 export credit agencies, and more, we have established figures such as the rejection rate for multinational companies of 17%. The hypothesis will consider the 17% rejection rate as a base rate.

Removing the operational cost of preparing due diligence papers for the financier, will increase their capacity for investing in SMEs, but still leaving other issues behind, such as the creditworthiness of the SMEs. Up to 16% SMEs considered in the survey, was able to find formal financing alternatives in the end. While other factors will have taken part in the first rejection of the trade finance, it could be considered that these SMEs would have been acceptable for trade finance with a

higher capacity and lower operational cost for the finance provider. It is also possible to assume that the underlying issue for financiers not to finance SMEs is their poor creditworthiness and failure to prove collateral, in which case the hypothesis would be false.

With a streamlined and centralized approach to KYC, AML, and trade documentation, this study justifies that banks and financiers would be able to increase their investments into SMEs along with expanding their trade finance business units. The referenced survey shows that the biggest issues for banks and lenders to expand their trade finance business units is rooted in a lack of profitability due to high transactional cost, as well as KYC and AML regulations/procedures. Since lenders in many cases will be able to see better return on SME finances, there will always be a driver behind their interest, which organically will increase along with an improved transparency.

Current situation

During the pandemic (COVID-19) banks and major corporations saw their loan books shrink to historic lows which are considered a major issue for big finance. The issue is not whether there are enough projects and finance seekers, but rather the risk and access to projects and companies. The long protocols and procedures banks and investors must provide capital to a borrower are long-drawn and difficult which results in far less capital being put to work in either local or cross-border operations resulting in large cash reserves which exceed the necessary reserve policies and block the opportunity to grow and, develop local and as well as international communities and economies. The first reason for the extreme cash reserves is due to the risk banks has to take to finance companies and projects which are either new or do not have credit rate which is trusted by the financiers. The second and most important reason is the access to companies and projects who are seeking finance but can't borrow due to low exposure to the financing market and high-interest rates which makes the project unrealistic. Companies who seek finance usually approach a couple of banks and investors to secure the best financing and terms, but only among the bunch/or the one, they have approached instead of having access to a marketplace of financiers offering on the same debt and giving the finance seeker a much larger exposure to capital and ensure the best obtainable terms possible.

Many financiers within the maritime business are dealing with medium-sized debt obligations with a certain risk appetite, as the industry is volatile and risky with assets being non-liquid and preventing capital providers to exit their positions in a relatively short period. In contrast to bonds, a finance structure within the maritime industry is often provided by a single capital provider taking all the risk and not being able to trade the debt as tradable securities, which could result in a much larger risk appetite as the risk-taker would be able to exit their position much faster and easier.

Market sentiments

The need to allocate funds and growing economies throughout the world creates an incentive to provide both capital providers and finance seekers a centralized

platform to interact through which standardize the medium-sized debt obligation market and gives access to much-needed capital for borrowers and a much larger list of financing projects to capital providers benefitting both sides in a simple yet advanced platform allowing users to interact and agree upon financing. The terminal provides great opportunities for SMEs who would previously struggle to find finance and the financier would, in turn, be able to enjoy better returns than that of loans to multinational firms. On the flip multinational firms with well-established finance channels will also be able to benefit from the terminal, whereas they can now have several financiers offering on one finance application, driving the interest rate down. From previous research findings, we observed that several reasons have been the cause for a high rejection rate of financing for SMEs, but more than others documentation and lack of collateral. As Globe Merchant Exchange wishes to streamline much of the documentation process, there should be a more optimistic sentiment from financiers.

Trade finance is one of the subjects that the terminal wishes to affect the most change. We have observed that there is a huge need for SME traders, which very often have the logistics of the trade laid out but are unable to find finance in the end. While the terminal and registration process make it easier for traders to have the documentation ready and live up to the financiers' requirements, the exchange creates a place to visualize their project to several financiers at once.

Obstacles and solutions

The single largest obstacle in gathering all finance seekers and capital providers in one centralized platform is the fact that many established finance seekers have one or few preferred partners when seeking finance, this could be due to the long relationship the parties has established over multiple years and deals, but also the further advantages a finance seeker will be looking for when signing up. With a centralized platform and a long list of qualified and verified financiers, the terminal allows finance seekers to market their projects digitally to a much broader group consisting of investors, banks, and institutional investors which will allow them to receive the best offers possible and not discuss the project's financing with a couple of financiers, spending far too much time and energy, but rather post a financing project to the platform and ensure direct interaction to a large list of financiers, leading to a potential cut in the interest rate and savings of millions of dollars during the maturity of a project.

A critical point for the terminal and exchange to become a success is to uphold a high standard of professionalism among finance seekers and financiers for both parties to feel secure about the use of the terminal and confident in the counterpart's ability to perform. The registration process for users and the document requirements for type 2 users when creating a finance application, are created to ensure the quality of the terminal.

Financiers usually have approval processes set in place for finance clients, which can be long and unavoidable. On the terminal the type 2 user profiles will give the financiers an extensive overview of the client they are dealing with and to provide additional certainty, finance seekers must include a financial statement and proof of collateral in their financial applications. Most information will be available for the financier, but some of the information type 2 users can make available upon request.

Legislative enactments

International laws (local jurisdiction laws)

Compliance with local rules on offering financial products and services, and development of global policies and procedures, licensing requirements and exemptions, relationship structures that optimize cross-border operations, international insurance operations, anti-money laundering (AML) laws, data protection laws (including GDPR)

Federal laws and best practices of the UAE

Decretal Federal Law No. (14) of 2018 Regarding the Central Bank & Organization of Financial Institutions and Activities, Decretal Federal Law No. (25) of 2020 Regarding the amendment of some provisions of the Decretal Federal Law No. (14) of 2018 regarding the Central Bank & Organization of Financial Institutions and Activities, Federal Law No. (6) of 1985 Regarding Islamic Banks, Financial Institutions and Investment Companies

Financial and investment related laws (including transaction laws)

Anti-Money Laundering And Combatting The Financing Of Terrorism (AML/CFT) including CBUAE Regulations, CBUAE Guidelines, Filing Suspicious Transactions Report (STR), Target Financial Sanctions (TFS) and other guidelines and best practices, Finance Companies Regulation, Large Value Payment Systems Regulation,

Privacy and Data Protection law

Constitution of the UAE (Federal Law I of 1971), Penal Code (Federal Law 3 of 1987 as amended), Cyber Crime Law (Federal Law 5 of 2012 regarding Information Technology Crime Control) (as amended by Federal Law No. 12 of 2016 and Federal Decree Law No. 2 of 2018)

Governance

Administration of Globe Merchant Exchange

We use a string of procedures and protocols to ensure that users safely access and navigate the terminal. Via our Simple Network Management Protocol (SNMP) which is the protocol governing network management and monitoring of network devices and their dedicated functions within the terminal. The System Security Officer (SSO) will always be monitoring the various layers of the terminal to

detect and counter any potential threats that might be of risk to the terminal and its users.

Support

All users will have access to full support and guidance when navigating the platform to ensure 100% efficiency and prevent mistakes on the terminal.

Support hotline	Support email
+971 50 902 2068	Support@globe-merchant.com
+971 50 902 2038	Disputes@globe-merchant.com

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