VERNAM

THE FUTURE OF INSURANCE

VERNAM TOKEN SALE

WHITEPAPER

01 Executive Summary

Ver. 1.3 Beta
May 10 2018

01 /

EXECUTIVE SUMMARY

- Our goal is nothing less, but torevolutionize the insurance industry! We are the first company in the world ready to implement a high-end technological solution which will dramatically lower the cost of insurance services while making the business way more efficient and friendly for all parties - from End Clients to major Insurance Companies!

- For this purpose we developed Vernam! A decentralized platform, based on blockchain technology, connecting various stakeholders in the insurance industry – customers, brokers, and insurance companies, which will use blockchain technology to make the insurance process less costly, fully transparent and much more convenient!

- An unexpected reality? Insurance is one of the largest global industries ($ 4.73 trillion in 2016), but its business model has not changed significantly over the last several centuries, while its technologies have long become outdated. That is why our plan is to make the next evolutionary step and digitalize the industry!

- The status quo today: Big insurance companies depend on brokers to bring their products to end customers. In exchange, brokers receive generous compensation – up to 30% of the policy premium – for performing relatively low value-added services. Imagine if End Clients don't need to cover the broker's commission and instead they receive his reward straight into their pocket? Vernam is about to make this possible!

- Our Solution: The use of a shared ledger will prevent any possibility for data manipulation, increasing transparency and minimizing transaction costs. Besides the engine, a proprietary off-chain market place will use the Vernam token (VRN), an Ethereum-based ERC 20 standard crypto token to take full advantage of the platform functionality

- Here's how: Clients, purchasing conventional insurance through the Vernam platform will receive a reward in VRN tokens, equal to a typical broker's commission (up to 30% of the premium price). Tokens can be sold on an exchange or used for the purchase of conventional and crypto insurance products!

- And there is even more! "CryptoSafe", a crypto product, only available through the Vernam platform. Each platform user will be able to purchase the "CryptoSafe", which is a type of a smart contract, guaranteeing that when a defined set of events occurs, the client will be compensated with a certain amount of VRN. An intelligent way to create even safer environment!

- Would you like to participate in the future of insurance NOW? In total 1 billion Vernam tokens will be created and 50% will be sold at the token sale event. The proceeds will be used to develop the blockchain platform and to implement the platform on key markets, depending on size of the funds raised.

- We unite the best of both worlds. Vernam platform users will be able to make conventional insurance through our own network of brokers, including Vernam company itself, and/or to purchase "CryptoSafe", the newest and most innovative blockchain based insurance product that Vernam will introduce.

02

INTRODUCTION

Nowadays, insurance is a global industry estimated at $4.73 trillion in 2016 and growing at an annual rate of over 3%. Yet, **It is curious though that its business model** insurance has not changed much over the last few centuries. Insurers are large companies, overseeing billions of dollars and euro, whose main job is to calculate risk and to spread a large amount of money over an even larger number of people. Like many other industries, they depend on distribution partners – like brokers and agents – to bring insurance products to their end customers. These partners decide how to identify clients, how to reach them most efficiently and how to handle paperwork and customer service. **In turn, brokers receive a commission of approximately 20% of the insurance policy value. Yet, the added value of their service is highly debatable!**

Technology advances in the recent decades have revolutionized both marketing and communication. Customers have received all kinds of tools to find a service provider, to receive information about price and features, and to compare products. Companies have received the possibility to interact directly with their clients. Yet, the business model fundamentals have not changed.

Broker's commissions are still as high as they were decades ago... Our plan is to take advantage of decentralized ledgers and to address all fundamental inefficiencies in the insurance industry!

OUR GOAL IS TO TAKE ADVANTAGE OF DECENTRALIZED LEDGERS AND TO ADDRESS CURRENT INEFFICIENCIES IN THE INSURANCE INDUSTRY.

By implementing blockchain technology, we plan to tackle two main problems with the current flow of information between insurance providers and end customers – the lack of pricing transparency and the lack of adequate customer history. Our open ledger platform will be decentralized and accessible to all stake- holders in the insurance process, increasing network effects and maintaining data integrity. Simultaneously we will build and operate an offchain marketplace that will be the first marketplace to connect to the Platform und use its functionalities.

Besides platform development, our growth plan foresees the establishment of a broker network in several countries to be operated by the offchain marketplace. Clients will be able to purchase insurance policies in VRN or fiat currency, taking advantage of the pricing and terms transparency, thus starting to create their own insurance customer history data as well.

In return against the use of OUR marketplace, customers will receive a reward in VRN tokens, equal the average broker commission for the given market (typically, around 20%).

Our vision for possible next steps include the introduction of additional blockchain based insurance services, with the main focus on the provision of crypto to crypto (C2C) insurance products, that do not fall under the scope of the applicable laws and regulations, where part of or the whole compensation will be in payable in VRN and / or other crypto currencies.

03

INSURANCE BASICS

What is the origin of the insurance industry? The earliest known examples of property insurance date from ancient China and Babylon. In the 3 millennium B.C. Chinese merchants would redistribute their goods, when sailing through dangerous river rapids, to minimize losses against a vessel sinking. The Babylonians advanced insurance further. The famous Code of Hammurabi (c. 1750 BC) mentions how merchants, financing their business through loans, would pay their lenders an additional sum, against a guarantee that the loan would be cancelled, should the shipment be stolen, or lost at sea.

The first printed book on the topic, On Insurance and Merchants' Bets, was written in 1488. Around this time, insurance had become increasingly sophisticated, with sector specialization emerging. The first "official" fire insurance company in the world, the Hamburger Feuerkasse was established in Germany in 1676. Meanwhile in England, economist Nicholas Barbon and eleven associates established their "Insurance Office for Houses" which insured over 5000 brick and frame homes in London, where the Great Fire had already convinced many homeowners in the need to protect their property against unforeseen risks. The "Sun Fire Office" established in 1710 is the oldest active insurance company in the world.

One of the most famous insurance institutions is the Lloyd's of London, established in the 17 century as a coffeehouse for merchants, bankers, and people willing to insure commercial activities, and evolving into the most likely place to find underwriters for marine insurance (the word "underwriter" is said to have developed from the practice to have ever risk taker to write his name under the total amount of risk that he was willing to take under the specific premium).

The first company to offer life insurance was the Amicable Society for a Perpetual Assur-ance Office, founded in London in 1706. Around 1750 the necessary mathematical and statistical tools became available for the development of modern insurance companies. Edward Mores's Society for Equitable Assurances on Lives and Survivorship, founded in 1762, pioneered "the framework for scientific insurance practice and development " and introduced premiums based on statistical models.

While insurance companies proliferated (by 1820 there were 17 stock life insurance companies in New York state alone) many of the early insurers failed from speculative investment, poor management and inadequate risk management models. Rate making was difficult in the absence of sound statistics and government regulation was poor. Many companies bankrupted after the Great Chicago Fire in 1871 and the San Francisco earthquake and fire of 1906. Almost 50% of US life insurers disappeared between 1873 and 1877.

MARKET PLAYERS AND TYPES OF INSURANCE

The insurance industry comprises several types of players and our service takes into account all of them. While clients range from individuals to Fortune 100 corporations, Insurance companies, are typically among the largest organizations in each country (e.g. Metlife and AIG in the United States, or AXA, Allianz and Generali in Europe) – This is hardly surprising, given that their business model depends on pooling together financial resources from thousands of clients to offset potential risks. An even smaller number of reinsurers (e.g. Swiss Re and Munich Re) provides assurance to the insurance companies themselves to offset risks, that may be too large for them to handle on their own.

Besides these groups, a large number of intermediaries connect clients and insurance companies. These are typically agents and brokers. Some of these intermediaries are corporate behemoths themselves with companies like Marsh & McLennan in the United States or Aon plc in the United Kingdom having revenues in excess of $10bn per year.

As in other industries, the use of intermediaries is a popular model from the era, when service providers could not reach their clients directly, or in a cost-efficient way. Agents and brokers would bear the cost of personnel cost and operations, and would manage their client relationships and sales process on their own, **while receiving a commission fee of up to 20-30% as a compensation.**

Any type of risk, which is quantifiable can be insured against. Generally, the major “division line” is between life and “non-life” insurers .In a life insurance contract, the insurance company pays to a designated beneficiary in case of the death of the insured person (typically the policy holder). The main non-life insurance categories are motor insurance, covering damages to one’s vehicle and/or liabilities to other parties, health insurance, covering healthcare and medical expenses, home insurance, travel insurance, marine insurance, commercial insurance (e.g. professional indemnity insurance for doctors, consultants, etc.).

MARKET OVERVIEW AND RECENT TRENDS

According to a recent Swiss report, the insurance market worldwide in 2016 was estimated at $4.732 trillion. Europe, North America and Asia have almost equal market size, with total premiums of $1.470 trillion, $1.467 trillion, and $1.493 trillion respectively. The remaining regions of the world account for about $301 billion, or 6% of the global market.

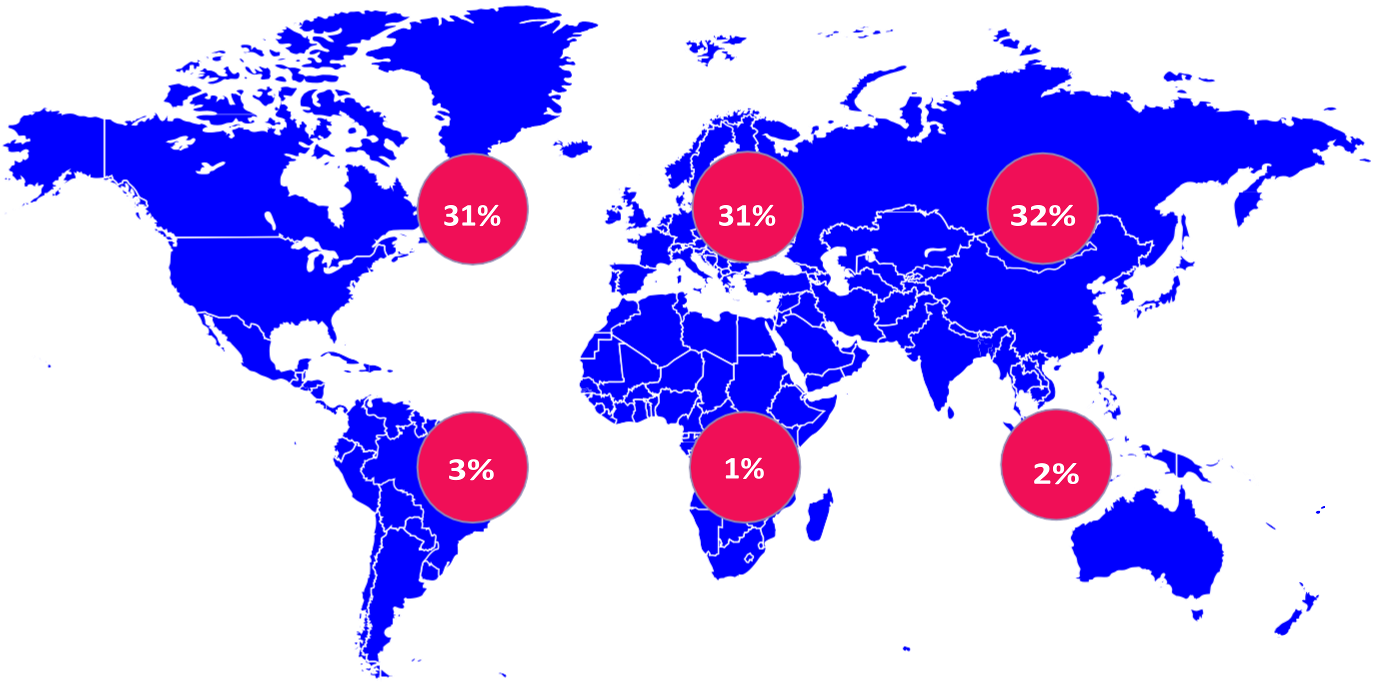


Figure 1: Regional share of 2016 insurance premiums revenues

Since Vernam will initially target Europe, our white paper will be focused on the EU market. The following figure shows its development by the major insurance categories. The total size of the insurance premiums in Europe has been stable around € 1 – 1.2 trillion, regardless of the overall economic situation on the continent. Of this amount, approximately 60% is attributed to life insurance.

The various types of non-life insurance contribute €471bn in 2015 - this is exactly the market share we are about to revolutionize!

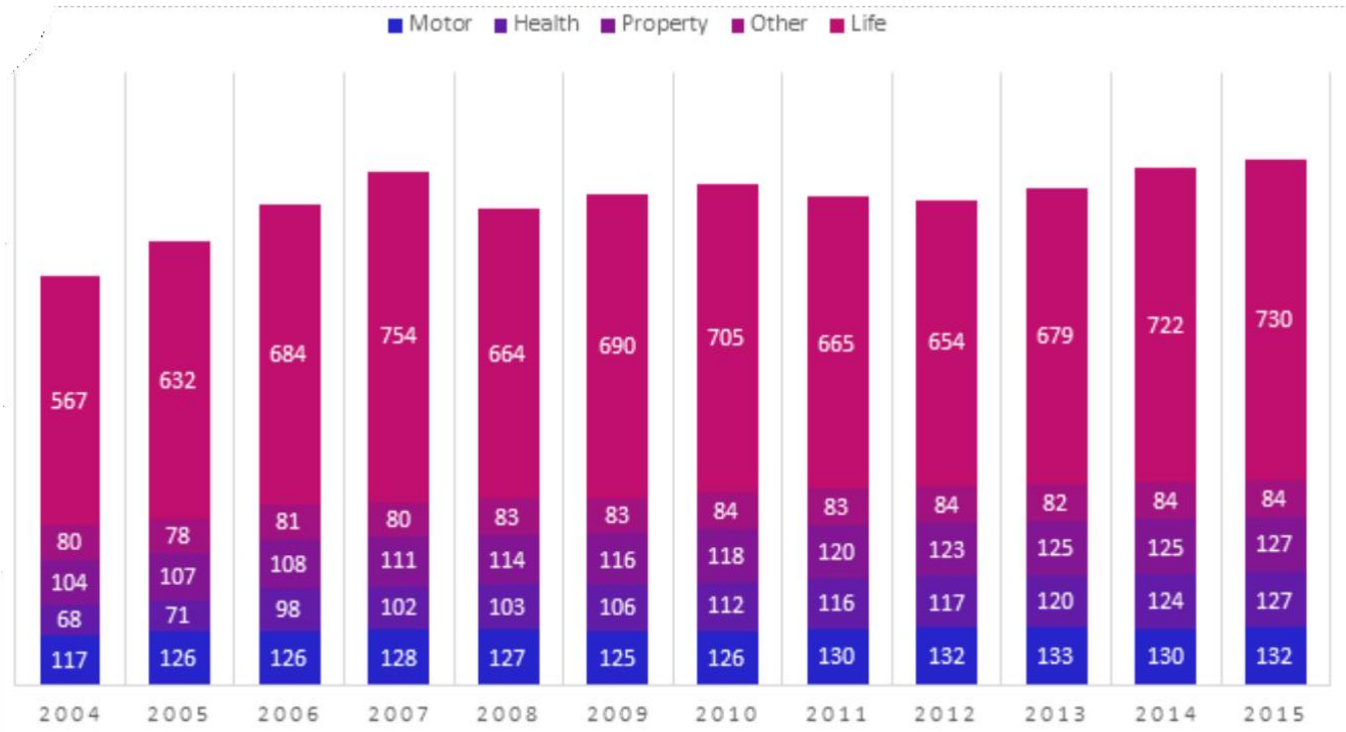
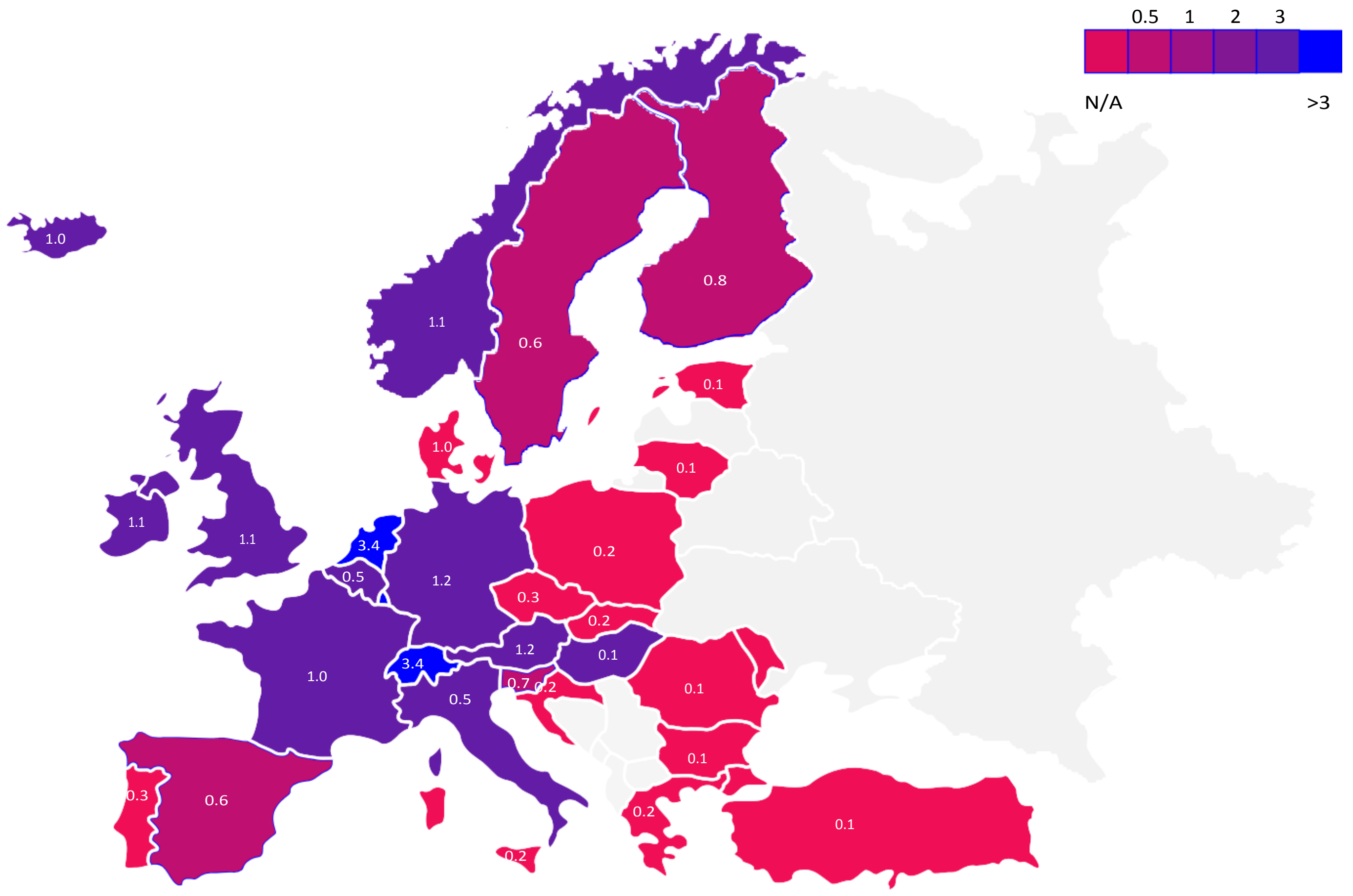


Figure 2: European insurance industry by major categories

Vernam's business model is based on the disruption of non-life insurance distribution chains, therefore our analysis does not take into account life insurance , where the largest European markets are UK (€181bn of life insurance premiums in 2015), France (€136bn), Italy(€115bn), Germany(€93bn),Switzerland(€30bn),Sweden(€27bn),andSpain(€26bn).

In non-life insurance, several countries have market size of €70-100 bn, which translates in "density" (i.e. premiums per insured person) of about €1000 / year. The average "density" in non-life insurance for Europe has been €760 for 2015.

The following figure shows the average non-life insurance premium ("density") per person in all EU countries. The countries with highest density are Liechtenstein (€22,946), Netherlands (€3,414), Switzerland (€2,949), Luxembourg (€1,529), Austria (€1,245), and Denmark (€1,245). Most large EU countries have an average density of about €1,000, while in Central and Eastern Europe, non-life premiums are typically in the €100-€200 range.



Average non-life insurance premium (2015, EUR ths)

The following figure shows the penetration in Europe by major insurance type. **Motor vehicle insurance is the predominant type in most countries, especially in Central and Eastern Europe, where it forms over 50% of all policies.** For example, in Bulgaria Motor insurance is 68% of the non-life market, in Romania it is 72%, in Estonia 60%, and in Greece 58%. From the large countries, Italy has a relatively high motor insurance penetration at 52% of all non-life policies, while for most other countries of this size, the average rate is around 25-30%.

In absolute terms, the total European motor insurance industry was worth €131.7 billion in 2015. Large countries expectedly have the biggest motor insurance markets with Germany's 2015 premiums standing at €25.2bn, France at €20.4, UK at €19.4bn, and Italy at €16.7bn. In Western European countries with 10-15 million citizens, motor insurance markets have total size of about €2-3bn per year.

Considering "density", the most lucrative European motor insurance markets are Luxembourg with an average premium of almost €750 in 2015, Switzerland with €664, Iceland with €501, and Norway with €415. Most western European countries have an average premium in the €260-€320 range, with Austria having a slightly higher average policy size of €364 per insured vehicle. Several countries (Sweden, Netherlands, Spain) have average premiums of €200-240 per year.

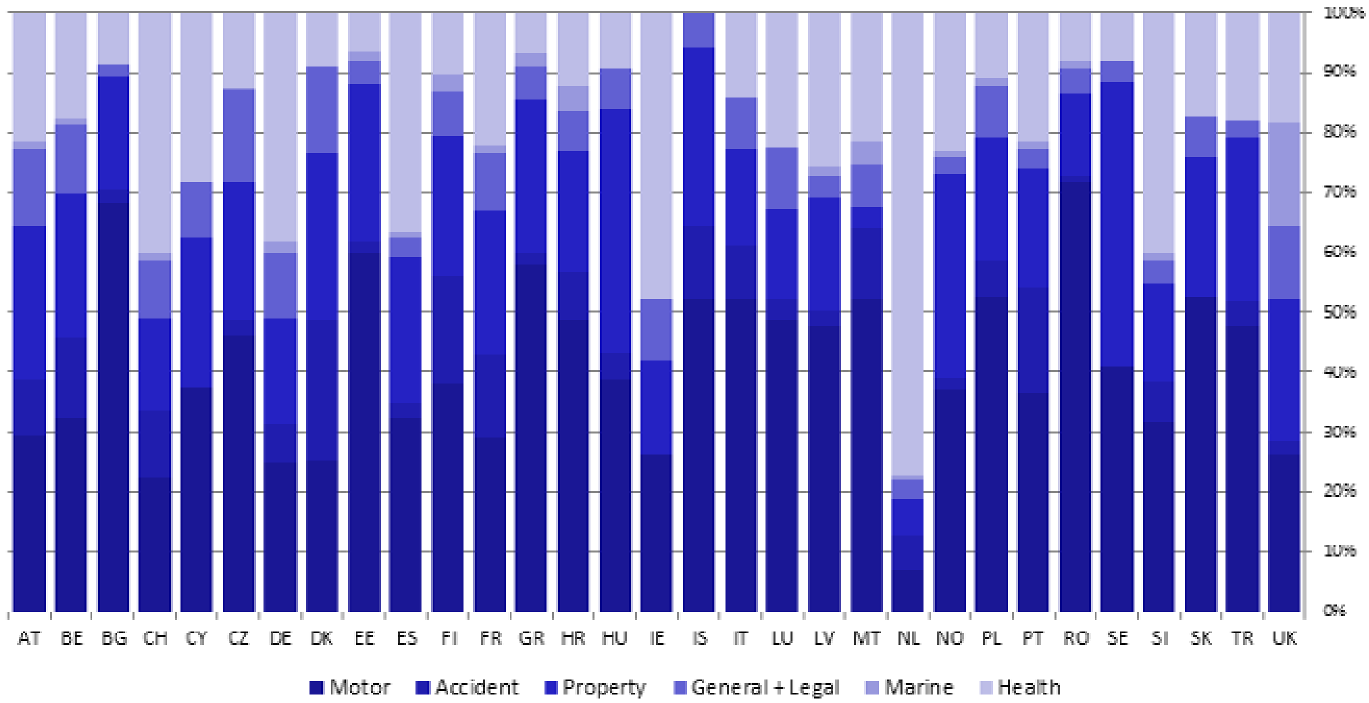


Figure 4: Penetration by insurance type, as a share of total non-life premiums

Property insurance is also a major category with a total size of €92.6 billion in 2015. Germany is the biggest market with €17.9 billion of property policies, with UK market at €17.6bn and France with €16.8bn having almost the same size. For the remaining West European countries, typical industry volume is in the €2-3 bn range, while Eastern European countries have property insurance markets of €100-200 bn per year (Greece with €447bn, Hungary with €518bn, and the Czech Republic with €731bn are relatively large per the region's standards).

The following figure shows market consolidation by EU country in 2014 (or latest available year). The most consolidated markets are Iceland, Finland, and the Czech Republic, where the five biggest insurers account for 90% or more of the market. The average share of the Top 5 companies in Europe is 66%. The least consolidated markets are Cyprus, where the five largest companies have only 12% of the market, Greece with 39%, Germany and the United Kingdom with 41%.

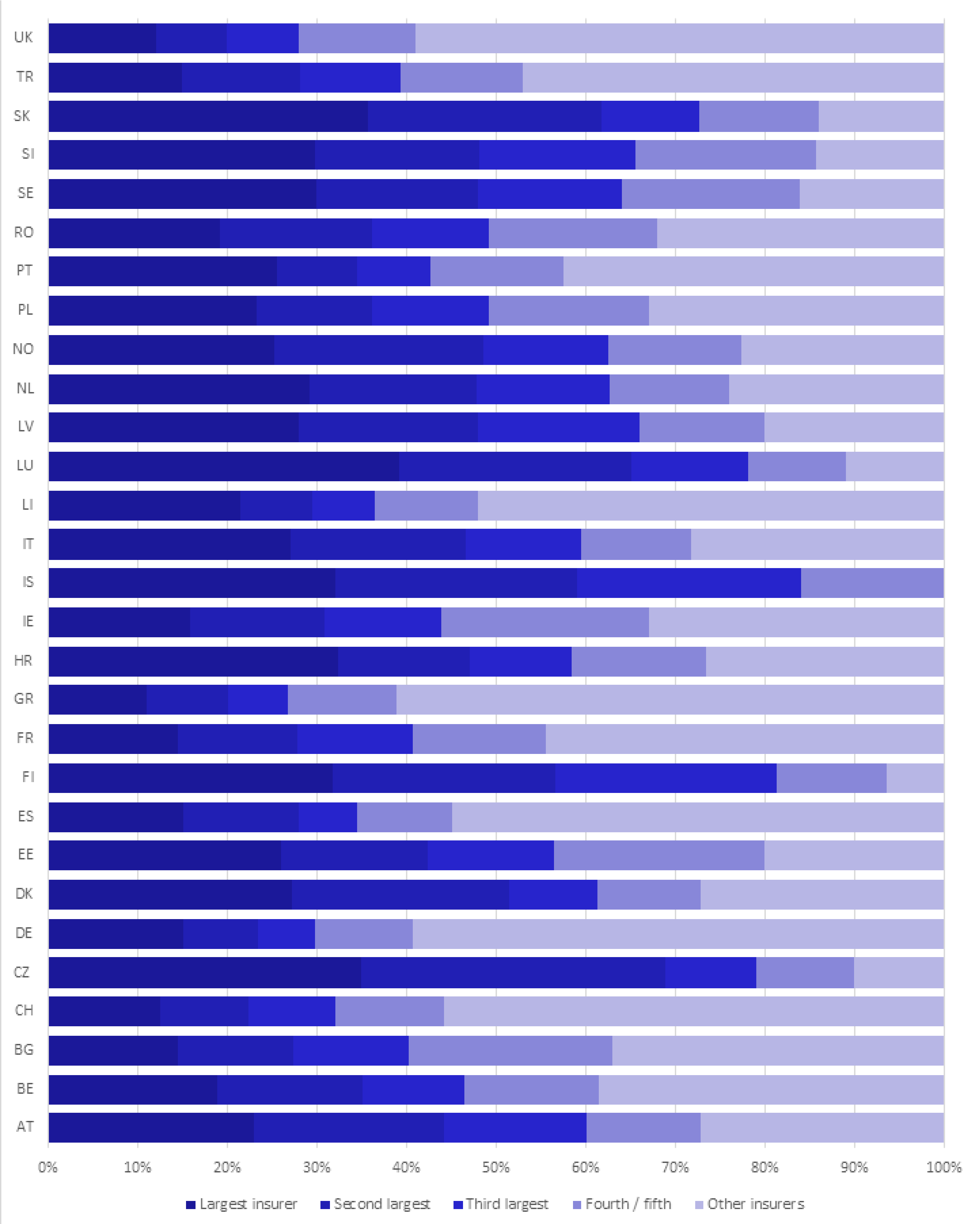


Figure 5: Non-life insurance market consolidation per country (2014 or latest)

The following table shows the biggest non-life insurance companies per country (in 2014 or latest available year). Large multinational companies, such as Allianz, AXA, and Generali hold positions in many countries. Apart from them, strong local players hold the top spot in most large Western European markets.

Country	Largest Non-life Insurer	Second Largest	Third Largest
AT	UNIQA	Vienna Insurance Group	Generali
BE	AXA	AG Insurance	Ethias
BG	Allianz Bulgaria Holding Group	Vienna Insurance Group	Armeec
CH	AXA-Winterthur	Zurich	Mobiliar
CY	General Insurance Of Cyprus	CNP Asfalistiki	Universal Life Insurance
CZ	Generali CEE	VIG	Allianz
DE	Allianz	Ergo	Axa
DK	Tryg Forsikring A/S	Codan Forsikring A/S	Topdanmark Forsikring A/S
EE	If P&C Insurance	ERGO Kindlustus	Swedbank P&C Insurance AS
ES	Mapfre	Mutua Madrileña	Allianz
FI	OP Group	LähiTapiola Group	If Insurance
FR	AXA	COVEA	Groupama
GR	Ethniki	Interamerican Non-Life	ERGO
HR	Croatia	Euroherc	Allianz
HU	Allianz	Generali	AEGON
IE	RSA	Aviva	FBD
IS	Vátryggingafélag Íslands (VÍS)	Sjóvá-Almennar (Sjóvá)	Tryggingamiðstöðin ™
IT	Unipol	Generali	Allianz
LU	Foyer	La Luxembourgeoise	AXA
LV	BTA	Gjensidige Baltic	Balta
NL	Achmea	VGZ	CZ
NO	Gjensidige	If	Tryg
PL	PZU	Ergo Hestia	Warta
PT	Caixa Seguros	Grupo Tranquilidade	Grupo Allianz Portugal
RO	VIG	Astra	Allianz
SE	LF-group	If Skade	Folksam
SI	Zavarovalnica Triglav, d. d.	Vzajemna zdravstvena zavarovalnica	Adriatic Slovenica, Zavarovalna družba
SK	Allianz SP	Kooperativa poisťovňa	Generali Slovensko poisťovňa
TR	Allianz Sigorta AŞ	Anadolu Anonim Türk Sigorta Şirketi	Axa Sigorta AŞ
UK	Aviva	RBS	AXA

SUMMARY: The insurance market worldwide in 2016 was estimated at $4.732 trillion and Europe contributes with a 31% share. The total size of the insurance premiums in the continent has been stable around € 1 – 1.2 trillion, regardless of the overall economic situation and the tendency is to increase. Of this amount, approximately 40% is attributed to non-life insurance which includes motor insurance, health insurance, home insurance, travel insurance, marine insurance, commercial insurance, etc. The various types contribute €471bn in 2015 with European motor insurance industry worth €131.7 billion and a total size of property insurance for the same year reaching €92.6 billion. Non-life insurance is Vernam's target sector and Europe is the first market we plan to penetrate. Insurance is one of the most stable markets, regardless of the overall economical landscape and Vernam's solution will completely transform the internal dynamics of this sector by implementing a high-end technological solution which will solve all inefficiencies in the current business model.

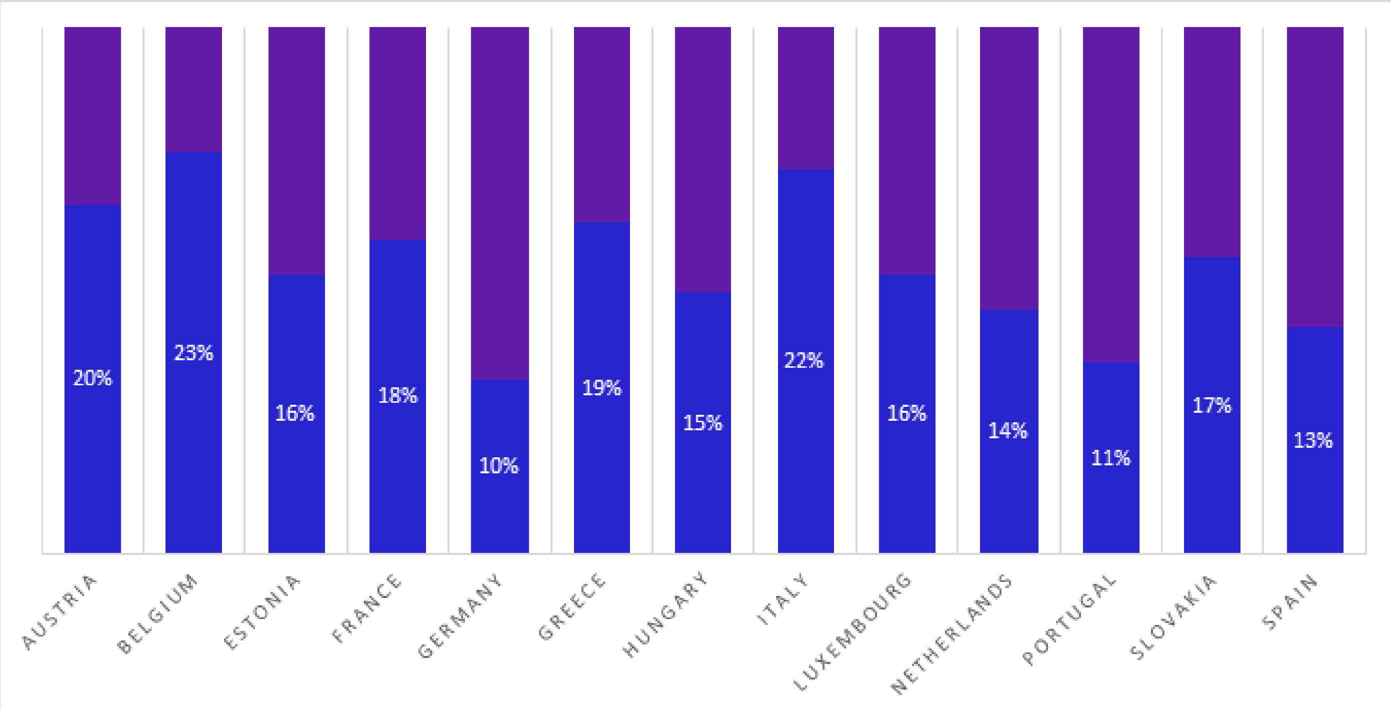
04 /

WHAT PROBLEM ARE WE SOLVING?

The standardization of information and procedures and the general customer awareness mean that most of the insurances can easily be completed online! As Mentioned in section 2, the insurance industry has not changed significantly over the last several centuries. Innovation is absolutely inevitable – it is not a matter of IF, but a matter of WHEN – and we can assure you the moment has come! New products have been added, but the distribution model has essentially remained the same – large insurance companies would use brokers and agents to reach their end customers. These distribution partners would typically organize their business processes – opening offices and service desks, maintaining personnel, running advertisement and promotional campaigns.

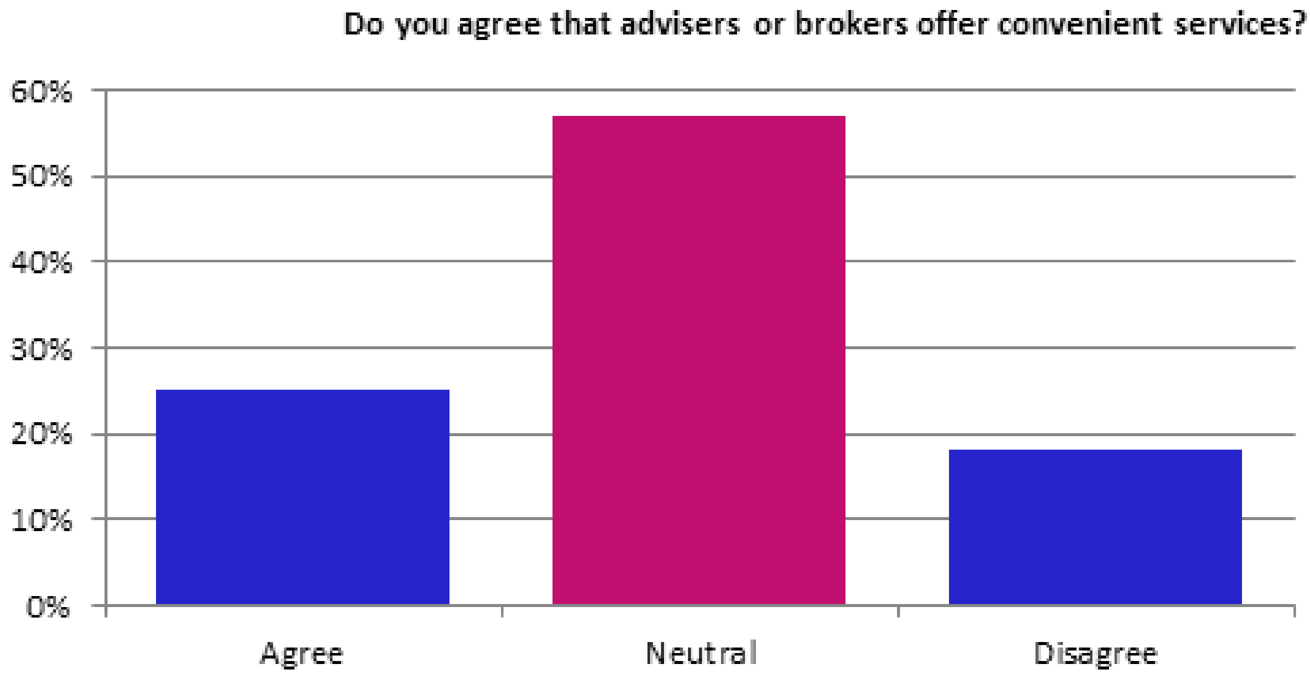
THE AVERAGE COMMISSION OF INSURANCE BROKERS IS APPROXIMATELY 15-20%, WHICH INCREASES THE PRICE FOR END CUSTOMERS WITHOUT PROVIDING PARTICULAR VALUE-ADDED SERVICES

While this model was typical across various industries in the pre-internet era, it does not add as much value nowadays as it used to. The figure below summarizes recent data for selected EU countries , showing that average brokers' commissions are indeed quite significant and relatively stable across the continent.



Innovation is inevitable. And if you look around you, you will understand why. Major business sectors were dramatically transformed once technology and internet allowed a direct interaction between the clients and the actual product and service providers. Some of these well-known models are implemented by Alibaba, AirBnb, Amazon and many others. The common point is the creation of an efficiently working environment where the middlemen are not required anymore, the business becomes direct to consumer and the experience from these other sectors indisputably confirms the effectiveness of these approaches which more and more seem like the most logical evolutionary step for many of the major business sectors. And since Insurance is a conservative market with tradition-driven business principles, Vernam will be the actual revolution – an up-to-date digitalization implementing the core values of the current era where clients and product or service providers are asking for a way to work with each other as directly as possible, without third party interest distortions involved in the process.

In a survey, by the British Bankers' Association from 2014, life insurance and pension customers across the United Kingdom reported on their perception about the convenience of services, offered by independent financial advisers and insurance brokers. An interesting result of this study is that **...only 25% of all respondents thought, that advisers or brokers offered convenient services[4] .**



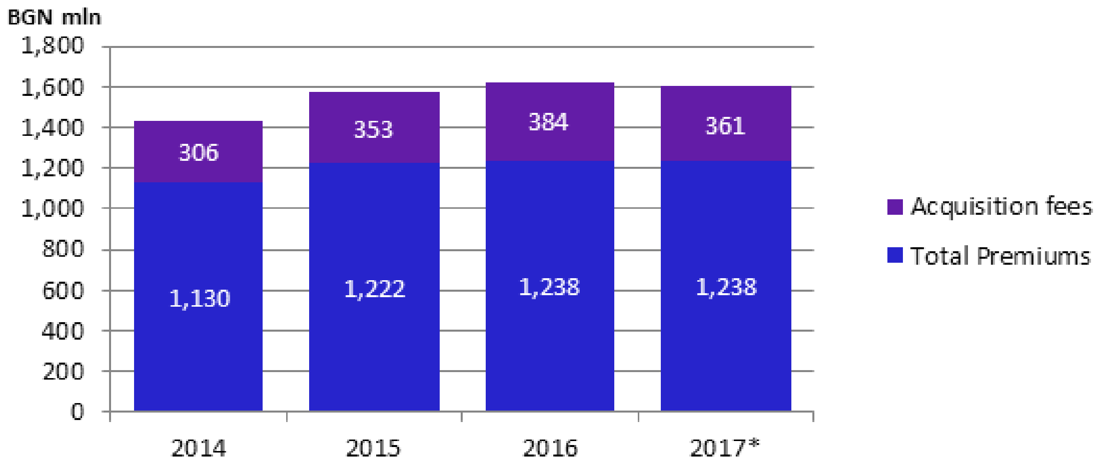


Figure 7: Average brokers' commission in Bulgaria

In any case, a very important issue is not about the average size of the brokers' commission, but about the transparency of their pricing policies and the related decision-making process. Customers are typically unaware about the incentives that insurance companies offer to brokers and therefore have no understanding whether the advice of a broker is in their best interest or not. **This fact gradually erodes confidence and leads to decreased customer loyalty. Vernam will fully solve this issue!**

An investigation of "grossing up" malpractices, i.e. inflating the premium paid without the consent of the client, by the Lloyds regulatory division has been quoted by the Business Insurance magazine :

"...In a situation where a broker is quoted a net premium by an underwriter, he cannot simply add what he considers to be the appropriate brokerage commission and represent that as gross premium; any commission charged in addition to the net premium should be clearly shown as such on any cover note or debit note..."

The lack of transparency and disclosure have been the issue of many articles about the insurance industry. In a 2010 report from the Insurance Age magazine , the authors cite a broker consultant, who "does not have much sympathy for brokers 'milking' their clients though and the lack of transparency that is often involved", stating:

"...In my experience, there are lots of brokers that try to disclose as little as is possible. Brokers need to think about fundamental integrity issues when entering into any enhanced payment arrangements – wherever they come from..."

Similarly, a study by the Risk and Insurance Management Society, a professional society established in 1950 and serving more than 3,500 industrial, service, nonprofit, charitable and governmental entities, and headquartered in Manhattan mentioned that *"...In paying an insurance premium,* ***the insured needs to know the amount of the premium that is going to the insurer to cover risk, and the amount that is going to the broker for negotiating the transaction and related services****. This information is essential to evaluating competing proposals and managing the components of the overall cost of risk. It is also necessary to identify potential conflicts of interest...."*

The figure on the following page shows the average share of brokers' commissions to the total insurance premium value for Bulgaria , Italy , and Spain . While exact commission numbers are rarely disclosed, we have taken the average amounts for acquisition, administrative and other distribution costs, available through the government financial regulators in different countries.[9,10,11,12]

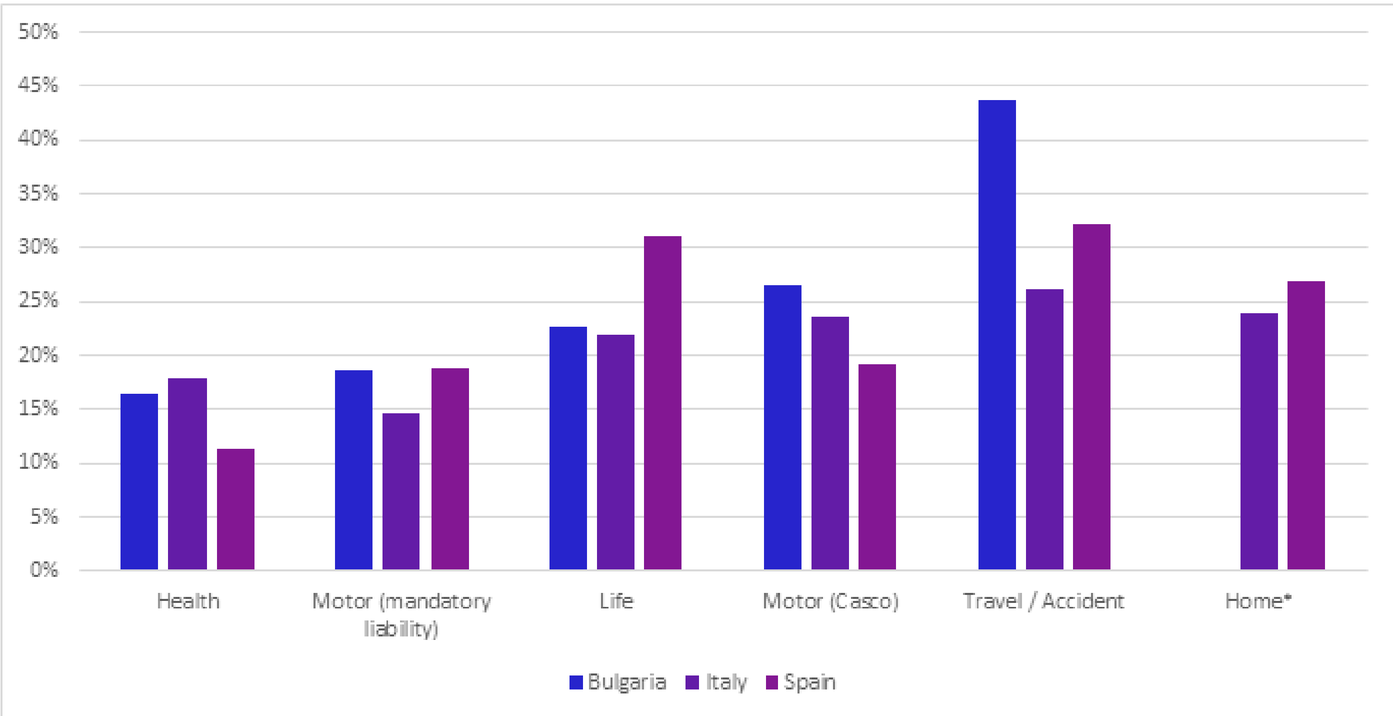


Figure 8: Acquisition and distribution costs / share of premium

Even with the relatively lower commission fees in the United States, **brokers would have still earned a respectable amount for a relatively effortless process, such as renewing corporate health insurance for a major provider.** For example, a 2011 analysis found that the average health premium for a company with 50 workers, half of which would buy a family package, and half – single person insurance, would cost about $470,000. The average commission of a large insurer, e.g. Aetna, would have been 6%, which would still come up to almost $30,000 for the broker (which was later decreased to $19,000 by the insurer). Shedding light on such issues have reportedly made many people think **"What does our broker get paid for and what does our broker really do?"**

In the United Kingdom, a survey by Insurance Research & Strategy, sponsored by the International Underwriting Association and Lloyd's Market Association with over 500 corporate insurance decision-makers found that: *"...high levels of ignorance and confusion surrounding broker remuneration. Only one respondent in five was aware that brokers often earn commission over and above any fees they charge their clients". 48% did not know or would not try to guess the commission that their broker earned. The rest guessed an average of 9.7% for their main commercial combined insurance policy, while typical commission was "actually between 17.5 percent and 20 percent "actually between 17.5 percent and 20 percent*"

Why are speculations of the type described in the last paragraphs destructive for the business? One of the reasons is that many clients do not fully assimilate the separation between the insurance provider and the broker they are communicating with. When an agent's service is not convenient or it does not comply with the clients' expectations, they very often project their dissatisfaction not only towards the broker, but towards the actual insurance provider who is not in charge of the broker's activity. Up to this moment there is no relevant research sharing trustworthy information about the effects of the middlemen on the clients' perception of the actual insurance providers. Yet, based on oblique research, one could reasonably suggest that the clients' view of the broker and the service provider is overlapping.

We think the lack of transparency is unfair – the Vernam platform will eliminate such speculations!

It doesn't make sense to have high brokers' incentives when products have a high customer demand – e.g. vehicle or property insurance – especially when the administrative process is not overly complicated. Standard motor insurances typically require general vehicle data (make, year, engine size, horsepower, etc.) and driver information (e.g. years of driving experience) to calculate premium and to prepare the necessary paperwork. The standardization of information and procedures and the general customer awareness mean that most of these insurances can easily be completed online! That is why we will digitalize the insurance sector!

A different issue, however, is that certain population segments are often unaware or simply not willing to purchase insurance through the internet. As can be expected, the main "division line" is generational. As the following figure, based on a September 2016 survey shows, almost 90% of Americans, aged 60 and above either did not know about the possibility or would not use online insurance, while the share among 18-29 year- olds is only 37% .

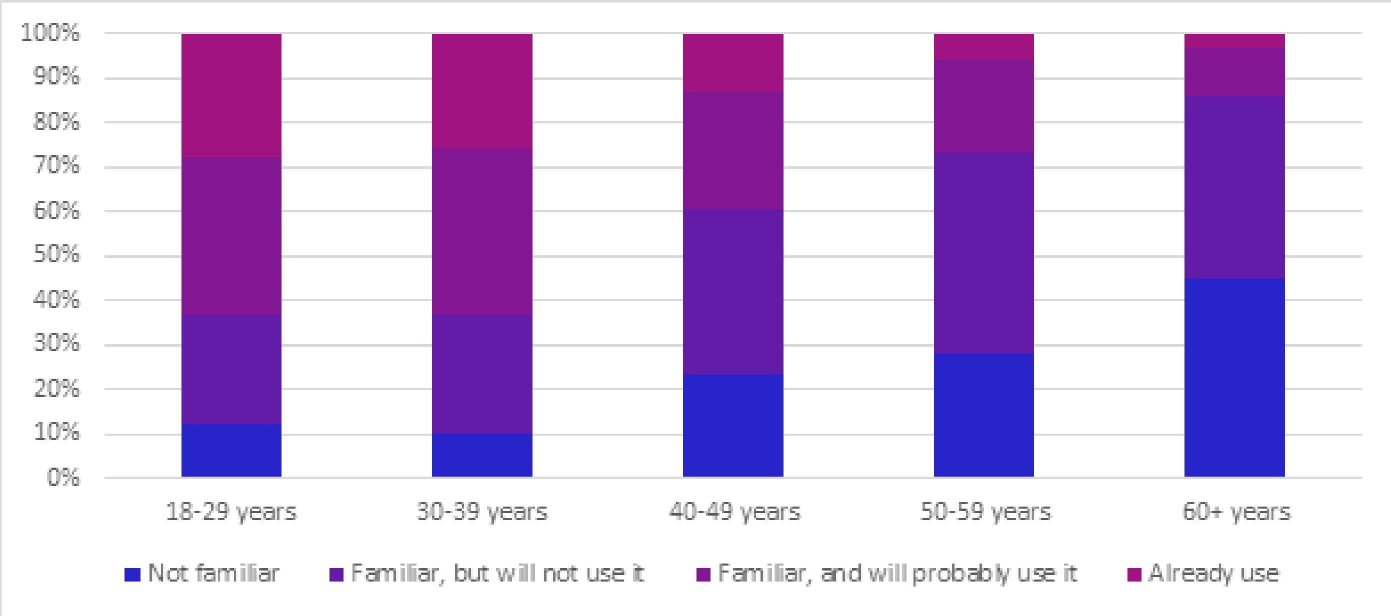


Figure 9: Consumer awareness of online insurance in the United States, 2016

Our plan, therefore, is to provide an online solution which can optimize pricing and increase information transparency for end clients, while maintaining the current level of customer service. Our business model will result in a form of "objectivization" of the Insurance sector because all forms of conscious or unconscious attempt for manipulation will be impossible. The clients will be sure that the middleman's self-interest will not define the choice of his insurance provider which will automatically eliminate any potential damages provoked by the clear client's understanding that he was partially "cheated" in regards to the insurance provider who's offer complies to a maximum extend with his needs and expectations. On the other hand, this same objectivization will allow the insurance providers to create an adequate picture of their core business capacities as these will, once again, be not manipulated by a middleman. The providers will be able to gain an indisputably valid understanding of their proposals' advantages and disadvantages when it comes to covering a certain type of risk which is predicted for a certain type of clients. This will be possible because the providers will know that the reason for a certain client to choose or refuse to work with them is based on objective factors related to their risk assessment and subsequent offering or previous claim management.

You can view this process also as a type of "calibration" for the insurance market which will help the better understanding of the needs of the clients and the actual solutions available to cover these needs. Insurance products which have become highly demanded through artificial means – an intense middlemen offering related primarily to the invisible background rewards available for them instead of actual "insurance product quality" – will quickly lose their ground and will be substituted by other products with real advantages.

Vernam is about to make this possible and another anticipated result in this respect will be the higher willingness of the clients to stay loyal to a certain insurance provider. Nowadays this loyalty in the Insurance sector is being shaken by the middlemen who are ready to re-direct a client's attention from one provider to another based on the reward offered to them and regardless of the relationship history between the same client and the same provider. The nature of this type of easily corrupt mediation is to neglect fundamental core values in the business relations and to pursue a self interest which could be damaging for both the clients and the providers.

Once Vernam is integral part of the Insurance, which we expect to happen quite quickly, having in mind that all the important preconditions are fully available, as well as the positive support by some of the most well respected advisors in the sector, a certain shift in the insurance business thinking will take place. Insurers will be stimulated to provide the best products possible knowing that these will be objectively reviewed and appreciated. Clients will gain further confidence in the insurance products which will result in the further stimulation of the market in general. These are just some of the main positives for the industry, yet they are enough to envision the future of insurance as a space of business integrity and high social values. **Through Vernam we will accomplish our goal – we will transform the insurance sector into a fair and honest environment!**

SUMMARY: The two main problems of the current insurance model are related to inefficiency and lack of transparency. While the average commission of insurance brokers is approximately 15-20%, all major research testifies for great discrepancies in evaluating the actual value added help and expertise they provide in return to their premiums. Having in mind the standardization of information and procedures, most insurances can easily be completed online by the Clients, thus circumventing the standard broker's service and making the process time and cost-efficient both for themselves and for the Insurance providers. Through our online platform, Vernam will make this possible! Consequently, the lack of information regarding the exact broker's commission the End Client covers under the overall insurance cost, will not play a role in the choice of his insurance. Currently, this blind spot makes it impossible to feel confident if the broker's advice is in the best interest of the Client or is rather influenced primarily by the reward percentage offered to him by the insurance providers. Vernam will not only eliminate these two major issues, but we will also allow our users to receive the standard broker's commission straight into their pocket in the form of crypto-currency, thus incentivizing their readiness to participate in a fair, honest, transparent and cost-efficient insurance industry! Here's more about the actual Vernam Platform!

05/

THE VERNAM PLATFORM

Our plan is to use blockchain technology to resolve the inefficiencies on the insurance market, resulting from the asymmetric information and lack of transparency between end customers, brokers, and insurance companies. We will create a marketplace, powered by a decentralized ledger, **which will allow providers to optimize their risk calculations, while customers will benefit from lower insurance premiums!** To provide a comprehensive experience, we will set up a network of brokers in different countries to be operated by the marketplace, which in the future will eventually include our proprietary blockchain powered C2C insurance company, operating with Vernam tokens. At the same time, our decentralized blockchain based platform will be open to all stakeholders, who would like to take advantage of its customer, insurance providers and their insurance products data base as our decentralized model will increase transparency and decrease transaction costs.

5.1. BLOCKCHAIN AND MARKETPLACE

One of the most important questions that all recent ICOs face is "why is blockchain even necessary for this project?" This is a very valid question, having in mind the proliferation of initial token offerings and shared ledger-based initiatives.

Given the lack of transparency and the resulting misinformation, or loss of trust between end customers, insurance providers, and intermediaries, such as brokers and agents, we are confident that the decentralized nature of the blockchain technology will help to recover the lost balance and will provide a platform, driven by shared data and mutual trust, while at the same time the clients may benefit from reducing administrative cost of the insurance products.

Blockchain technology is an excellent mechanism for transferring and securing funds. It can also support the complex multi-party agreements between participants in the insurance industry value chain, using smart contracts.

Since data remains stored in a **re-distributed ledger, which constantly validates itself and is free from central authority**, clients can be sure that their data will not be tampered with. Simultaneously, user identity and transaction history can be securely managed, providing the **information and transparency**, which the insurance industry is currently missing. Because of the constant revalidation, **data cannot be manipulated** and no external "manager" or authority is required.

"...the blockchain technology also offers potential use cases for insurers that include innovating insurance products and services for growth, increasing effectiveness in fraud detection and pricing, and reducing administrative cost..."

The win-win scenario!

The immutable decentralized ledger holds advantages for both end clients and insurers. **Blockchain can be utilized to create a tamper-free, perpetual record of clients' insurance history, which can be used by insurers to optimize risk assessment, whereas from customers' perspective blockchain can be the key to lower their own insurance premiums.**

Over time, maintaining the shared ledger of insurance transactions, including premiums and claims history, will create a substantial database which may be used to derive a customer "insurance risk" score, similar, for example, to one's credit rating. While similar solutions are already in development, using blockchain would make the data itself free and available to everyone – unlike proprietary databases. This "liberalization" that we are about to undertake will affect positively the overall profile of Insurance and will create an additional value for all the companies who are participating in Vernam. The first ones adopting our approach will be considered game changers and this will result in popularization of their services as the general perception of the public and the clients will conclude that right now these are the companies with the safest and most transparent insurance products. Consequently, with the development of the project, Vernam will become the only real alternative to traditional insurance practices and the gains from the "new generation" profile, backed up by real efficient and very convenient online platform, will become more important than any other image-making activity initiated by the insurance providers.

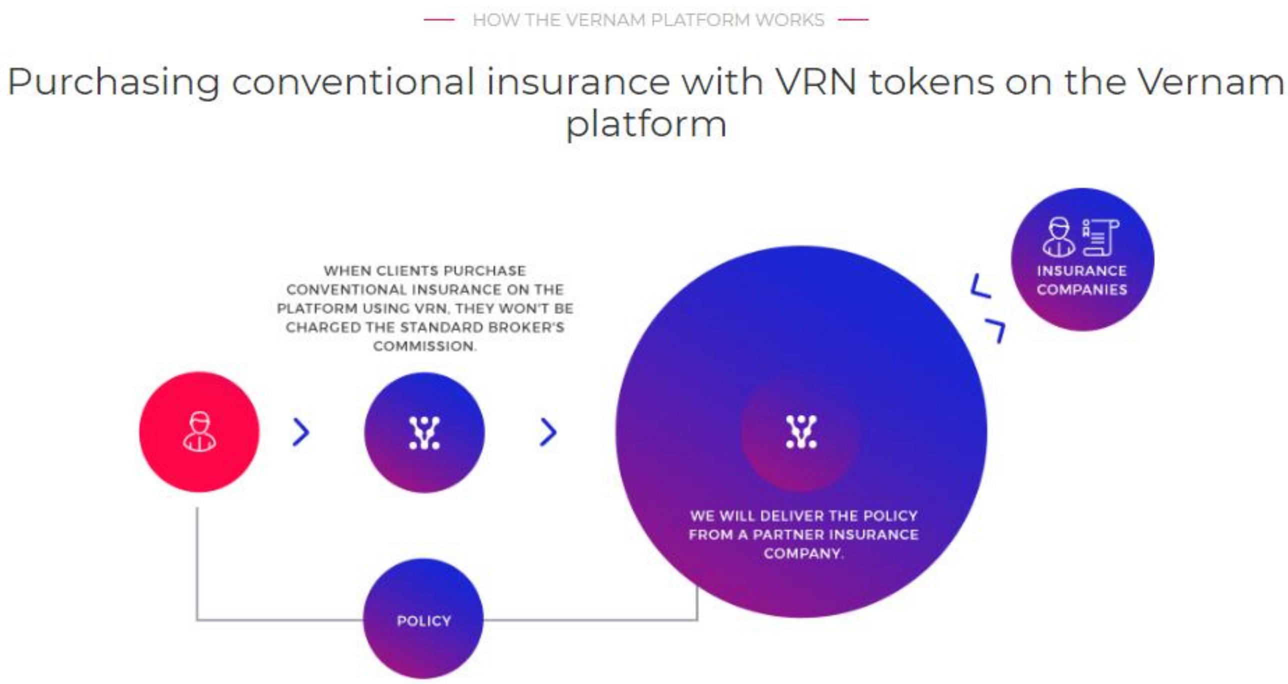
Data protection is an issue, central to the success of similar projects. The General Data Protection Regulation (GDPR) of the European Union and other similar legislative acts aim to regulate personal and "sensitive" data, including the rights of access, erasure, and portability of personal information.

Storing sensitive information on the blockchain secures us GDPR compliance, as pseudonymisation and encryption of personal data are one of the key measures to ensure a level of security according to Art. 32. Through the use of cryptography (digital signatures, encryption, time-stamping) and systemically embedded economic incentives for network maintaining entities, blockchains provide a secure way of storing and managing information, including personal data. "Hashing" the data – e.g. transaction record, vehicle or property ownership registry, etc. creates a compressed digital "snapshot", which is identifiable only to the involved parties and cannot be "reconstructed" without revealing the confidential keys, used to create the hash. As described in a recent Forbes article:

"The collecting, hashing, and then discarding of all but the hashes of your personal data permits a globally distributed digital system to behave in a very similar fashion to the plastic ID card in your wallet. As long as you can keep your personal devices secure nobody has your ID or personal information, but you can prove yourself when you need to do so..."[17]

While hashing makes personal information safe, it is also likely that customers themselves will be happy to maintain their transaction history on the shared ledger as this will help them to eventually lower their insurance premiums. Also, by not having a central authority behind the ledger and by keeping the transaction history public (i.e. by not trying to monopolize the information and to profit from it), the platform will increase its value to potential stakeholders.

Having in mind that market middlemen take around 20% of each "deal", releasing the Vernam ledger as a decentralized solution will return this value to the end customer, allowing cheaper insurance premiums.



The Vernam platform's main goal is to incentivize clients to purchase insurance products using the platform, in return for which they will receive a crypto currency-denominated award in Vernam tokens of up to the typical broker's commission.

The platform will have a public and a private section. The former will provide insurance-related information. The private one will allow clients to purchase crypto digital and insurance products. These products will be in the form of smart contracts, deployed on Ethereum network and their autonomy - triggering a set of events when all prerequisites are met – will allow the replacement of the "paper" business, making it paperless and accelerating transparency and data integrity. Vernam will be an archetypal model of the perfect mix between digitalization, full digital security, optimization of an otherwise clumsy process, customer care, customer data protection, liberalization, business and social purity. Our online system will be self-reliant because one of its definitive features is the capacity to create in-built rules which cannot be circumvented even by the system itself. This is the level of trust and care expected by any global new era service. A philosophy also supported by the encryption technology behind Vernam which is the safest possible!

WHY "VERNAM"?

Of all the methods of encryption ever devised, only one has been mathematically proved to be completely secure. It is called the Vernam cipher or one-time pad. In cryptography, the one-time pad (OTP) is an encryption technique, requiring the use of a one-time pre-shared key of the same size (or longer) than the message being sent, which cannot be cracked.

The "worth" of all ciphers is based on computational security. If a cipher is "computationally secure" this means the probability of cracking the encryption key using current computational technology and algorithms within a reasonable time is supposedly extremely small, yet not impossible.


UNITED STATES PATENT OFFICE.

Patented July 22, 1919.

In theory, every cryptographic algorithm except for the Vernam cipher can be broken given enough cipher text and time.

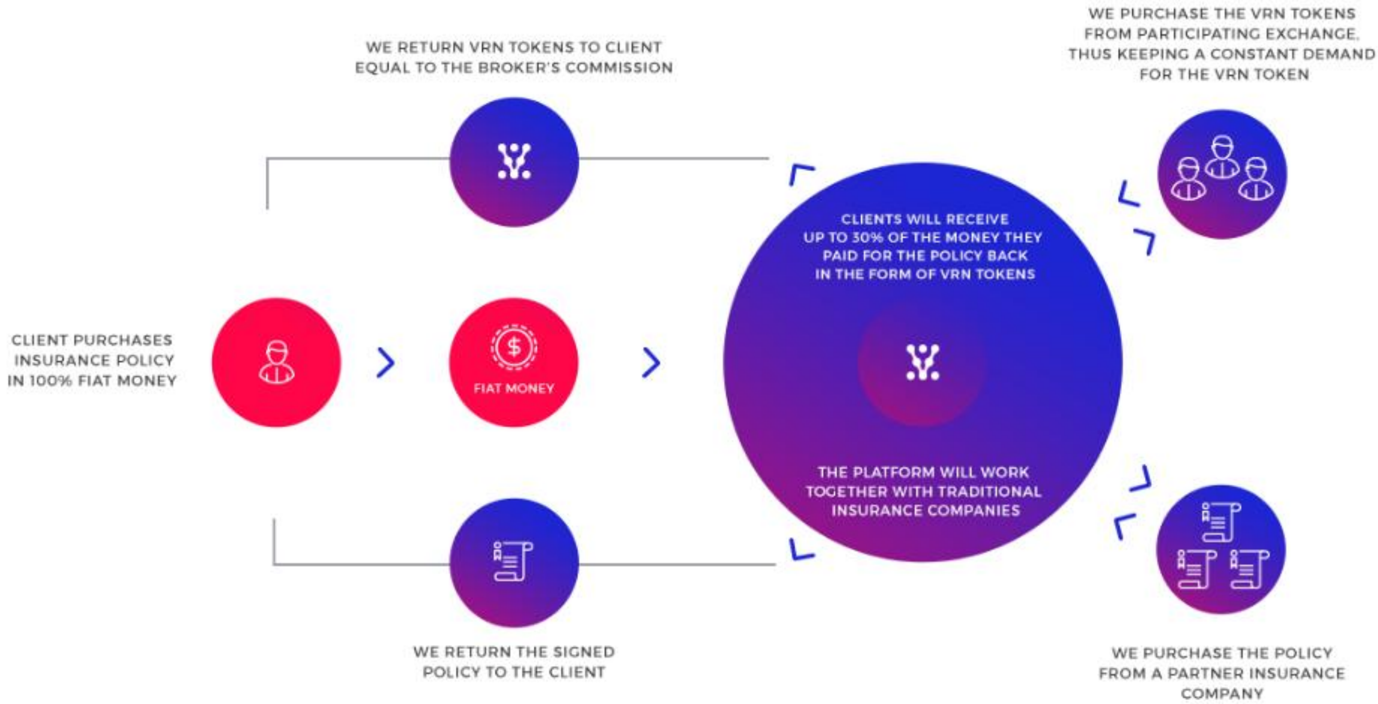
VERNAM TOKEN

The platform will be powered by Ethereum based ERC20 utility token named Vernam Token (VRN), which will be used by clients, insurers, brokers and third parties. Each new insurance contract, signed on the Vernam platform will be denominated in VRN. Tokenizing the platform will allow the unique identification of customers and assets, and the transfer of this information through the blockchain to insurers as an unalterable digital record.

Besides the purchase of insurance products, the rewards and incentives for platform users will also be given in Vernam tokens, which will thus be an integral part of the ecosystem and will be used to access the decentralized ledger.

While the use of VRN tokens will not be a requirement for the purchasing of digital insurance instruments through the Vernam platform, its built-in algorithm will convert any method of payment (such as fiat currency) into Vernam Tokens – under the current exchange rate of participating platforms. The reward tokens, received as an incentive for purchasing digital insurance products through the platform could be converted back to fiat money through a digital exchange, retained to purchase subsequent insurance (at an approximately 20% lower rate, than purchasing it with fiat money and receiving a VRN-denominated discount).
As the Vernam platform gains traction, the growing recognition and acceptance of crypto insurance products will result in a wider circulation of the VRN Token. In addition, the increased circulation will create a significant pool for exchanging tokens into Euro, Dollars, or other fiat currency – thus guaranteeing liquidity to VRN holders and prospective platform users.

Purchasing conventional insurance with fiat money on the Vernam platform



PURCHASING INSURANCE THROUGH THE VERNAM PLATFORM

After the Vernam platform is operational, customers will be able to purchase conventional insurance products through a broker network – including proprietary Vernam brokers. Sales and claim compensations will be covered through the platform, while risk analysis, claim adjustment and examination will be provided by the insurance company. Communication between Vernam and the insurer will be real-time and completely automated.

Purchasing process will start with a request from the customer. The platform will return quotes from participating brokers and insurance companies, which will be denominated in Vernam tokens. If accepted, depending on the availability of VRN in the customer's wallet, either the quoted amount will be transferred to Vernam / third party broker, or the required VRN tokens will be purchased from a digital exchange. An insurance contract will be created, where information will be retrieved from the shared ledger, or provided / updated from the client.

When insurance products are purchased through our dedicated broker network, clients will receive a VRN-denominated incentive, approximately equal to the standard broker commission for the specific type of insurance (typically, around 20%). A minor share will be retained for platform maintenance and to cover additional operating costs. This will increase the appeal of the Vernam platform to potential customers, thus creating a positive network effect.

The Vernam tokens could be exchanged for fiat money, or kept for future VRN-de- nominated purchases. As discussed earlier, direct purchase of insurance products in Vernam tokens will be cheaper by an amount, equal to the abovementioned incentive, which will also stimulate the development of the platform and its tokenized economy. The open possibility to exchange VRN's for fiat money is the ultimate "no brainer" model for clients because in many cases, especially with non-life insurances which is our target sector, the clients are already willing to insure, there is no need to convince them to do so. Vernam will be the only option which will allow them to earn real money while they spend on something obligatory. Furthermore, this will happen without any compensation required from the insurance providers.

When a client signs an insurance contract on the platform a small floating fee* will be deducted from the reward for the operation. The revenue from this fee collection and advertising will be used to run the business and cover operational costs.

**The fee will depend on the number of clients on the platform. The more clients, the smaller the fee. But even in the worst case scenario of small client base, this fee will be much lower than standard broker commission.*

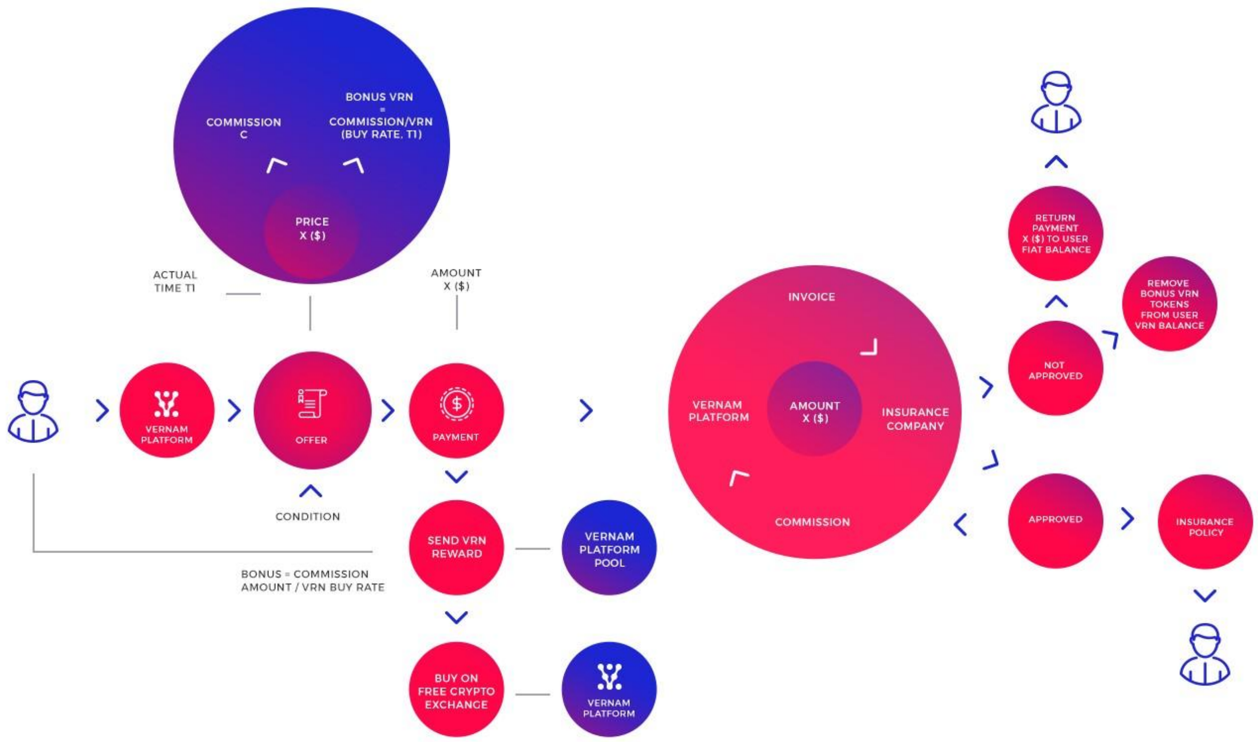


Figure 10: Purchasing general insurance in fiat money through the Vernam platform (flowchart)

The nature of the platform creates additional revenue opportunities!
Besides simply purchasing insurance policies, the Vernam platform will allow registered clients to actively solicit insurance products and thus create a reverse bidding process and an additional revenue opportunity for insurance providers and third party brokers.

When a client wants to take advantage of this facility, it would be able to outline service terms (e.g. what type of insurance is it looking for, what is the timeline, what are the main characteristics of the insurance required, etc.) Brokers will be able to place an offer, stating their terms and premiums. The platform mechanism will automatically select a broker or provider, based on a defined match of bid- and offered terms and conditions, and the contract will automatically be signed. At the same time, the identity of the customer will remain secret for the remaining insurers and brokers.

5.4 CRYPTOSAFE

The CryptoSafe (CS) will be a digital crypto product, only available through the Vernam platform. Each registered platform user, who has a sufficient number of its proprietary Vernam Tokens, will be able to purchase the CS, which is a type of a **smart contract, guaranteeing that when a defined set of events occur, the client will be compensated with a certain amount of Vernam Tokens (VRN).** Smart contracts are autonomous and execute without the need of a third party.

CryptoSafe will be developed jointly with the leading global claim management company Insuralis Germany, which will provide risk assessment methodology and will take care of the claims management process.

The main differences between the CryptoSafe and the "conventional" insurance are as follows:

- CryptoSafe will provide an end-to-end digital process, which will be fast and automated. The use of a smart contract will guarantee correctness towards the end client

- We will use mathematical and statistical models for risk assessment, but will provide a transparent premiums and coverage policy (again underpinned by the use of a smart contract)

- When no damage has been claimed, the CS smart contract will return a defined percentage of the premium to the client

The CS purchasing process will be initiated by the customer, which will generate a request, and return a VRN-denominated quote, based on the risk assessment methodology of our partner. Shared ledger data will be used to optimize the calculations, determining the CS policy premium. If the quote is accepted, Vernam tokens will be deducted from the client's account, or purchased from a participating digital exchange.

The following figure illustrates the CS workflow process:

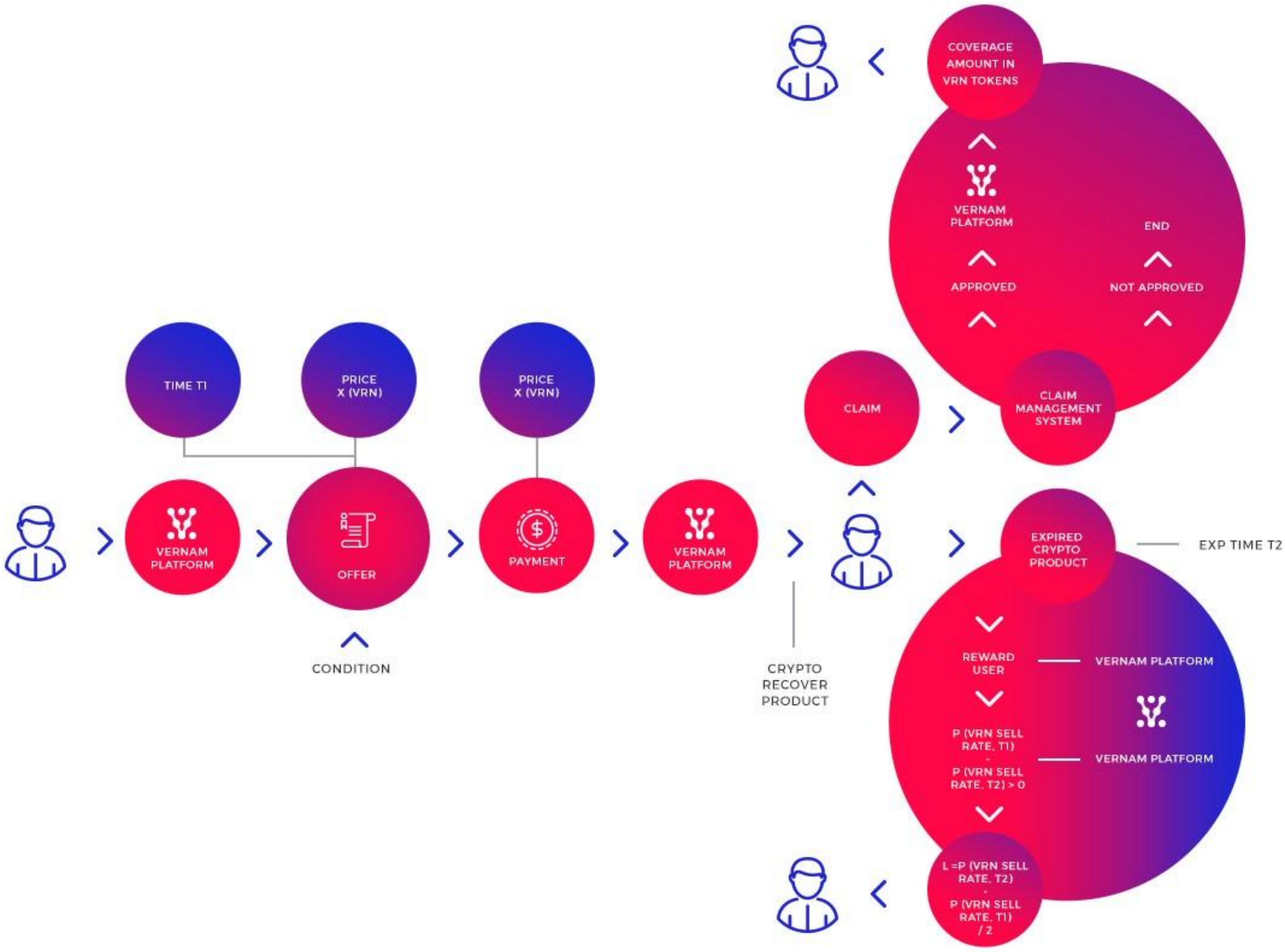


Figure 11: Purchasing CSG through the Vernam platform (flowchart)

SUMMARY: The Vernam platform is an online marketplace, powered by a blockchain based decentralized ledger which will provide the information and transparency which the insurance industry is currently missing. The clients' insurance history will allow insurers to optimize their risk assessment while the customers will be able to get the most suitable insurance product for them through an efficient and user friendly interface without paying for the mediation of a commission based broker. The average 20% middlemen commission will be returned to the end customer in the form of a crypto currency denominated award in Vernam tokens (VRN). The VRN is Ethereum based ERC20 utility token which will power the platform – each new insurance contract, signed on the Vernam platform, will be denominated in VRN. As the Vernam platform is being implemented in the industry and recognized as the next evolutionary step in Insurance, the growing recognition of crypto insurance will result in wider circulation of the VRN Token. Since the VRN can be exchanged at any given moment into fiat currency (Euro, Dollars, etc.), the development of the business will guarantee increased circulation and profitable liquidity to VRN holders and prospective platform users. This semi-automated online service will be upgraded through CryptoSafe (CS) – a digital crypto product available only through the Vernam platform. Each registered platform user with sufficient number of its proprietary Vernam Tokens will have access to CS which is a type of a smart contract, guaranteeing that when a defined set of events occur, the client will be compensated with a certain amount of Vernam Tokens autonomously and without the need of a third party! CryptoSafe will provide a complete digital process which will be fast, automated and 100% safe as the predefined outcomes will guarantee correctness towards the end client and will provide a transparent premiums and coverage policy.

06/

WORKFLOW AND INSURANCE REGISTRIES

6. WORKFLOW AND INSURANCE REGISTRIES

The blockchain sub-system of Vernam, is system of inter-related smart contracts.
It has two main purposes:

- Create Insurance Smart Contracts as a proof of the issuance of insurance and its details
- Transfer a commission back in the form of VRN Tokens

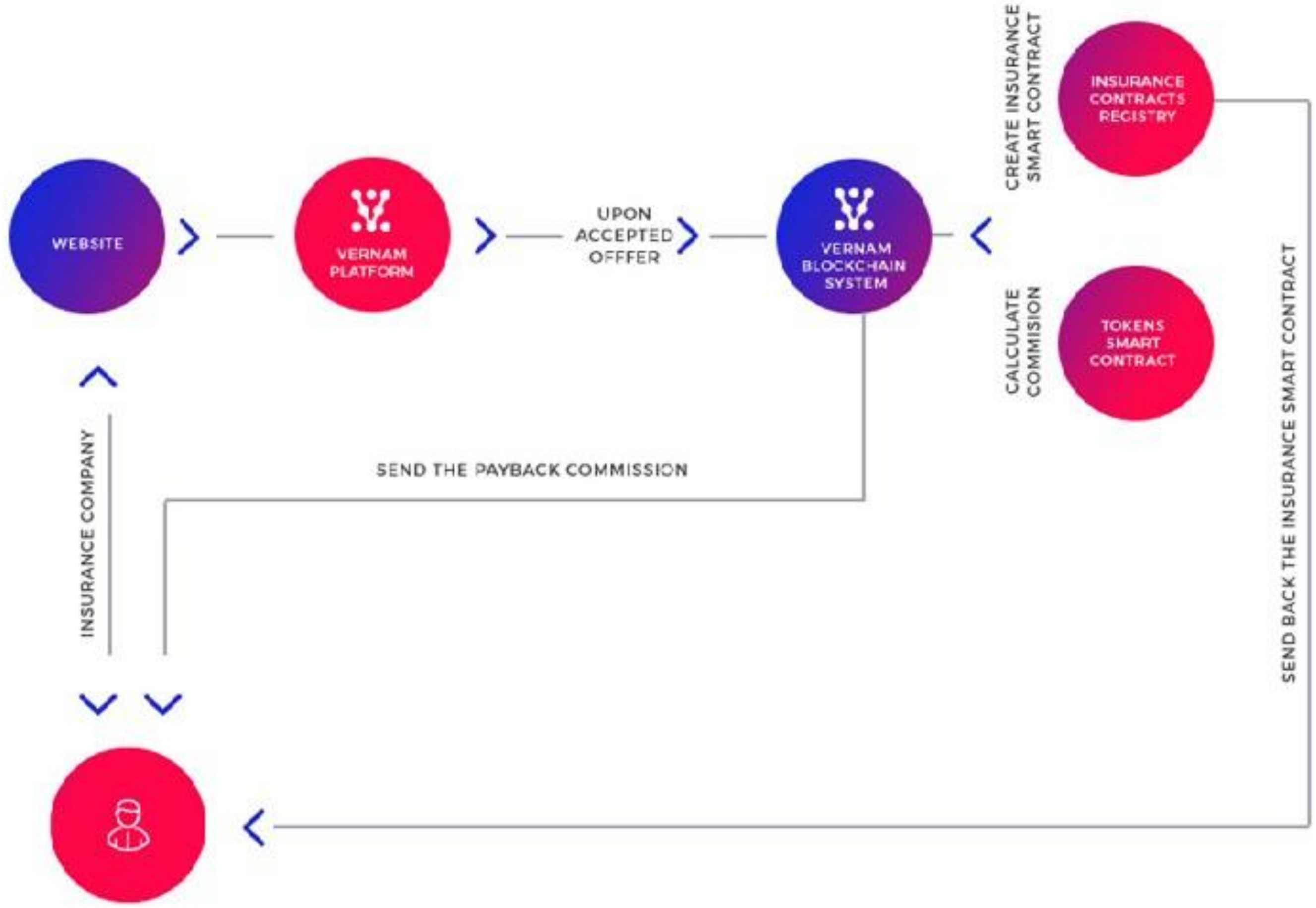


Figure 16: General interaction architecture of the whole system

General Workflow

The Vernam system is divided to several subsystems. All of them interact with each other (as could be seen in Figure 16). The user interacts with the Website, which later interacts with the logical subsystem in order to achieve happiness in form of Insurance Contract and paid back commission.

WORLDWIDE INSURANCE REGISTRIES REGISTRY

For this and all of the following points refer to Figure 17

Naturally, due to the differences in the laws and regulations for the different countries a need of having different insurance smart contracts for different countries arises. This would require a more complex system consisting of:

- Worldwide Insurance Smart Contract Registries Registry – This smart contract is the "master" smart contract that is the single linking point between the different nation-wide registries. It holds the list of all available registries for the different countries. Also, this is the smart contract that whitelists the registries in order for them to be able to transfer the commission VRN tokens.
- National Registry Smart Contracts group – a system of smart contract obliging the famous Factory-Registry design pattern.

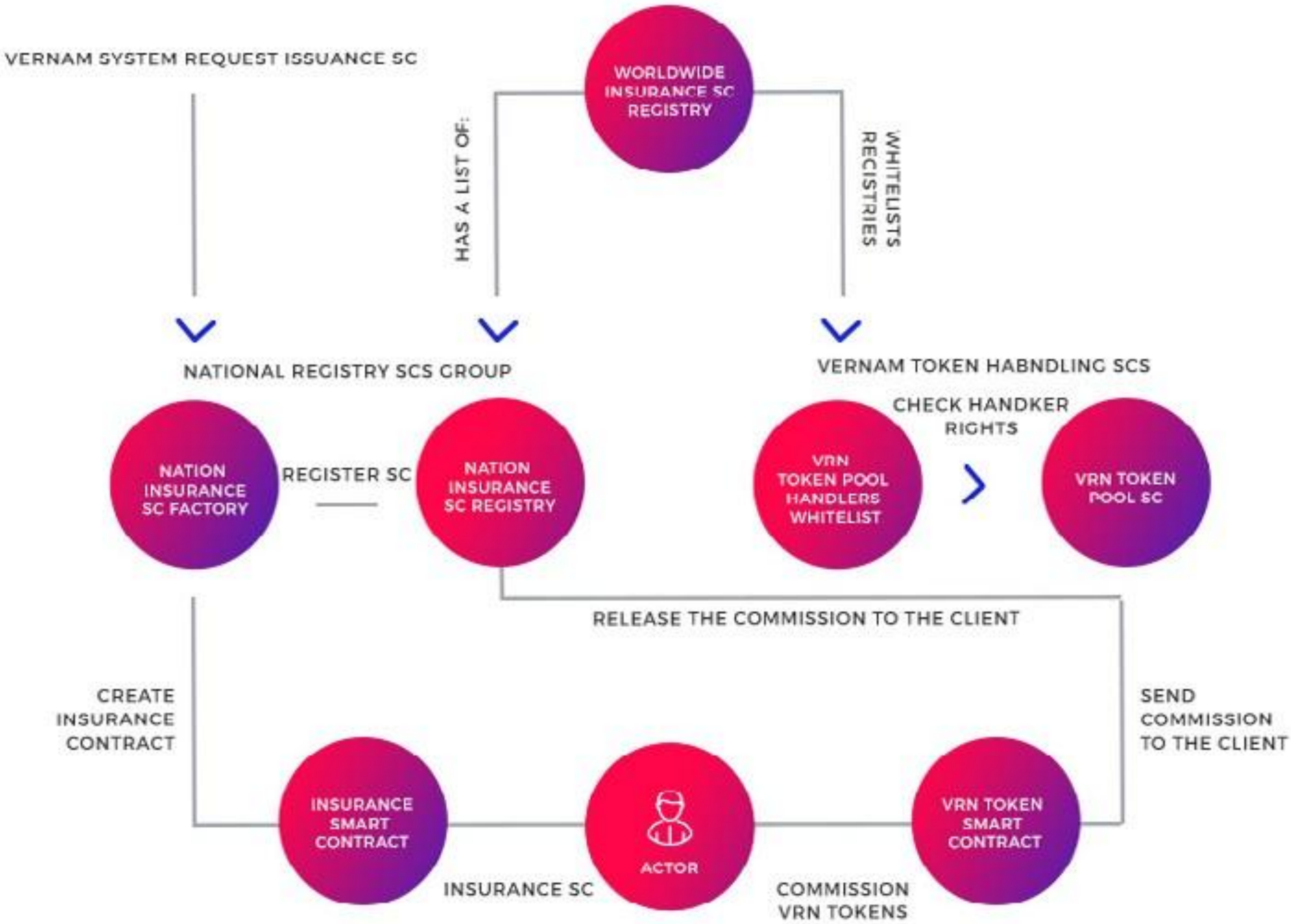


Figure 17: Worldwide Smart Contracts Sub-System Architecture

Nation Insurance Smart Contracts Group

Factory Smart Contract

This contracts goal is to be used for creating insurance smart contracts for the given country. It stores the necessary supplied data into new insurance smart contract and registers it into the registry smart contract.

Registry Smart Contract

This contract's goal is to be a registry of all insurance smart contracts issued for this nation. It is used for querying for insurance smart contract using the necessary supportive meta- data associated with it (issuer, client, commission fee etc.).

It has an interface that allows issuing and recording smart contracts in its storage, but is limited to be accessed only by the factory smart contract. In addition, this is the smart contract that is whitelisted by the worldwide insurance registries registry to be able to handle and operate (think sending back the commission) VRN tokens form the VRN Token Pool. This ensures that only once a successfully issued smart contract is written in the nation registry a commission is sent to the client.

In addition, this smart contract holds a historical data about the claims in relation with the insurance smart contracts. This allows for this data to be used as "rating" of the different clients thus providing for adaptive algorithms of price-calculation to be created.

VRN Token Handling Smart Contracts

The VRN Token handling smart contracts sub-system is in charge of the VRN Token Pool. It consists of three main smart contracts:

VRN Token Pool

This smart contract is used as holder of VRN tokens. These tokens will be used for commissions. This smart contract can only be requested to perform a token transfer by whitelisted nation registries whitelisted in the VRN token pool handlers whitelist smart contract.

VRN Token Pool Handlers Whitelist

This smart contract goal is to be a list of whitelisted nation registries that can operate with the token pool. It's owned and operated by the worldwide insurance registries registry smart contract.

07/

TOKEN SALE

We offer you an exclusive chance to become part of a historical moment for the insurance industry! Our token sale process will start on 15.05.2018 and last until 15.07.2018. Exactly 50% of all 1 billion VRN tokens will be available during the event. New tokens will never be created. Unsold tokens will be burned. Purchasing coins during the pre-sale period will confer of up to 40% discount

The token will conform to the ERC20 standard. The minimum target for the token sale is set to 40 million VRN tokens while the hard cap will be set to 500 million VRN tokens. If the minimum goal is not reached, the Vernam team will make a full refund to the contributors.

Overview

Token name	Vernam Token
Token symbol	VRN
Total VRN token amount	1,000,000,000 VRN
Hard Cap	500,000,000 VRN
Conversion Rate USD	1 VRN = 0.051 - 0.085 USD
Conversion Rate ETH	1 VRN = N/A ETH*
Conversion Rate BTC	1 VRN = N/A BTC*

*The crypto currencies exchange rates, used during the event will be locked to the first day of the crowd sale.

Token Sale Event

Exchange rates	Private placement	Up to 10%	Not locked
	"Three Hot Hours"	1 VRN = 0.051 USD	Locked (6 months)
	Day 1-8	1 VRN = 0.068 USD	Not locked
	Day 8-20	1 VRN = 0.072 USD	Not locked
	After Day 20	1 VRN = 0.085 USD	Not locked
	After Day 20 (> ETH 10)	1 VRN = 0.076 USD	Not locked
Minimum transaction amount	ETH 0.1, BTC 0.01, Wire Transfer 1000 USD		
Token sale distribution period	15.05.2018– 15.07.2018		
Distribution method	We will distribute VCT tokens immediately after purchase. They will be converted in VRN tokens after the end of the token sale. *		
Minimum goal	VRN 40,000,000		
Hard Cap	VRN 500,000,000		

* The corresponding amount of VCT tokens will be send to the wallet immediately after purchase. The only purpose of this token is to guarantee that after the end of the campaign everyone will be able to convert it in VRN tokens. It can't be transferred and no one can't use it for anything else. After the end of the Crowdsale and IF the KYC is approved, the vernamCrowdsaleToken will be converted in vernamToken.

7.1 TOKEN DISTRIBUTION

A total number of **1 billion VRN tokens will be created**, from which **50% (500 mln) will be available in the Token Sale.**

The Token Sale ends if the hard cap has been reached or on its closing date (15.07.2018) whichever comes first. In case the token sale is not successful (i.e. the “soft cap” has not been reached), all contributed funds will be returned to token sale participants.

Besides the token sale proceeds, additional **3% will be distributed to early stage project supporters** in the form of Airdrop and Bounty. Furthermore, **7% will go to our advisor’s, half of which locked** and other “project champions”.

20% will be set aside for an Internal Reserve Fund. These 20% VRN will be locked in a smart contract and used only for covering our CryptoSafe insurance product. (When a client is insured through our CryptoSafe product and a claim occurs it will be paid through this fund after it is approved by a third party claim management company.) 5% Liquidy Fund will be used for reserve to cover operating costs.

Finally, a 15% share will be awarded to the **project founders and the Vernam team** to recognize their role in digitizing the insurance industry. These will have a vesting period of 18 months to ensure commitment.

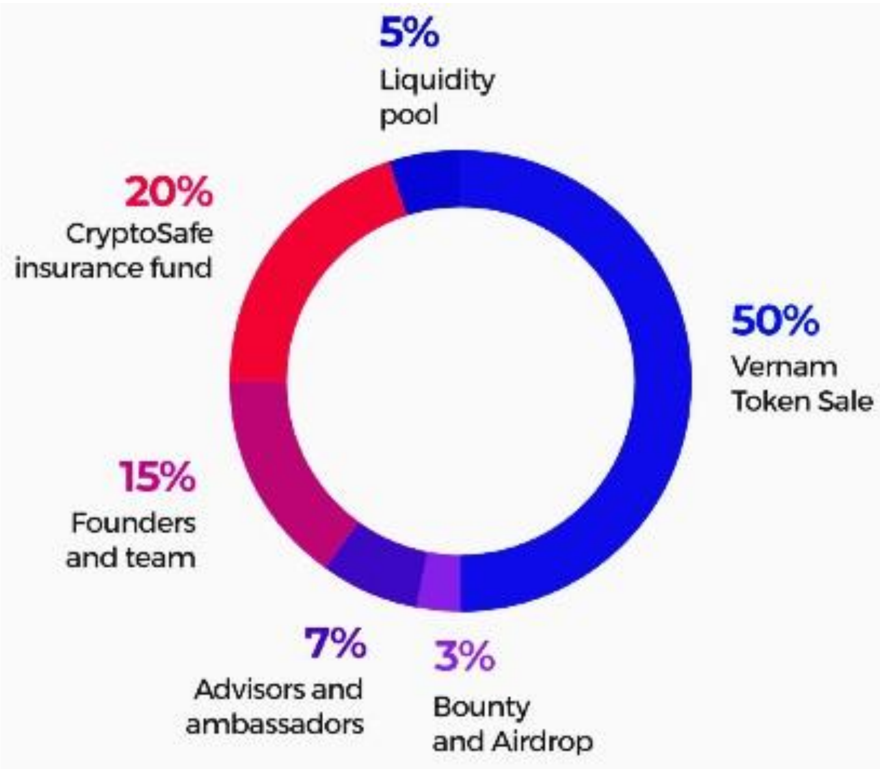


Figure 12: VRN token distribution

7.2 TOKEN SALE EVENT STAGES

We are ready to go! The token sale will include five distinct stages, starting from 15.05.2018 and lasting until 15.07.2018. The maximum number of tokens, which will be available during the event is 500 million VRN.

Initially, a private placement will take place, with token distribution reserved for early stage project supporters and contributors. **Up to 10% of the VRN tokens will be sold during the private placement stage.**

The token sale itself will start on 15.05.2018 and last for 61 days!

The first stage of this process, called **"three hot hours"** will make VRN tokens publicly available to the most enthusiastic contributors. This stage will last from 06:00am UTC to 09:00am UTC, during which Vernam tokens will be sold for USD 0.051 (representing a **40% discount** of the "standard" token sale cost).

To minimize "token dump", which is relatively frequent after the end of a new token sale project, the amount of **VRN that have been purchased during the "three hot hours" will be partially locked after the completion of the token sale** – each contributor that has purchased tokens during the "three hot hours" will be able to make use of 1/6 of its VRN per month, over 6 months' period.

No more than 20% of the tokens for sale could be sold during this stage – if the limit is reached, tokens will be available for purchase at the next stage's price.

The next stage, lasting for 8 days, will start at 09:00am UTC on 15.05.2018. **The "Day 1-8" stage will provide tokens at a 20% discount** (USD 0.068) and there would be no vesting period, or availability cap for the tokens, issued at this stage. Token sale contributors, who pur-chase tokens after the first 8 days of sales, but before the end of the 20 day of the event (i.e. from 09:00am UTC on 23.05.2018 until 09:00am on 04.06.2018) will be able to take advantage of a **15% discount** and purchase VRN for 0.072 USD. Similar to the previous stage, there will not be vesting or availability limitations on the funds, issued during this stage.

The basic investors' economy model is very simple. You, as an Investor, will contribute to our ICO campaign in the form of FIAT money. In return you will receive the amount of VRN Tokens corresponding to your investment. We will use the gathered financial resources to develop the Vernam business model.

The nature of the VRN and its rate changes will be fundamentally similar with the nature and the rate changes of the stock market share. The better we perform, the more widespread the Vernam core values and service, the higher the exchange rate of the VRN Token. With the growth of our company and Vernam's implementation in Europe's insurance sector, the VRN Token's value will increase very significantly. When that happens, you can exchange your VRN Tokens for FIAT money (USD, EUR, etc.) at any given moment which means you will easily monetize your investment.

That is why, to get the most out of the next evolutionary step in Insurance, pay attention to the Token Sale information above. The earlier you get on board, the higher your profit will be! You can expect high profit margins as early as the first months after the ICO campaign is over.
The last part of the token sale event, will take place during the final six weeks (from 09:00 UTC on 04.06.2018 until 23:59pm on 15.07.2018). There will be no discount and the cost of 1 VRN during this period will be USD 0.085. However, during this token sale stage, contributors purchasing tokens in excess of ETH 10 (or corresponding amount in other accepted crypto currencies) **will enjoy a 10% discount** (i.e. USD 0.076 for VRN 1).

Figure 13: VRN token allocation

7.3 USE OF PROCEEDS

Figure 13 illustrates the allocation of funds, collected during the various stages of the token sale process. 25% of the proceeds are expected to cover the platform development costs (blockchain platform, desktop and mobile clients)

Marketing is a critical element for the platform's success and "Insurtech" is one of the most expensive industries in terms of marketing costs. We have to ensure that enough funds are allocated to the outreach of local, regional, national and international communities around the world. The marketing budget will be used to create awareness and engagement of the possibilities of our platform. 30% of the token sale funds will be allocated to cover social platform and other marketing channels, including website and content development, the organization of events, etc.

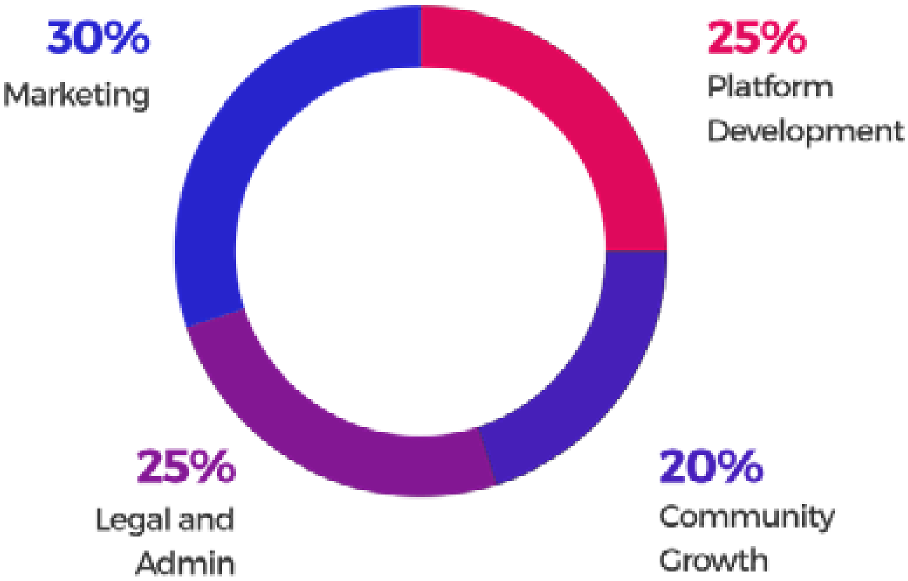


Figure 13: VRN token allocation

Legal and administrative fees will be substantial, given the platform's target of registering brokers in two EU countries by Q2 2019 and covering 8 countries by the end of 2020. Therefore 25% of the token sale funds will be directed to cover such expenses.

The remaining 20% will be used for network development (i.e. negotiating initial broker collaboration, potential acquisitions and other equipment / physical asset costs).

Figure 13: VRN token allocation

08/

NEXT STEPS

The Vernam project will start with the token sale event in Q2 2018, followed by the initiation of platform development shortly afterwards. Depending on the amounts contributed at the token sale event,...

...we will develop our proprietary broker network across a number of European Union countries.

8.1 PROJECT ROADMAP AND MILESTONES

The following graph illustrates the main milestones from Vernam's development. Con-tingent to reaching the TSE's minimum cap, the platform development will start on Q2, 2018. This will include blockchain, web and mobile platforms. This stage is expected to finish at the end of the year, and the **platform is intended to go live in Q1, 2019.**

2017

Founders joined efforts to change the insurance industry and started building the Vernam concept.

January 2018

Concept was validated by experienced InsurTech executives, who later joined the team.

February 2018

Angel investment received, start of platform development

March 2018

Start of the preparation for a token sale

Q3 2018

Listed on an exchange

Q4 2018

Vernam platform MVP launch and testing

Q1 2019

Vernam broker starting operation in several markets

Q2 2019

First CryptoSafe smart contracts signed. Vernam mobile app launch

Q3 2019

Development of additional smart contract insurance products

2020

Operating on 8+ key European markets

8.2 Milestones

Besides platform development, our growth strategy foresees the establishment of a broker network across a number of EU countries at first, depending on the funds raised.

Soft Cap 40m VRN

Platform core blockchain integration and first EU county broker license.

250m VRN

Opearate up to 8 EU countries and integrate country specific platform upgrades.

500m VRN

Expand beyond Europe and develop additional platform features and products. Buying licensed brokers with network.

The business development part of the process will also start in Q2, 2018. It will include the setting up and development of our broker network, to ensure coverage of several EU countries – initially with conventional insurance products, sold through the Vernam platform (and with a VRN-denominated incentive when using our own brokers), and eventually with the CryptoSafe digital insurance products, described in section 6.

8.2 EXPANSION STRATEGY

Besides platform development, we plan to establish a proprietary network of brokers across a number of EU countries.

- Our network of brokers will initially target the biggest EU insurance markets, UK, Austria, Belgium and Italy among them.
- The first markets we will enter will be the "crypto-friendly" ones, securing the fast adoption of our platform.
- Our main focus will be Switzerland, considered by many to be Europe's "Crypto Nation"

While we aim to digitalize the insurance industry, the current regulatory landscape requires that many steps of the insurance process would still go through a licensed intermediary.

With time, brokers and agents would join the Vernam platform, as it provides an increasing access to customers across the continent and – with development of the shared ledger – a mechanism to estimate customer risk and optimize premium calculations. Nevertheless, to stimulate platform development and customer adoption, we develop our own broker network, guaranteeing control over the complete insurance contracting process.

Two strategies are possible – the establishment of brand new broker companies, or the acquisition of existing ones. The first path is cheaper, but might require a longer planning horizon, as many licensing and legal steps might take a significant amount of time.

Acquiring an existing broker is more expensive, but has the added benefits of inheriting the existing relationships with insurers and with clients. While the latter is important, we believe that releasing the value-added back to end customers (through the return of the "traditional" brokerage commission) would stimulate client adoption – especially in an industry where customer loyalty is not very high. Therefore, a good marketing strategy and an effective and intensive promotional campaign will be more important than acquiring an existing broker's client portfolio.

Acquiring the relationship between brokers and insurers, on the other hand, is of primary importance, as it will allow a faster and more efficient operations roll-out.

Our interviews with industry experts have confirmed that setting up the documentary and administrative relationship for a new broker might take up to a year.

M&A activity in insurance brokerage has traditionally been stronger than across other industry areas. A recent report from KPMG noted that “[as expected], *insurance broking was the most active segment in 2015, particularly in the Europe, Middle East and Africa region, with a wave of transactions throughout the year*.”

Most of these acquisitions have been driven by a wave of consolidations, or private equity-financed with a focus on price optimization and financial leveraging. This explains the high price tag – for example, in 2015, the UK-based Willis Group acquired the remaining 70% in Gras Savoye, which it did not already own for EUR 550 million. The French company, founded in 1907 is the leading insurance broker in the country, employing over 3,900 people, insuring over 500 thousand vehicles and offering healthcare protection to over 2.2 million people worldwide

Typical M&A drivers for insurance brokerage firms include their product mix – with better portfolio width commanding a higher valuation, contract renewal rates – with agencies depending on a smaller number of major clients suffering a valuation penalty, compared to brokers with a diversified client portfolio. Geography matters, as Agencies in high population and/or high income demographic markets sell for higher multiples because there are more local buyers and better opportunities for growth. Large brokerages in small markets even often sell at lower multiples than small ones in high population areas.
Given the contribution limits for our token sale event, and the 20% allocation for com- munity growth, we expect to have about $7-8m available for broker acquisitions. This is clearly below the value of the deals from the examples above, but as mentioned earlier, we are not looking to purchase brokers because of their installed customer base and office network, but because of the administrative relationship with the insurance providers.

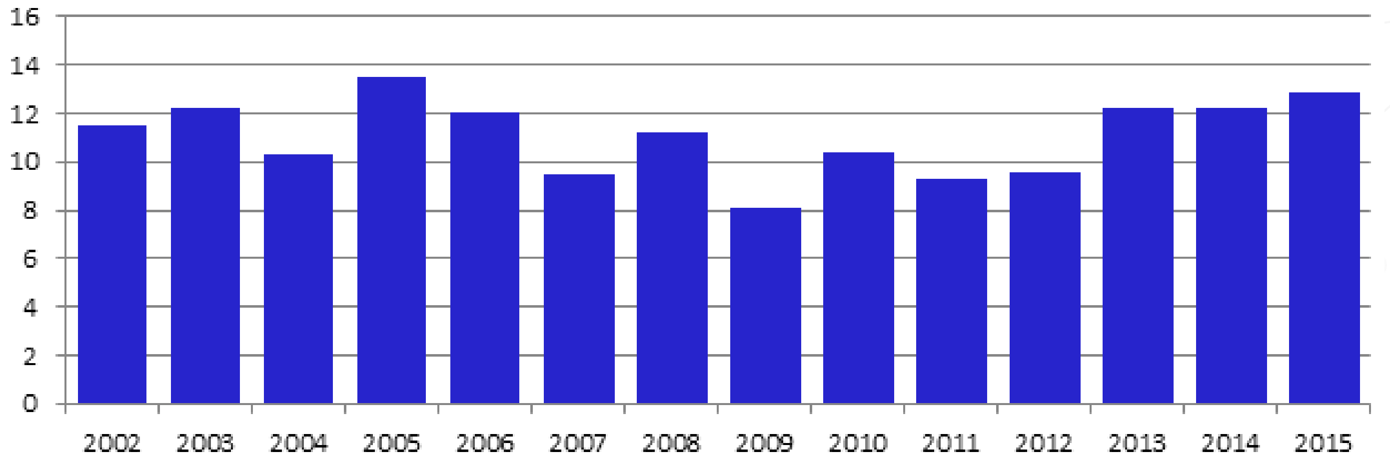


Figure 15: Valuation multiples (public brokers)

The figure above shows average valuation multiples (Enterprise Value / EBITDA) for publicly traded broker companies. Ratios above 12x in 2014-2015 are relatively high, when compared to historic data. Typically, a small insurance agency is valued at 4-6x (pro forma) EBITDA, a mid-sized agency is valued at 6-8x and a large agency is valued at 8-10x. In general, larger broker/agencies have less risk than smaller ones, giving them a higher relative multiple. However, smaller brokers that are high performing relative to their competitors can achieve multiples similar to the public companies, as well.

EBITDA margin, itself varies across companies, depending on their product lines, client portfolio and other factors. Reagan Consulting, a management consulting and merger-and-acquisition advisory firm for the insurance distribution system, has estimated Q1 EBITDA margin across the industry at 22-30%, yet noting that full-year margins typically decrease to about 20%.

Taking this information into account, we would be able to acquire existing broker companies with an annual revenue of about $3-4 million. As mentioned in the beginning of the section, we would target companies in Switzerland and several large EU insurance markets which have a good existing relationship and administrative experience with insurance company.

SUMMARY: Our expansion strategy is logical and effective. First, we will target the biggest EU insurance markets – among them UK, Austria, Belgium and Italy – with a main focus Switzerland which is considered to become Europe's "Cryptio Nation". There are two main approaches – the establishment of brand new broker companies or the acquisition of existing ones. The first option is limiting in terms of the amount of time required for licensing and other legal formalities. That is why we will focus on acquiring existing companies with the clear vision of implementing intensive promotional campaigns which will attract new customers with great potential of staying loyal to our business model instead of relying entirely on the acquired broker's client portfolio. We expect to have about $7-8m available for acquisition of broker companies with an annual revenue of about $3-4 millions each – the most important asset for us will be their administrative relationship with insurance providers.

09/

TEAM AND PARTNERS

THE VERNAM TEAM

PhD Student, MBA
Roman Angelov

CEO, Co-founder

CEO of DIMIROMA GROUP, leading Bulgarian consulting, IT and digitization company. Rewarded DNI Innovation funding by Google.

PhD Student,
Dipl. Eng Dimitar Mitrev

Co-founder

Experienced in creating and managing different B2B IT projects. CEO of DEAFOR. Member of the Bulgarian Association of Information Technologies (BAIT)

Ivan
Georgiev

Co-founder

Member of the board of directors of one of the biggest holdings in Bulgaria. Founder and manager of a successful mobile app development company.

Branimir
Minkov

CTO

Experienced Senior Software Engineer at TIS. Former software Developer and Technical Team Leader at Proxiad. Sun Certified Java Programmer SE 5.0. Former PHP Web Developer at Aplus.net.

PhD, Prof.
Zhelyo Hristozov

in

Insurance Director

Experienced Insurance executive, professor at the University of Finance, Business and Entrepreneurship. Former CEO of Olympic Insurance Company and the DBJZ Insurance Company

MBA
Borislav Stefanov

in

Business Developer

Harvard MBA graduate with extensive experience in business development and management strategy. Former head of Bulgarian Government Investment Agency.

Vesselin
Zahariev

in

Financial Expert

Partner at Mane Capital, an investment banking boutique, specialized in Equity&Debt Capital Markets and Mergers&Acquisitions transactions. Former head of Corporate Finance in the Bulgarian Branch of KBC Securities.

George
Matev

in

General Legal Counsel

Attorney at Law with rich experience in ICT and corporate law. Extensive competence in blockchain law.

René
Rosenberg

Business Developer

Experienced executive with over 13 years of professional experience in the outdoor advertising industry. Previously worked for German company OOH Wall AG

PhD, Prof.
Angel Doraliyski

Strategic Planning

Associate Professor at the University of National and World Economy, New Bulgarian University and Limburg University in Belgium. Author of Academic Textbooks on Theory of Management; Management Policy;

Ivan
Manchev

Marketing Expert

Experienced data-driven creative generalist, with a rich track of successful projects in advertising, online marketing and social media. Co-Founder and CMO of software development company SolvedOut.

Nadya
Kaloyanova

Marketing Director

Master of digital marketing. Co-founder and marketing manager of Woomie.gr, one of the leading e-commerce stores in Greece.

Venimir
Petkov

Blockchain & Crypto Expert and Developer

Blockchain developer at Global Group (ggroup.io). Owner and Lecturer at Global Academy Place - Investment, Crypto and Forex e-learning platform. Blockchain lecturer at SoftUni.bg. Blockchain developer and crypto advocate.

Alexander
Mihov

Blockchain developer

Blockchain developer at Global Group (ggroup.io). Software Developer with rich experience in Web Development and Software Engineering. Certified .NET and Javascript Developer

Sevgin
Mustafov

Blockchain & Crypto Expert and Developer

Blockchain developer at Global Group (ggroup.io). Blockchain lecturer at SoftUni.bg. Project Manager at Global Academy Place. Course Developer, Technical Trainer and Educational Assistant at Academy School of Blockchain. Certified Ethereum and Blockchain Expert.

George
Spasov

Blockchain & Crypto Expert and Developer

Blockchain Architect and Chief Of Delivery at LimeChain. Co-Founder and Chief Growth Officer of the Lean Collaboration Tool Swip. Agile Enthusiast and a Panda in nature.

ADVISORS

Dr.Ing.Inf. Theodor
Tamvakidis
in

Advisor

Chief Technology Officer at Huawei Technologies | Part of the CERN research team | Karlsruhe Institute of Technology (KIT)

Boris
Cuchran
in

Advisor

Senior Executive Officer with international experience in banking, insurance, and operations. Member of the Board of Directors at Wüstenrot Financial Group in CZ. Former CEO of AEGON Insurance Czech Republic. Former CEO of Generali Bulgaria.

Ivan
Todorov
in

Cybersecurity Expert

Founder of TAD GROUP, the first cybersecurity company in Bulgaria. CEO of Subway Bulgaria and Romania.

Nick
Todorov
in

Advisor

Blockchain Practitioner & Advocate. Founder & CEO @ LimeChain. Working on making a positive impact using blockchain technology.

Simon
Cocking
in

Advisor

Cofounder Chief editor Irish Tech News, CryptoCoin.News | Top 10 ICO expert advisor ICObench | In advisory board for more than 36 successful ICOs

Nathan
Christian
in

Advisor

Blockchain technology consultant | ICO Campaign Manager| TraXion by Pluma Technologies | Top 10 ICO expert advisor at ICObench | In advisory board for more than 21 successful ICOs

Jason
Hung
in

Advisor

CAMP CTO | Top 10 ICO expert advisor ICObench | In advisory board for more than 20 successful ICOs

Yagub
Rahimov
in

Marketing Advisor

CEO / Co-founder at 7marketz Inc. |Top ICO expert advisor ICObench | Advisor to 30+ leading ICOs | Co-founder of Fintech training centers in Europe, Asia and Africa

10/

LEGAL NOTICE

IMPORTANT! TOKEN SALES (OR ICOs AS KNOWN TO PUBLIC) ARE UNSTABLE AND UNREGULATED MEANS OF FUND RAISING AND SHOULD BE HANDLED WITH CAUTION. WE RECOMMEND WISE INVESTING OF MONEY DUE TO THE RISK OF LOSING THE MONEY.

PLEASE, READ THE WHITEPAPER AND THE TERMS AND CONDITIONS CAREFULLY AND MAKE SURE THAT YOU COMPREHEND EVERY ASPECT OF THEM. IN CASE YOU DO NOT UNDERSTAND ANY ASPECT OF THE FOLLOWING TEXT, YOU SHOULD CONSULT WITH A PROFESSIONAL ADVISOR UPON YOUR JUDGEMENT.

Vernam tokens are not given legal or constitutional form depending on a specific jurisdiction. The Whitepaper is not intended to represent an act of offering and should not be associated with any activity connected to the encouragement of investment in securities in any jurisdiction. The Whitepaper does not incorporate in any way a business advice in the sphere of token purchasing, does not represent a certain opinion, which should be considered as such, and does not offer to purchase Vernam tokens (hereby VRN tokens) by the distributor or vendor of the tokens (hereby „Distributor“). Please, do not make any decision for investment or contract signing based on the following informationI.

This Whitepaper does not in any case bind any person into a legal commitment in connection to the sale and purchase of the tokens. Therefore, no payment, either with cryptocurrency, or other means, is acceptable in compliance with the previous sentence. Provided there is a legal commitment between the Distributor and a purchaser, the commitment shall be regulated by a separate document representing the Terms and Conditions. In case of collision between the Terms and Conditions and the Whitepaper, the former shall prevail and govern.

This Whitepaper is not constituted upon any legal requirements set up by a regulatory authority and in connection to a certain jurisdiction. This document is not consistent with any legal act and is not approved by the authority mentioned before. Therefore, the publication, circulation or broadcasting of this Whitepaper does not in any way suggest coordination with the applicable legal acts. The Whitepaper under any form must not be distributed in countries where the circulation of it is restricted and/or prohibited..

LIABILITY SECTION

In reference to the information above, Vernam is not and shall not be responsible in any case for any consequences in connection to legal commitments made by you, including but not only tort, breaches, damages suffered, losses of any kind, lost profits, etc. You should not use this information as a basis of your acceptance and/or decisions to commit legally under any form.

CONTENT WARRANTY SECTION

Vernam does not in any way display the content of the Whitepaper as the objective truth, neither does Vernam give any guarantee that the information consists only of accurate and complete facts.

WARRANTY IN CONNECTION TO FORWARD LOOKING STATEMENTS

Every statement, written or oral, apart from historical facts, made by Vernam, Vernam's leading team of directors and executive officers, as well as the company's employees, shall be considered „forward-looking statements". Terms associated with these statements include non-exhaustively the following words "could", "expect", "probably", "possible", "estimated", "anticipate", "hope", "believe", etc.
Statement including information about Vernam's financial status, business plans, work appraisals, revenues and profits data, future plans, planned trends in the industry and other topics associated in any way to the topics mentioned above shall be considered "forward-looking statements". Taking everything into account, it should be noted that these statements include a variety of uncertainties and risks connected to the future development and may lead to discrepancy with the objective, actual results.
These forward- looking statements are dependent entirely on the following future changes in different aspects. Different factors have to be taken into consideration:

(1) Impossibility for Vernam to perform the operations and business plans established*;*

(2) Economic, financial, tax, political or any other change in the market of cryptocurrencies*;*

(3) Change in the availability of enough capital to finance the business of Vernam*;*

(4) Change in the rates connected to cryptocurrencies and fiat currencies*;*

(5) Increase of the fees Vernam has to pay referring to its business*;*

(6) Force majeure events;

(7) Increase of the salaries of Vernam's employees;

(8) Changes in the sphere of competition connected to the respective business and operations of Vernam;

(9) Change in customers preferences;

and every other unplanned and unexpected event that may influence in any way to the business of Vernam, including the Vernam Token Sale.

The information therefore has to be proceeded with caution and with lack of full reliance to the estimated results. The statements refer to future plans and expectations but are applicable solely to the present and the current White Paper. Vernam does not guarantee the occurrence of any of the predicted events, business plans, strategies, conditions, etc. Vernam does not have the obligation to modify the forward-looking statements in the future in connection to the change of the situation, conditions or events.

PUBLISHED MARKET AND INDUSTRY INFORMATION

This White Paper includes market and industry information such as researches, publications, surveys, documents, studies, reports and other publicly and worldwide available information. Such information published is considered to be obtained by trust-worthy and reliable sources. However, Vernam does not in any way guarantee the accuracy and truth of the market and industry information

CONSENT SECTION

Apart from Vernam, Vernam's leading team of directors and executive officers, as well as the company's employees and contractors, no other person has given his consent to the involvement of his name or additional information for him to be associated to such person regarding the information provided in the Whitepaper. Therefore, no warranty shall be provided in connection to the truthfulness and accuracy of the information originating from such person and the latter is not obliged in any way to update the information included in the Whitepaper content. Vernam has made every necessary step to ensure the accuracy and trust-worthiness of the materials; however, the same is not obliged to make detailed researches to clarify the origin of the information from third party sources, does not have the obligation to guarantee the completeness, accuracy and certainty of the information and is not obliged to update the same.

ADVISE SECTION

The Whitepaper does not incorporate in any way and under any form business, financial, legal or tax advices connected to the activity of Vernam, including the VRN Token Sale. Vernam does not have any responsibility regarding the possibility of financial risk occurrence when purchasing VRN tokens at any time. You must consult your intentions and actions regarding the VRN token Sale with a professional legal, financial, tax or other advisor on your initiative.

MODIFICATION OF INFORMATION

The VRN Token Sale and the Whitepaper do not guarantee the lack of possibility of any change or modification of the conditions, prospects or affairs of Vernam. Vernam is not obliged to update these documents with further information on the business, financial and economic development

RESTRICTIONS ON DISTRIBUTION, CIRCULATION AND POSSESSION

The circulation, distribution, possession of the White Paper or any other version of it may be restricted or prohibited in certain territories and countries depending on the different legal acts. Please, bear in mind that you have to inform yourself about such legal restrictions for possession of the White Paper and you are liable solely in case of a breach of any legal norms. Vernam is not liable in these circumstances.

NO SECUITIES OR REGISTRATION OFFER

The Whitepaper is not intended to represent an act of offering and should not be associated with any activity connected to the encouragement of investment in securities in any jurisdiction. The Whitepaper does not in any case bind any person into a legal commitment in connection to the sale and purchase of the tokens. Therefore, no payment, either with cryptocurrency, or other means, is acceptable in compliance with the previous sentence. Provided there is a legal commitment between the Distributor and a purchaser, the commitment shall be regulated by a separate document representing the Terms and Conditions. In case of collision between the Terms and Conditions and the Whitepaper, the former shall govern. Provided you are a citizen/ resident of the United States of America or you have a green card for the country, you are a citizen/resident of the Republic of Singapore, People's Republic of China, Canada or the Republic of South Korea, you are not recommended to purchase a VRN token or be a purchaser- party in any Token Sale Agreement. The Whitepaper is not constituted upon any legal requirements set up by a regulatory authority and in connection to a certain jurisdiction. This document is not consistent with any legal act and is not approved by the authority mentioned before.

RISKS AND UNCERTAINTIES SECTION

We recommend future purchasers that they must thoroughly research every aspect connected to the Purchase of VRN tokens by Vernam, including but not only the Whitepaper, the Terms and Conditions, the Vernam Online Platform, the Company's policy and relevant operations, before they purchase the tokens. If any risk or uncertainty occurs, this will affect the business, financial and economic development and therefore, can result in the loss of part or all of the value of the Vernam tokens by the purchaser.

11/

REFERENCES

REFERENCES

1 Source: Plunkett Research

2 Source: Schonfeld & Associates, 2014

3 Source: OECD

4 Source: Statista; Accenture* Data until 30/11/2017

5 Source: Bulgarian Financial Supervisory Commission

6 Source: Tommy, V. A. (2000). The mystery of broker remuneration.

Business Insurance, 34(23), 25.

7 Source: Tommy, V. A. (2000). The mystery of broker remuneration.

Business Insurance, 34(23), 25.

8 Source: Friel, M. (2010). An honest buck? Insurance Age, , 38

9 Source: A Practical Guide to Insurance Broker Compensation and Potential Conflicts of Interest for the Risk Manager

(2009) Risk and Insurance Management Society

10 Source: Bulgarian Financial Supervisory Commission

11 Source: Italian Institute for the Supervision of Insurance. 2016 Annual Report.

12 Source: General Directorate of Insurance and Pensions (Spain). Sector reports.

13 Source: Wall, J. K. (2011). Benefits brokers set for shakeout. Indianapolis Business Journal, 31(50)

14 Source: U.K. buyers want broker transparency. (2006). National Underwriter & C, 110(16), 28.

15 Source: Why the global insurance industry is wrong. (2014, Feb 25). Mint

16 Source: Statista

17 Source: Chester, J. (2017). How The Blockchain Will Secure Your Online Identity. Forbes.

18 Klein, Melville, Securing Record Communications: The TSEC/KW-26

19 Source: Why Switzerland is Becoming a “Crypto Nation” with a Flourishing ICO Market: Expert Take. Cointelegraph

20 Source: Insurance M&A trends: A year in review and predictions for 2016. KPMG.

21 Source: 2017 Has Broken All The Records For Insurance Agency M&A Activity. Agency Checklists.

22 Source: NASDAQ OMX’s News Release Distribution Channel (Dec 30, 2015]

23 Source: 2016 Insurance M&A Outlook. Deloitte

24 Source: Mensch, M. [2016] Agency Valuations – The Truth About EBITDA Multiples

25 Source: Ybarra, J [May 9, 2017]. The Start Of 2017 Sees Gap Widening Between Broker Growth & Valuations