



XL Insurance  
Reinsurance

# Innovation in Credit & Surety Insurance

A market survey in 2020/21



AXA XL Credit & Surety

# Foreword

Dear Readers,

- ➔ We have structured this report to allow on the one side for the quick reader who prefers a slide presentation that provides the essential findings of our study. On the other side, we were also keen to share with you many of the details that our study found.
- ➔ Therefore our report works in double-pages – the first page summarizes the detailed findings while the second page describes the key conclusions of our research.

# Foreword



## *Peter Schmidt*

Chief Executive Middle East, Africa, India, APAC,  
Latin America, Credit and Surety Re at AXA XL

- ➔ We are pleased to present the AXA XL Credit & Surety Survey 2020/21 on '*Innovation in Credit & Surety Insurance*'. As a leading global credit and surety reinsurer we aim to enhance the relevance of our line of business and increase its share in the marketplace.
- ➔ During the past two years our industry has once again demonstrated its ability to provide security and stability in testing times. However, we believe we can do more for our clients by insuring the exchange of goods and services and securing the realisation of essential infrastructure as well as other guarantees.
- ➔ To grow our industry and increase its penetration, innovation is essential. It opens access to new markets and client segments, and enables us to insure the previously uninsured. In our survey we were keen to learn from our partners which trends will shape our industry going forward. Not surprisingly our interviewees from the Credit & Surety industry as well as the insurtech players active in our sector agree that digitization will change our industry's face more than any other development in recent years. The COVID-19 pandemic has even further reinforced this trend.
- ➔ We would like to thank all companies and experts who contributed to this survey and shared their knowledge with us and wish you an interesting and hopefully inspiring read.

Kind regards

Peter Schmidt

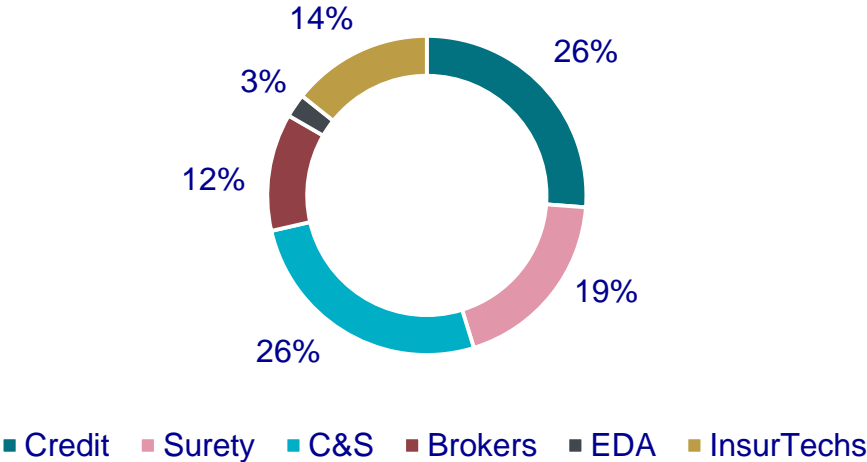
# A representative mix of participants shared their market insights

- We conducted 42 in-depth telephone or online conferencing interviews with senior executives from 38 different companies operating either globally or regionally in Europe, the Americas and Asia/Pacific.
- The companies interviewed were either multiline insurers or reinsurers, monoliners operating in credit or surety insurance, as well as export development authorities (EDA) or brokers.
- In addition, we also interviewed senior executives from the InsurTechs industry, operating in credit or surety insurance.
- The interviews were conducted initially at the beginning of the COVID-19 pandemic in 2020 and again in spring and early summer 2021 to verify if the pandemic had changed our initial findings.
- The Credit & Surety survey was executed by Faber Consulting AG, a Zurich based independent consultancy company.

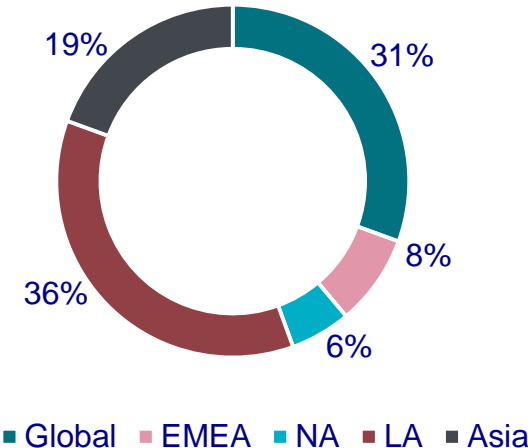
# A representative mix of participants shared their market insights

## Overview of participants in the AXA XL Credit & Surety survey

### Participants by sector



### Participants by region (excl. InsurTechs)



# Key findings

## Digitization seen as the route to enhance efficiency and expand the market

- ➔ The share of both credit and surety insurance has been largely unchanged with regard to either the global trade or the infrastructure and construction industry. True product innovations have been rare. The plea to improve efficiency, expand market outreach and increase resilience against shocks has quickly turned into a call for digital technology.
- ➔ Data has become the main means of production. While artificial intelligence or machine learning perform the data analytics, distributed ledger technology (DLT) and blockchain enhance contract certainty and efficiency in supply chains. Finally, ecosystems or platforms try and directly match risks to capital providers.
- ➔ Artificial intelligence and machine learning are deployed to collect data from clients, the own organisation or the public domain with intent to improve and streamline the underwriting and risk management process, strengthen client relations and also comply with expanding regulation.
- ➔ Credit insurers that focus on the finance of trade receivables team up with banks that perceive these risks as an opportunity for a tradable asset class. They hope that platforms will connect suppliers, funders and insurers via so-called smart contracts to enhance transparency, security and efficiency in trade finance.
- ➔ Corporate clients are the key driver for innovation. Although insurers have already taken large strides to integrate their systems with their clients', many policyholders still perceive credit insurance as highly inefficient. Technology is a driver for innovation too. Insurers are able to analyse large amounts of data and adjust risk management to a real-time analysis incorporating data from clients, suppliers and public sources.
- ➔ The impact of digitization on insurers' premium growth depends on the technology. Artificial intelligence and machine learning are implemented to improve the workflow across the value chain. Technology is part of the cost to remain competitive. As for the digital platforms, their traded volume is currently still negligible but may assume a market share of up to 10%, depending on their ability to establish a scalable and replicable business proposition.
- ➔ In terms of the further profits that digitization may add, artificial intelligence and machine learning are expected to improve insurers' efficiency. Technology will contribute to disintermediate the value chain, make products more affordable and drive sales. Those insurers that are bullish with regards to the impact of the digital platforms expect no less than a "revolution" of them. Transactional cost as well as cost of capital may come down if platforms manage to turn trade receivables into a tradable asset class.



# Key findings

## Technology to grow insurers' efficiency and enhance their resilience

### I Hardly a change in relevance

- Credit and Surety grow in line or slower than GDP
- Credit insurance only covers a fraction of global trade
- In surety infrastructure investments require substantial financial security. Surety mainly grown outside this segment

### II Data became the means of production

- Digitization is seen as the route to grow the market:
- Artificial intelligence and machine learning
- Distributed ledger technology and blockchain
- Distributed platforms and eco-systems

### III Change driven from outside

- Main drivers for innovation:
- Clients: Products are seen as complex and intransparent
- Technology: Data analytics greatly enhance efficiency and decision making
- Competition: widening gap btw. larger and smaller insurers

### IV Preference to digitize and partner

- Insurers digitize themselves
- Partner with insurtechs
- Pursue a plug n' play approach of digitizing themselves to partner with an insurtech
- Key objectives include improved client relationships, more efficient underwriting, risk adjusted pricing and better risk management

### V Slow build-up of volume and profit

- Short-term insurers expect efficiency gain from digital technology
- In the medium to long-term, insurers expect substantial volume growth at lower cost
- However, some of the gain will be returned to clients through lower pricing

### VI Digitization enhances resilience

- Pandemic has further reinforced the value of digitization
- Insurers were able to continue operations despite lock-down
- Availability of data served to detect upcoming constraints
- Improved exchange of data with clients helped to explain decisions and credit limits







# 1

**The market's perspective on  
growth and innovation**

# Credit & Surety insurance still punching below its weight

## The plea for innovation quickly turns into a call for digital technology

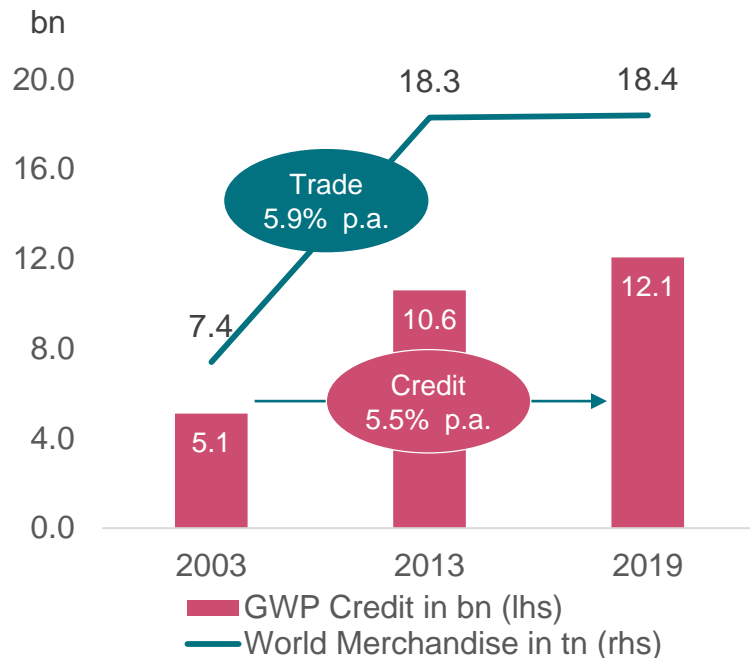
- ➔ Credit and Surety have grown roughly in line with the world's gross domestic product (5.15% p.a.) since 2003. Volume in credit insurance grew by 5.5.% from US\$ 5.11 billion to US\$ 12.07 billion (2003 – 2019). Likewise, surety insurance expanded at 4.7% annually from US\$ 7.41 billion, in 2003 to US\$ 15.33 billion in 2019.
- ➔ Compared to global trade, credit insurance was unable to secure a larger share with exporters. By contrast, surety insurance clearly outgrew the infrastructure sector and increased its relevance for the construction industry.
- ➔ According to the Berne Union, credit insurance still very much caters to the large corporations. Only about 13% of cross-border trade is credit insured. Prior to the COVID-19 pandemic, the Asian Development Bank estimated that additional US\$ 1.5 trillion of potential global trade require financing. With the decline in trade due to the COVID-19 crisis that deficiency will have exacerbated to up to US\$ 5.0 trillion.
- ➔ The situation is comparable in surety insurance. According to a World Bank study from 2017 the low- and middle-income countries (LMICs) might need to spend about 4.5% of their GDP on infrastructure until 2030 to assure economic growth, social progress and fulfil the climate change commitments. Surety insurance could help to secure these investments.
- ➔ Surety insurance has actually outgrown infrastructure investments since 2003. On the one hand surety insurance benefited from new markets, such as China which licensed surety insurance as a guarantee for public and private construction projects. On the other hand, surety insurance has grown into other forms of bond segments, such as judicial bonds, which are unrelated to infrastructure.
- ➔ In order to expand insurance penetration and capture market opportunities innovation is needed to bridge the trade finance and infrastructure gaps. In trade credit the request for innovation is also motivated by defensive considerations in light of challenges confronting the industry such as the COVID-19 outbreak, trade conflicts, environmental and social concerns, tighter regulation as well as increases in fraudulence.
- ➔ The plea for innovation quickly turns into a call for digital technology. The hope to expand as well as defend the market position mainly rests on the opportunities posed by digital technology. However, insurers' attitude to technology can be quite ambiguous, seeing technology as both a bane, adding to the industry's woes of heightened competition and a boon, helping to improve product simplicity, cost, efficiency and outreach.

# Credit & Surety insurance still punching below its weight

Credit outgrows surety, but only expands in line with global trade

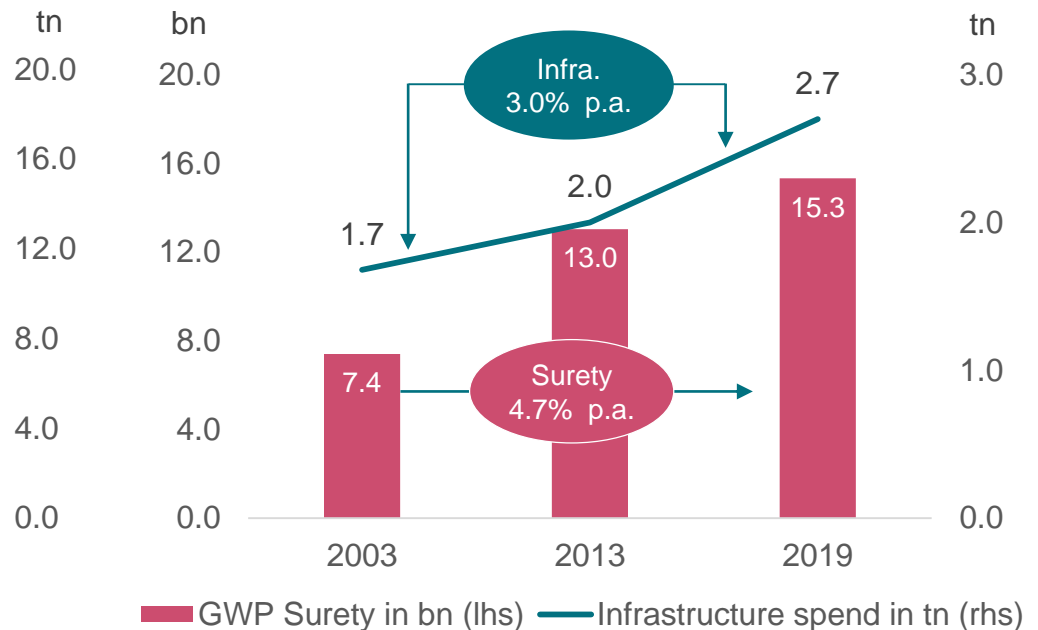
## Credit vs. Global Trade, 2003 - 2019

Relevance of Credit remains unchanged in trade



## Surety vs. Infrastructure spend, 2003 - 2019

Surety increases its share in infrastructure



Source: Swiss Re, WTO, Willis Towers Watson, Global Info Research

# Digitization as a means to increase efficiency and gain scope

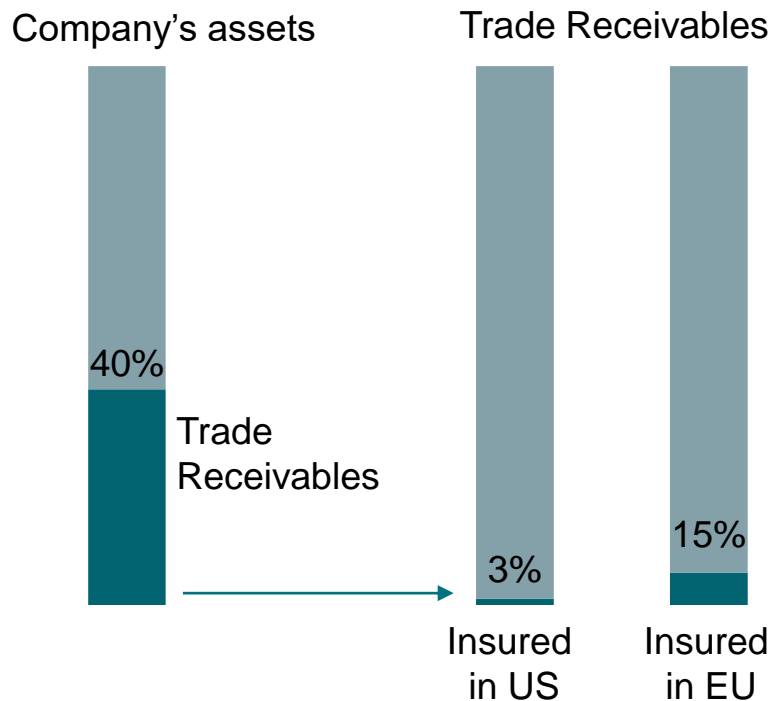
## Technology to improve risk management and enhance connectivity

- ➔ The Credit & Surety industry has been debating for years how to increase its relevance. In 2017, Euler Hermes estimated that just 5% of B2B trade leverages the benefits of credit insurance.
- ➔ Receivables financing is seen to be similarly under-exploited. While receivables account for approximately 40% of a company's assets, about 3% are insured in the US and about 15% in Europe.
- ➔ The cost to the world's economy in missed opportunities and failed businesses is underestimated. According to Euler Hermes 30% of bankruptcies are caused by delayed client payments. Disputes are not uncommon, can take years to resolve and create major financial and legal stress.
- ➔ In its 2020 annual report the Berne Union stated that digitalization has taken hold of the whole-turnover business. The COVID-19 pandemic has further accelerated this process with the insurance community realizing that digitization is no longer solely an efficiency but also a resilience play.
- ➔ Thus far in credit and to some degree also in surety insurance, insurers follow a digitization strategy which pursues along three interconnected avenues.
- ➔ In the whole-account business the ability to collect, sort and understand data has become the main means of production enabling a higher efficiency, better risk management and improved client relations. The technology behind this development started off as artificial technology but has since morphed into machine and most recently deep learning.
- ➔ The second approach focuses on trade finance and aims to address inherent inefficiencies in the supply chain trade through the distributed ledger technology and blockchain.
- ➔ And thirdly, the combination of the former two trends - while improving connectivity - led to the emergence of digital platforms both in the single transaction and the whole-turnover business. While some of these platforms have matured, most of them are still in the proof-of-concept phase.

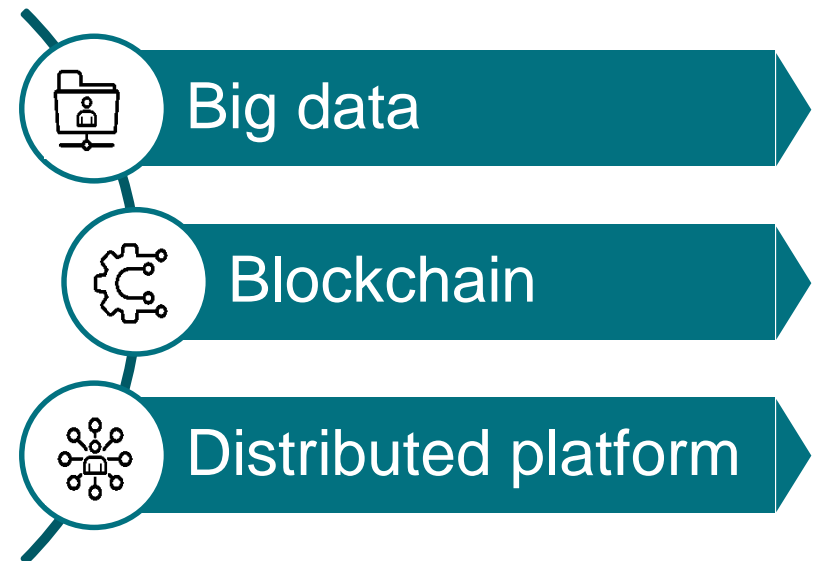
# Digitization as a means to increase efficiency and gain scope

Credit insurance does not yet tap its market potential

## The 'trade receivables gap'



## Avenues of digital innovation



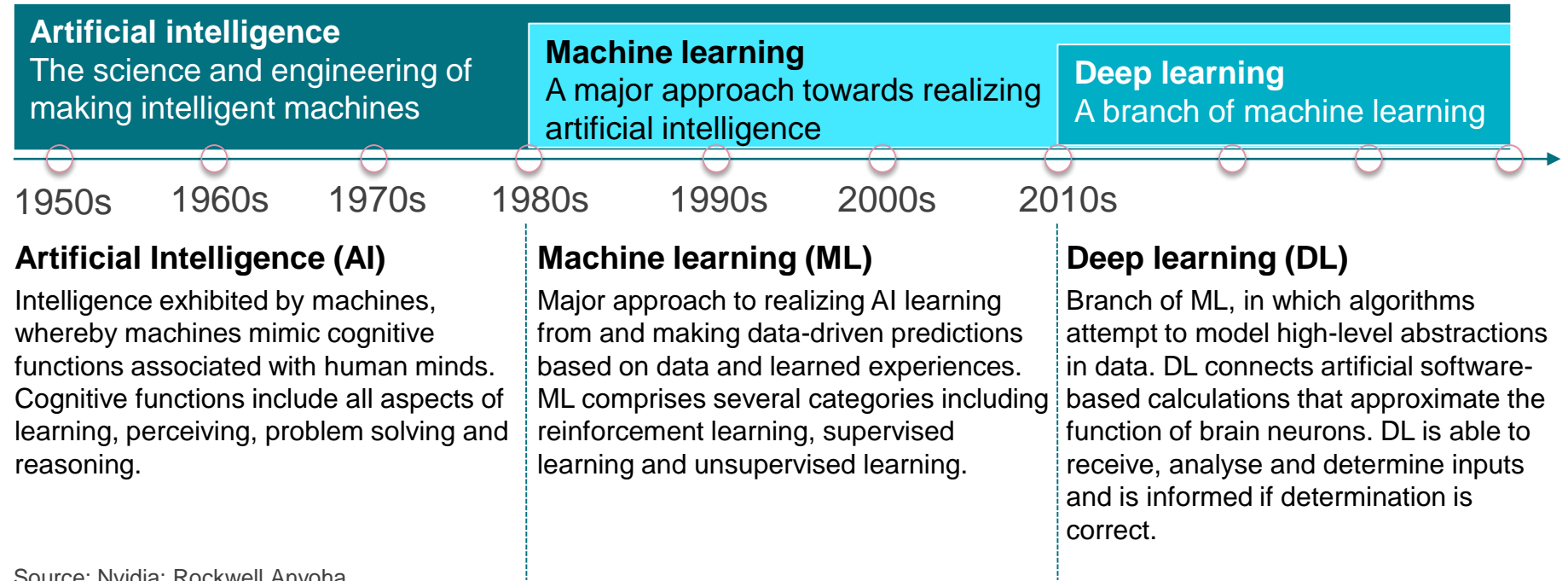
# Artificial Intelligence seen as key to address market opportunities

Today large credit insurers set 10% - 20% of credit limits based on algorithms

- ➔ Enabled by the explosion of data, the proliferation of cloud computing, the ability of data storage in boundless quantities and the increase in connectivity, artificial intelligence is seen as a key solution to address these market opportunities.
- ➔ AI-driven technology facilitates scalable access to business data required to make sound underwriting decisions. Based on technologies such as computer vision, machine or deep learning and robotics, artificial intelligence is used to collect and process information sourced in the public domain, from clients or internally from other lines of business.
- ➔ By sorting huge amounts of data, risks are evaluated according to their relevance. Typically, insurers use the technology to automate the more generic business and concentrate the attention on those risks which generate the highest return or present the largest risk. Credit insurers also use AI to determine and align credit limits and to assess their portfolio in a time of crisis, a cycle is supposed to come to an end or profit margins no longer meet internal benchmarks.
- ➔ Artificial intelligence also benefits from the expansion of APIs (Application Programming Interface) which enable the digital connection of insurers with their corporate clients and their seamless exchange of data, although both may operate on separate systems.
- ➔ Market pundits estimate that today 10% - 20% of the credit limits set by the market leaders with their large corporate clients are automated, based on algorithms. These kinds of networks that emerged in recent years are called destination platforms.

# Artificial Intelligence seen as key to address market opportunities

AI to enable improved efficiency, risk management and client satisfaction



Source: Nvidia; Rockwell Anyoha

- With the proliferation of data, the ability to store and analyse it, became the new means in production, helping to sort risks or predicting future developments
- Enables to sort risks by relevance, predict future trends and improve transparency in decision making
- AI became the main digital innovation that also enables to integrate the client in a seamless information flow



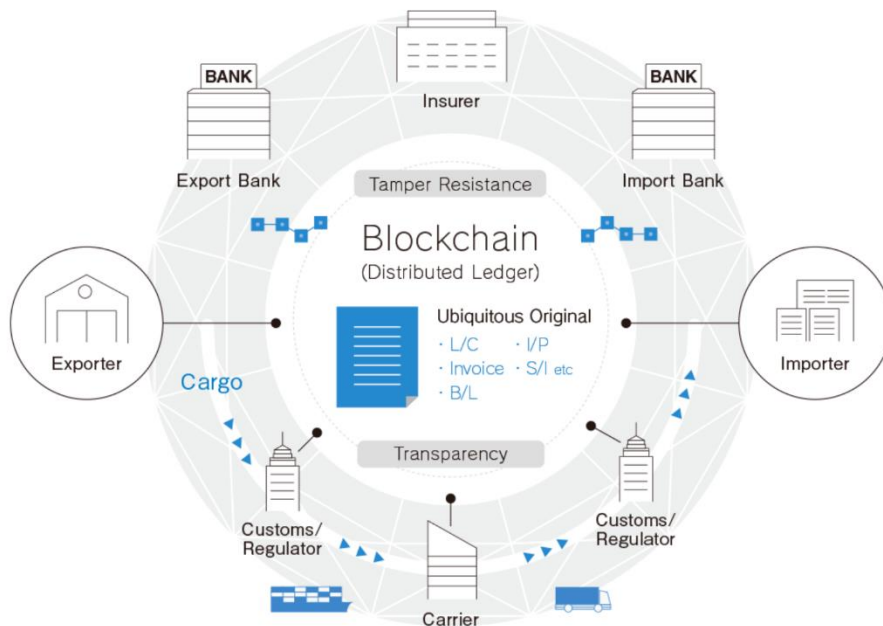
# Distributed ledger technology and blockchain to transform trade finance

## Regionalization of supply activities requires a more efficient and resilient system

- ➔ Key processes have not yet been digitized in credit or surety insurance. That is particularly true for trade finance in supply chain transactions, where a lot of manual work stands in the way to improve efficiency. A study by BCG found that a single transaction in trade finance can involve approximately 5'000 data field interactions, of which 90% could be streamlined if digitized.
- ➔ Disconnected systems limit the ability of banks or insurers to develop new offerings and scale new revenue streams at a low marginal cost.
- ➔ The inherent inefficiency of the system make access to trade finance solutions often complex or even impossible, which is particularly true for SME and mid-market companies, reducing their ability to integrate into the global supply chain.
- ➔ Blockchain or distributed ledger technology is defined as a technological infrastructure and protocol that enables simultaneous access and decentralized data storage, validation, and record updating in an immutable manner across a network spread across multiple entities or locations. Its core strength is seen in the transparency and openness that it creates, reducing barriers to entry for business and in the mutual consensus that it generates across networks.
- ➔ Replacing the former siloed systems and manual processes, the value of the blockchain technology has started to extend beyond cost efficiency. Accelerated by the pandemic, companies across the supply chain are faced with a greater regionalisation and near-shoring of supply activities. These shifts require a system that is more cost efficient, resilient, eliminates sources for errors and increases the speed in information exchange.

# Distributed ledger technology and blockchain to transform trade finance

DLT enables simultaneous access and decentralized data storage



## Programmable

A blockchain is a set of programmable “smart contracts”

## Secure

All records are encrypted

## Time-stamped

A transactions timestamp is recorded on a block

## Distributed

Participants have a copy of the ledger for complete transparency

## Immutable

Any validated records are irreversible and cannot be changed

Source: Trade platform - TradeWaltz™

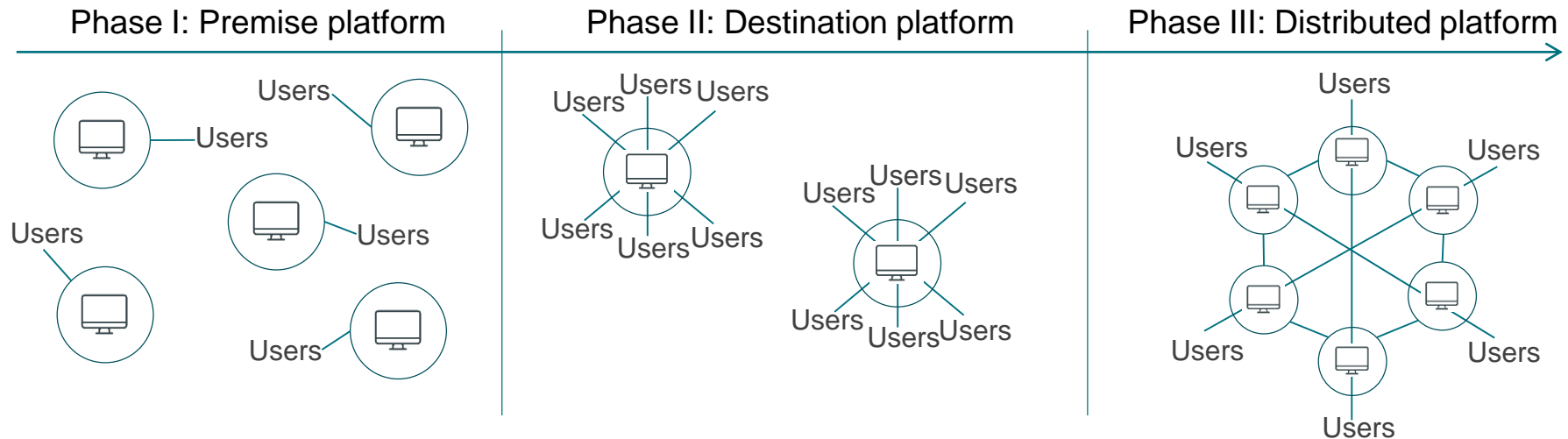
# Distributed platforms target multi-party trade transactions

## Resolving access to data and data privacy are preconditions to success

- ➔ Although the COVID-19 pandemic has accelerated the process of digitization, thus far, digitization by credit and surety insurers has been a standalone affair, not yet linking to other services. According to the Berne Union, the next phase is expected to connect different services, eventually creating a one-stop-shop environment for exporters.
- ➔ Some companies have embarked on that route. Currently the credit & surety industry is still mostly coined by enterprise software used to sort data on internal servers (on-premise) to manage processes and tasks. These systems cause substantial cost, risk, complexity and efforts if data has to be shared or integrated with parties outside of these on-premise systems.
- ➔ In the early 2000s, so-called destination-platforms emerged, which offered software as a service and enabled participants to transact digitally on a joint server. In credit insurance this includes the commonly known systems that join the market's leading insurers with their corporate clients for a continuous and automated exchange of data and information.
- ➔ While these destination platforms improve transactions, sharing information across destinations is still costly and complex. As a result, trade remains fragmented and technology systems are still siloed and disconnected, the criticism goes.
- ➔ As the digitization of trade finance progressed, banks, brokers, insurers and trade companies invested in networks based on distributed ledger technology to create platforms able to support multi-party trade transactions, requiring participant to join a common destination. Examples for these distributed platforms are Marco Polo or similarly TradeIX.
- ➔ However, while these platforms claim to reduce cost, improve simplicity, security and connectivity, the platforms still struggle with questions around data privacy and access to data, at least for as long as the large destination networks in trade finance, which reside on most of these data, have not yet joined.

# Distributed platforms target multi-party trade transactions

Platforms aim to connect all players in a value chain



- Most common forms of digital technology are still 'on premise' platforms – digital systems based on vendor or proprietary software structuring the internal processes of an insurer
- Following the Global Financial Crisis, larger insurers have accelerated the introduction of 'destination platforms', enhancing the information flow with their corporate clients to improve risk management and transparency
- High expectations rest on the 'distributed platforms' which try to link trade finance with corporate clients, insurers, banks and investors. The system still suffers from a lack of access to data and the uncertainty regarding data security





# 2 Assessment of market and premium growth

# Credit more dynamic than Surety

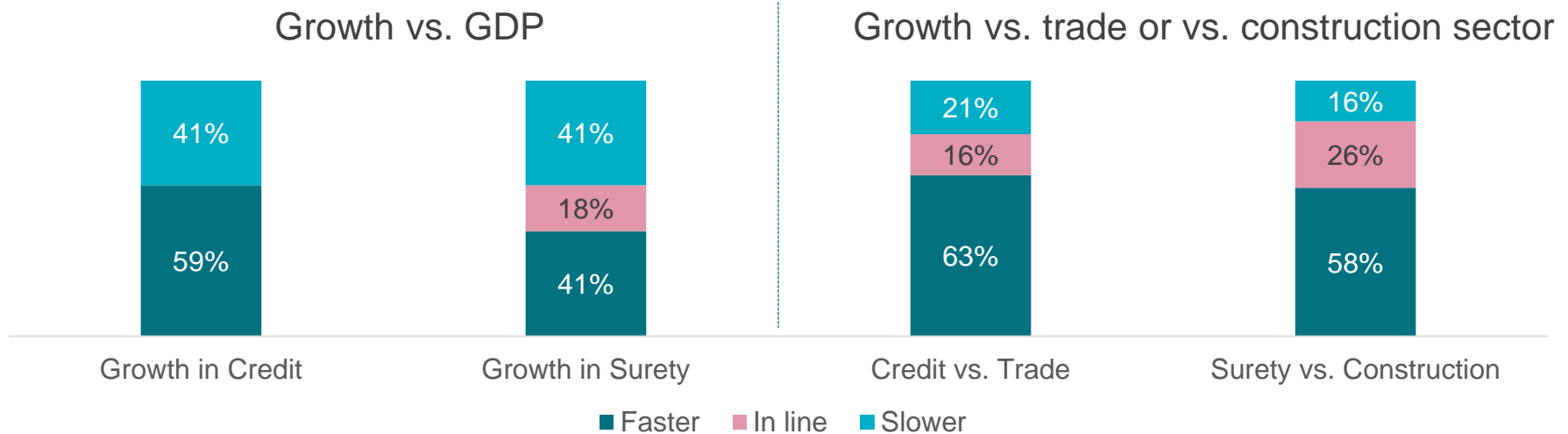
## Credit insurance outpaces GDP and the trade sector

- ➔ Overall, credit insurers saw their market perform more dynamic than the surety market. According to 60% of the credit insurers surveyed their line of business outgrew the GDP in the twelve months before the COVID-19 pandemic.
- ➔ Risks such as single buyers and trade finance grew fastest, while the more generic excess-of-loss or whole-account business saw only moderate growth. Low rates still weighed on premium growth, but as the market hardened that impact diminished.
- ➔ According to our interviewees, particularly in emerging markets where public budgets were under pressure, volume growth was restrained as insurers entered into 2020 – growing in line with GDP. Only markets like China, where surety is still a relatively new line of business, benefited from high construction activities even during 2020.
- ➔ In Latin America judicial bonds continue to drive the market growth in Brazil. As the COVID-19 pandemic unfolded and governments started to launch their public stimulus packages, demand for surety insurance was expected to accelerate as governments fuelled investments into public construction projects.
- ➔ Both credit and surety insurers see their market growing faster than the underlying trade or construction sector. In Credit, interviewees pointed out that their client base extends well beyond the classical trade sector. As a result, the slower growth in trade, which was due to the rising trading tensions and later by the disruption of supply chains, did not affect the insurance side to the same degree.
- ➔ In surety insurance certain segments exhibit more rapid growth than the construction industry. In China where surety insurance is still rolled out across the country, surety bonds experience double digit growth. Furthermore, bond products geared towards niche segments outgrow the market such as judicial bonds that have been expanding in Brazil since 2014.
- ➔ However, for the most part, surety insurers remarked that their line is closely tied to the fate of the construction industry and if public budgets are tight, as for instance in Latin America, premium volume suffers from low construction activities.



# Credit more dynamic than Surety

Surety grows slower than GDP and benefits from increasing penetration in China



## Credit grows faster than GDP

- Insurers focus on growth segments such as single buyers and trade finance
- Generic business such as whole account/excess-of-loss remained flat
- Financing of trade receivables grows faster than export
- However, trade conflicts and declining rates negatively impact on growth

## Surety outgrows construction industry

- Premium volume often tied to public spending
- Growth driven by dynamic market expansion in China and by judicial or digital bonds in Latin America
- Restrained public spending on construction negatively affected the surety growth in most Latin American markets

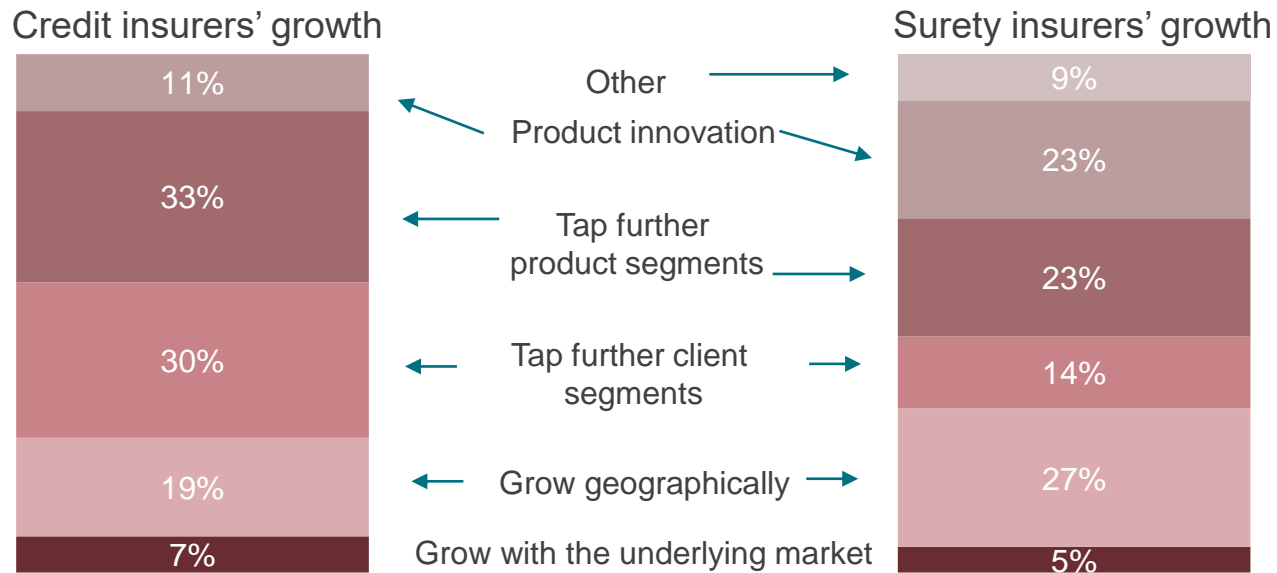
# Markets' maturity and profitability seen to stifle innovation

## In Surety low penetration to provide growth opportunities

- ➔ Market maturity, regulation and triangulations between buyer, seller and insurer stand in the way of innovation in credit insurance. Loss ratio dampens the need to innovate. Insurers thus mostly grow their book by moving into additional markets or by leveraging established products and extending them to new client segments, such as SMEs or large-scale single risks.
- ➔ Insurers also aim to expand their portfolio by entering further product segments. Judicial bonds are frequently seen to provide growth opportunities. In terms of innovation, digitization creates new possibilities in Surety. Bonds that are issued and signed digitally or electronically are opening the route to efficiency improvements and thus facilitate the entry into new segments such as the SME sector.
- ➔ In Surety insurers mostly pursue a geographic expansion. Particularly in China, where surety insurance is still a fairly new product, the cover is steadily rolled out to more provinces and experiences double digit growth.
- ➔ This development has accelerated due to the COVID-19 pandemic, where digital signatures have become more common as insurers were unable to travel or visit clients.

# Markets' maturity and profitability seen to stifle innovation

Most growth driven by expanding with existing products



## Innovations are rare in credit insurance

- ➔ Highly regulated markets complicate innovations
- ➔ Complex triangular relationship between buyer, seller and insurer
- ➔ Low loss ratio dampens need to innovate

## Surety insurers bet on new types of bonds

- ➔ Judicial and electronic bonds seen as key innovations in recent years
- ➔ Digital bonds particularly benefited during COVID-19 pandemic
- ➔ Low penetration in emerging markets (i.e. China) makes geographic expansion attractive

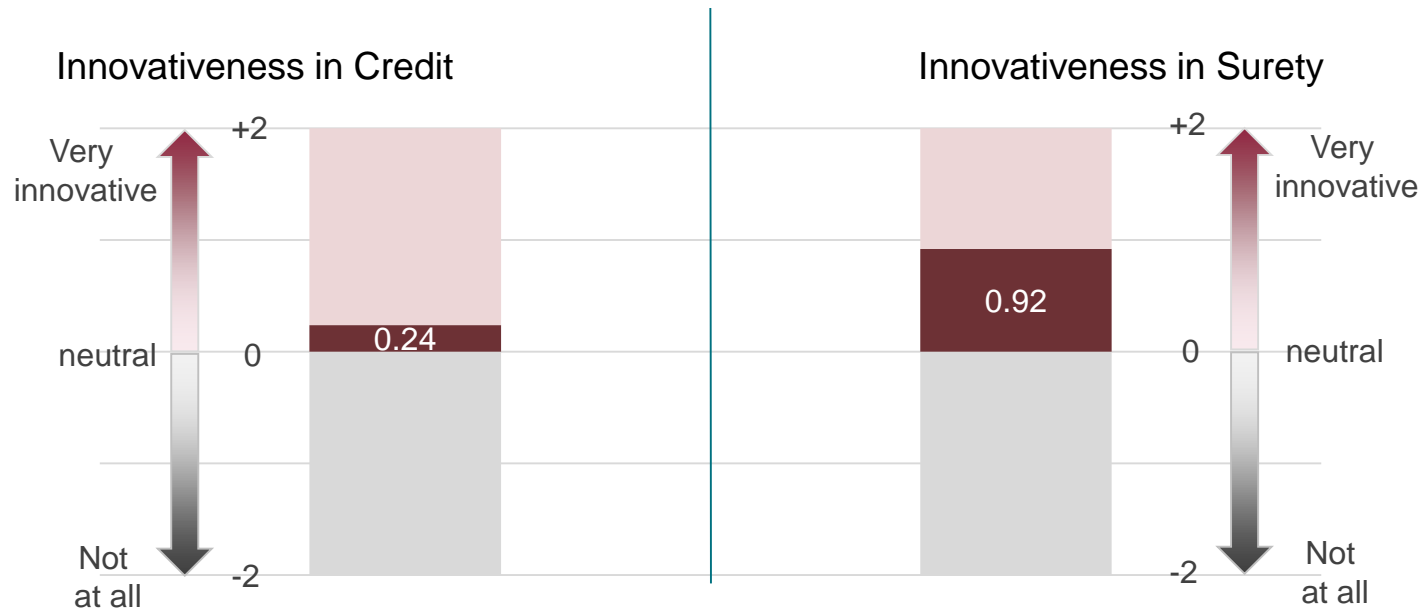
# Complex structure in Credit and Surety does not encourage change

## Digitization to improve efficiency

- ➔ According to 38% of interviewees credit insurance is not innovative at all. An equal share of insurers sees new initiatives, which are predominately driven by digitization. The product is perceived highly complex and labour intensive.
- ➔ The market predominately experiences different utilizations of credit insurance such as bespoke solutions for large risks. The classic whole turn-over segment is seen as rather traditional and not open to change, which is also due to the risk that by deviating from established product designs the threat of negative risk selection is feared to increase.
- ➔ Innovations originate from technology. The amounts of data that credit insurers need to deal with are increasing exponentially. Artificial intelligence is needed to analyse and structure the information, improving internal efficiency and operations.
- ➔ Surety insurers take a more favourable view of the innovativeness of their line, citing new types of bonds such as judicial bonds in Brazil – although already introduced in 2014 – as well as new utilizations such as digital or electronic bonds.
- ➔ These products are seen to create opportunities to reach out to additional clients, new client segments, such as SMEs in the case of digital bonds, and enhanced efficiency.
- ➔ Digital platforms are emerging as Chinese municipalities commence to auction risk to insurers and they dock onto these systems. Eventually the whole underwriting and later the claims process is handled via the platform.

# Complex structure in Credit and Surety does not encourage change

Innovation in both lines largely driven by technology



- ➔ Market is split about its innovativeness – almost as many interviewees see the market as innovative or not at all innovative.
- ➔ Innovation is not originating from within the industry but is enabled through technology.
- ➔ Siloed view of the value chain (insurers, brokers, reinsurers, customers) not open to change. Focus is on underwriting, no opportunities arising from data.
- ➔ Insurers perceive the surety market as more innovative.
- ➔ Innovation includes judicial bonds (Brazil), as well as digital and electronic bonds or auction platforms in China.
- ➔ Structure of the market stands in the way of innovation too. Government as the beneficiary not open to change.

# Technology as a game changer in credit and surety insurance

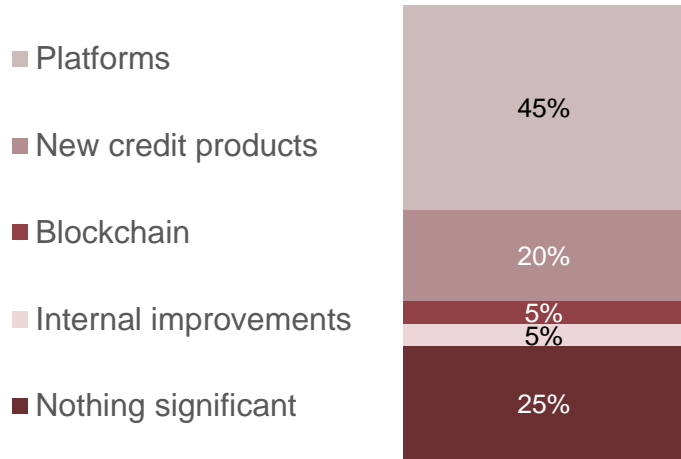
## Some innovations still need to prove their viability

- ➔ Credit insurers which mainly underwrite whole-turnover see large opportunities in utilizing their vast amounts of data. Technology has become imperative to sieve through the submissions received and identify those that are relevant. Efficiency is mandatory as the bandwidth in pricing is slim.
- ➔ Artificial intelligence and lately machine learning are deployed to conduct that process which includes the collection of client data as well as publicly available and purchased data.
- ➔ Credit insurers focussing on large or single risks and operating in trade or project finance might team up with banks to shoulder more generic risks in trade finance and account receivables. In these risks some banks see the opportunity for an evolving and tradable asset class.
- ➔ Platforms or ecosystems emerge that tie suppliers, funders, banks and insurers to a joint system. Distributed Ledger Technology (DLT), based on blockchain technology, is used to provide smart contracts, which aim to enhance transparency, security and efficiency in trade finance.
- ➔ Those who supply capacity to these platforms believe they could be transformational. But the platforms have to demonstrate how they handle the data, which clients are only willing to share if their confidentiality is guaranteed. Furthermore, insurers doubt that it is possible to fully automate the complex underwriting process in credit and to eradicate the human element.
- ➔ According to the surety insurers, the sector's main innovation, digital or electronic bonds are driven by technology too. Strongly supported by surety associations, electronic bonds replicate the established processes by assuring its electronic delivery.
- ➔ The COVID-19 pandemic has accelerated their utilization as the acceptance of electronic documents has been greatly encouraged by supervisory authorities.
- ➔ New types of bonds are also mentioned as growth drivers. However, many of these – such as Brazil's judicial bonds - are difficult to replicate in other jurisdictions.
- ➔ Similarly, the auction platforms introduced in China might be a novelty, but they are not driven by the surety industry. Instead technology providers and municipalities or government authorities introduced them to enhance efficiency and clamp down on fraud in the auction process.

# Technology as a game changer in credit and surety insurance

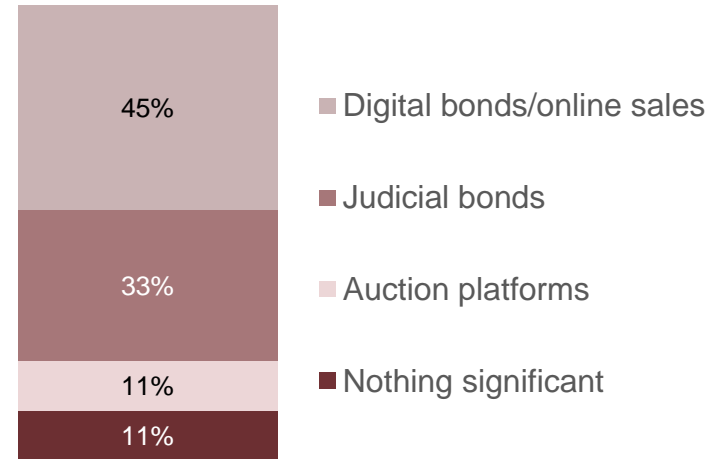
## Platforms and digital bonds perceived as most promising innovations

### Promising innovations in credit insurance



- ➔ Platforms seen as the most promising innovation, though they still need to prove their merit
- ➔ This incorporates aspirations driven by AI and distributed platforms
- ➔ Digitization is also expected to enhance internal efficiency

### Promising innovations in surety insurance



- ➔ New bonds are the markets main innovations Brazil's judicial bonds recurrently mentioned, although their introduction date back to 2014
- ➔ Digital bonds as well as auction platforms are both technology driven. They mainly improve market efficiency



# Client pressure and technology drive change

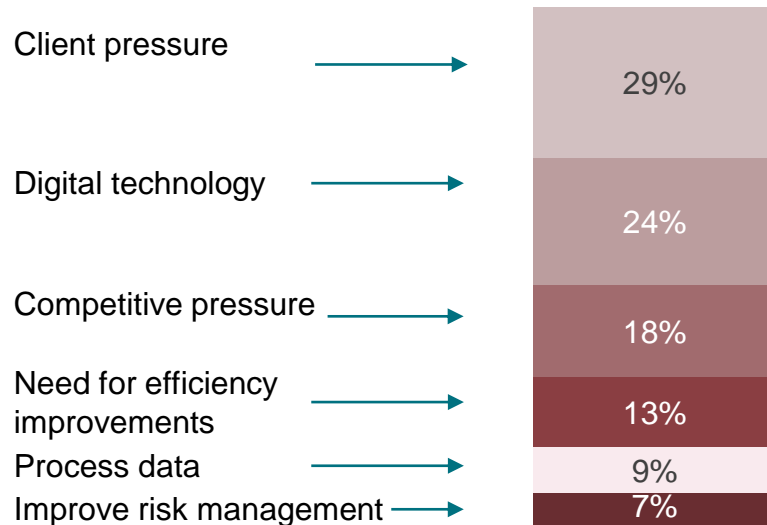
## Clients demand that products are more predictable – also in times of crisis

- ➔ Drivers for innovation reside outside of the industry. Many policyholders perceive the system as inefficient and unsatisfactory. Cancellable policies or credit limits, which change according to risk profiles are cited as examples.
- ➔ Following the great financial crisis, when many credit insurers reduced their exposure, the industry was thus accused of only providing “fine-weather protection”. Some large corporates now hope that with the advent of digital platforms, they will be in a stronger position to pick and choose a policy which will not change their conditions in the advent of a crisis.
- ➔ Credit insurance typically comes with a lot of manual and recurrent work. Corporate clients pressure the insurers to improve their services. The leading players have already taken large strides to integrate their systems with their clients’ and to automate the information exchange.
- ➔ Technology is a key driver for innovation in credit insurance. Digitization enables credit insurers to access and analyse large amounts of data and adjust their risk management from a former reliance on historical data to a real-time analysis incorporating proprietary data of clients, their suppliers and publicly available sources.
- ➔ Technology also improves efficiency. Without the use of technology credit insurers would not be able to sieve through the amount of requests and submissions they receive.
- ➔ Client needs, risk management and regulatory requirements – such as for instance the “KYC” directive in the UK – add up to the need to process enormous amounts of data that without technology would be impossible to digest.
- ➔ Competitive pressure is another driver for change, which was also introduced by the banking sector. As credit insurers take on more of the trade receivables business which used to be a domain of the banks, they had to adapt to the standards of technology that was customary among banks but not yet insurers.
- ➔ In Surety the drivers for innovation are similar. Competitive pressure is the main motivation for change as peers either provide a better service or expand into product segments (such as judicial bonds in Brazil), which grow faster or are more profitable.
- ➔ Digital technology also creates opportunities in surety insurance which include the marketing and distribution of new bonds for the SME segment, but it also applies to the auction platforms that emerge in China.

# Client pressure and technology drive change

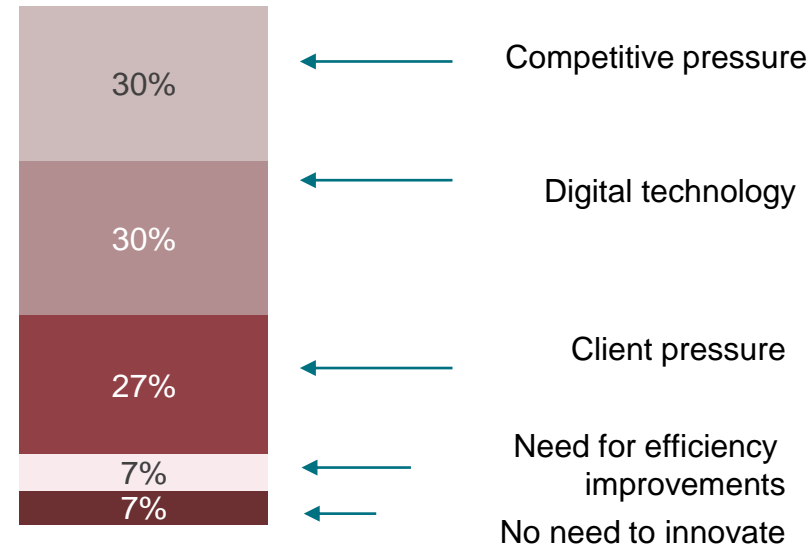
## Insurers need to innovate to remain relevant

Drivers for innovation in Credit



- ➔ Change is driven by large clients demanding a more reliable and transparent product
- ➔ Technology introduces opportunities to deliver on client demands, enhance efficiency and security
- ➔ Those who cannot afford to invest in technology will lose competitive edge

Drivers for innovation in Surety



- ➔ In surety competitive pressure is more pronounced as those who cannot innovate, will be left out
- ➔ Technology and client pressure are also decisive as technology provides the opportunity to deliver a more robust and transparent product to clients
- ➔ To some insurers the need to innovate is not yet mandatory as in emerging markets the line provides enough growth momentum

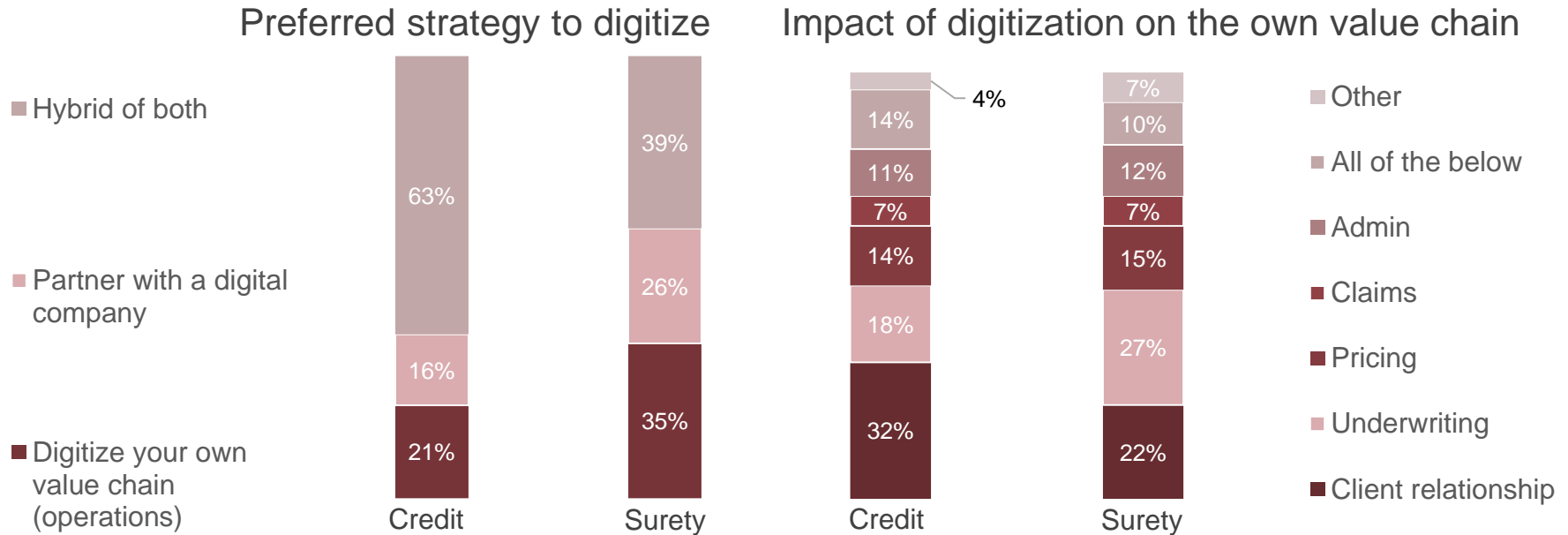
# Insurers to partner with InsurTechs when digitizing their operations

## Demand focuses mostly on artificial intelligence to process and utilize data

- ➔ Most insurers pursue a hybrid strategy to digitize their operations by partnering with an insurtech player. Many follow a plug n' play strategy, digitizing their own value chain to later link to a platform or a data provider.
- ➔ Larger insurers frequently invest in setting up their own lab or venture capital unit to keep an eye on upcoming developments in the market. AXA, Allianz, Mitsui Sumitomo, Swiss Re or Munich Re pursue this approach.
- ➔ Mid-sized insurers often follow a top-down approach with regional organisations or specialty lines depending on their access to technology on the sequences of their group's investment.
- ➔ The smaller insurers, national sureties for instance, prefer to partner with an external player as they lack the resources and the expertise for a comprehensive digitization strategy.
- ➔ The client relationships are expected to benefit the most from digitization. Digital technology will aide insurers to prioritize business and focus on those risks that require the largest amount of attention and provide the most promising return. The exchange of information becomes more swiftly, improving the transparency in adjusting credit limits.
- ➔ The availability of data will allow more accurate risk-adjusted pricing as insurers have access to more information on the client and its risks. Finally, technology will contribute to accelerate the claims payments and help to detect fraud.
- ➔ Insurers have the highest expectations in artificial intelligence and machine learning as they will enable them to strengthen their analytical capabilities, automate decision making processes, reduce costs and strengthen risk management. AI enhances the ability to digest large amounts of data, improving the market understanding and greatly improves efficiency.
- ➔ The second most important technology that credit and surety insurers invest in is blockchain or distributed ledger technology. Immutable or smart contracts offer the benefit of automation, consistency and accuracy to insurers. Besides, blockchain technology improves access to information and data and enhances efficiency as it automates the reporting on milestones and deliveries.
- ➔ Few insurers invest into digital platforms. Some insurers act as venture capitalists to gain insights in rapid market developments and trends. However, most of the credit insurers that engage with platforms only provide risk capacity.

# Insurers to partner with InsurTechs when digitizing their operations

## Client relationships and efficiency seen as key areas of improvement



- ➔ Most insurers first digitize their operations to afterwards partner with an InsurTech provider.
- ➔ Larger insurers often pursue a multiple strategy of investing in their own lab or venture capital unit, partner with InsurTechs and digitize their operations.
- ➔ The smaller insurers mainly partner with an external player as they lack the resources and expertise for a comprehensive digitization strategy.

- ➔ Insurers predominately invest in AI as they anticipate the strongest impact from digitizing their sales, underwriting and pricing operations.
- ➔ Credit and surety insurers also invest in blockchain technology to improve efficiency and automate clients' reporting on milestones and deliveries.
- ➔ Some insurers act as venture capitalists and invest directly in distributed platforms. However, most insurers just provide risk capacity to platforms.

# Artificial intelligence to impact the strongest on volume and results

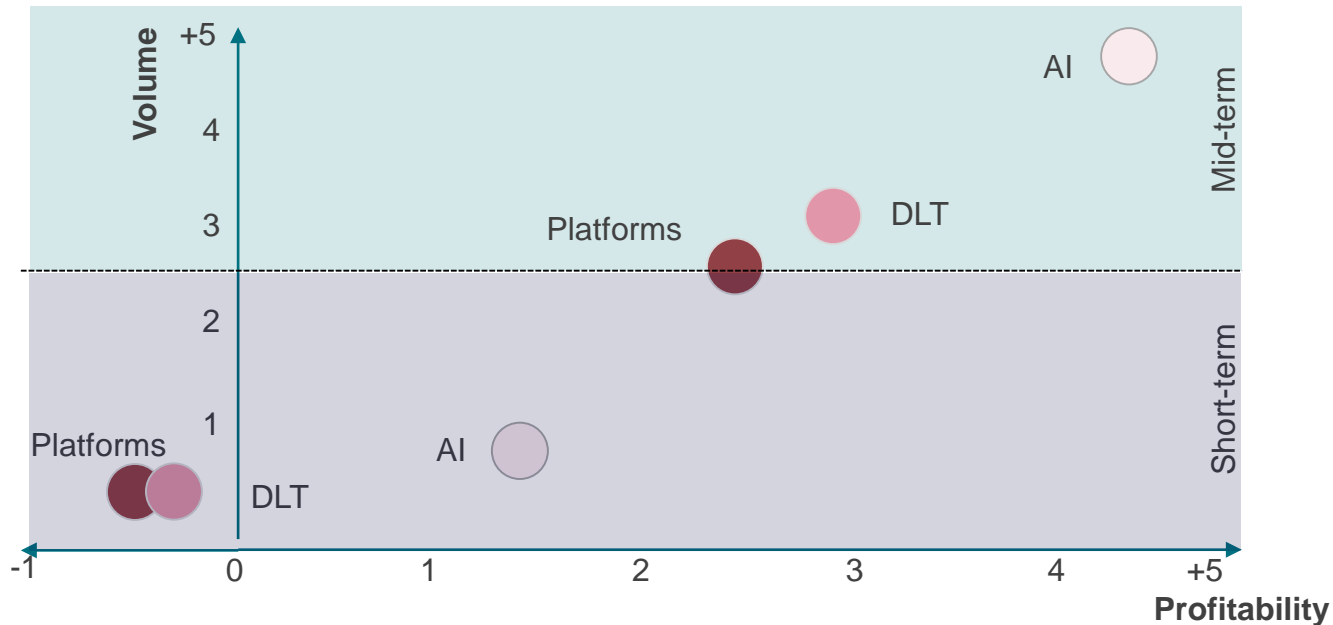
## Digital technology to make products more accessible and processes more efficient

- ➔ In the short-term artificial intelligence (AI) is expected to increase efficiency and improve the underwriting and risk management of credit insurers.
- ➔ Long-term products should become more affordable and insurers will be able to take on more risks based on a automated underwriting process.
- ➔ As a result, AI will also contribute to a growth in volume as insurers hope to improve their risk selection, gain access to more profitable risks and better rated clients and reduce transactional cost too.
- ➔ For blockchain and the distributed ledger technology insurers expect to generate efficiency gains, reducing fraud and enhancing transparency. However, in the initial phase, the investments to install the technology will have a negative effect on income statement, Also in this case, insurers expect that an improved process will translate into additional business in new client segments, such as SMEs.
- ➔ In terms of the opportunities provided by digital platforms, insurers are more hesitant. Currently the impact of these platforms on the traded volume is still negligible. In the mid-term, the platforms may assume a share of up to 10% if their business model becomes more scalable, replicable and is able to grow beyond the current volume business characterised by low margins and high claims.

# Artificial intelligence to impact the strongest on volume and results

## Additional volume and access to more profitable business will only materialize over time

Credit - Impact on volume and results



- ➔ Artificial Intelligence (AI) to almost immediately benefit insurers' volume and profits as the technology is seen to improve efficiency in underwriting and risk management.
- ➔ Artificial intelligence (AI) to help credit insurers focus on their main risks and the more profitable business.
- ➔ Impact of platforms and distributed ledger technology (DLT) are less clear cut. In the initial phase insurers expect high upfront investment.
- ➔ DLT to drive volume and efficiency as products become more accessible also for the SME segment.
- ➔ Platforms have significant potential but first have to prove their business model.

# Digital technology is expected to first improve efficiency

## High upfront investments in digital applications will take time to convert into profits

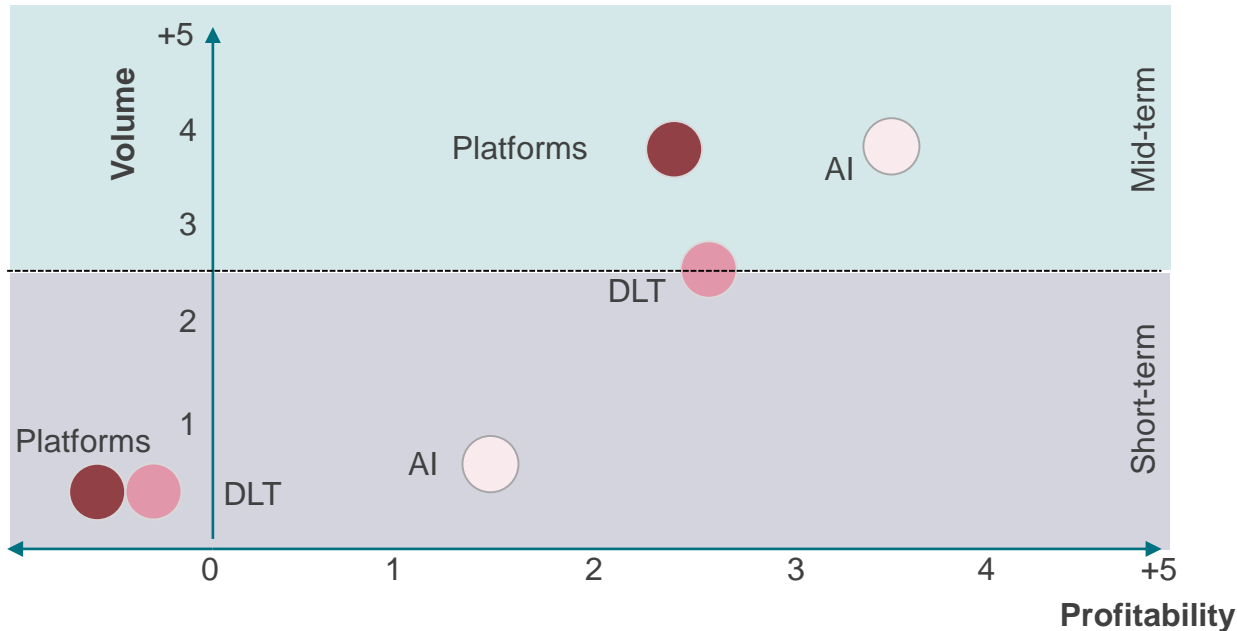
- ➔ For the surety insurers the impact of digital technology on their sales volume and returns depends on the business segment to which they cater.
- ➔ In Latin America, where insurers sell more generic bonds that target the SME segment, online platforms will play a more prominent role. Insurers assume that the online business will grow up to a market share of approximately 25% within the next five years.
- ➔ Similarly, Asian insurers which collaborate for the sale of surety bonds with platforms such as Tencent, Softbank or Alibaba assume that this volume might amount to 10% of all transactions in the mid-term.
- ➔ Those who provide surety bonds to the construction business see an even greater share for the business auctioned on digital platforms. Since the Chinese construction business is dominated by the provinces and municipalities that place their tenders through these platforms, the share of that business may approach 70% to 80% in those regions.
- ➔ In terms of profitability, insurers assume that in the short- to mid-term their investments in digital infrastructure will exceed the benefits on short-term profitability. In addition, they see increasing competition which will eat into margins. Profitability improvements may thus be returned to customers in the form of lower prices or increased services.



# Digital technology is expected to first improve efficiency

Additional volume and access to more profitable business will only materialize over times

Surety - Impact on volume and results



- ➔ Initially, surety insurers do not expect a significant impact of digitization on volume and profits.
- ➔ Insurers fear that high upfront investments are needed to stay in business.
- ➔ Over time surety insurers expect that profitability gains will be passed on to clients. However, more affordable products may generate further volume.





# 3

## The insurtechs' perspective

# Insurtechs see most potential in the credit insurance market

## Access to data and the need for information exchange are key motivations

- ➔ The main digital innovations like artificial intelligence, machine learning, distributed ledger technology and blockchain as well as the emergence of digital platforms target the credit market.
- ➔ Only about 10% of tradable risk is credit insured. The rest is basically self-insured. Lack of awareness and of insurability are seen as possible reasons for the low penetration.
- ➔ Banks are a driving force for the digitization in trade finance. They are regarded as more advanced in technological innovation and expect the same from their insurance partners.
- ➔ The credit insurance market is regarded as easier to penetrate. Although the surety market is larger in volume, the market lacks scale as it is often confined within national borders.
- ➔ The use of digital technology enhances the exchange of information between insurer and corporate client and facilitates real-time underwriting.
- ➔ Digital technology strengthens the transparency in supply chains, improves insurers' risk management and protects against supply chain shocks and – through the use of digital ledger technology - enables the traceability of goods in transit or the ability to intervene and avoid a loss during shipment.
- ➔ According to the insurtech providers innovation in credit and surety insurance is externally driven by the advent of technology. The exponential increase in data is the catalyst to a new approach to credit insurance. As storage has become affordable, insurers can process large amounts of data and provide a more accurate pricing and setting of limits based on improved risk management.
- ➔ While technology is seen as the catalyst, clients are the second most important agent for change. They demand a better product, according to our interviewees.
- ➔ Customers are keen to streamline the current labour-intensive work process, make it more convenient, gain access to more valuable information and improve the transparency of decision with the ultimate goal to reduce the transactional cost.
- ➔ Since change is driven externally, it comes as no surprise that the insurtech players issue a bad report to their insurance colleagues as they doubt their drive to innovate. In fact, some players question if there is a demand for innovation as the market allows for a decent margin and is fairly well protected against intruders.

# Insurtechs see most potential in the credit insurance market

Innovation predominately driven by external forces

## Drivers for innovation



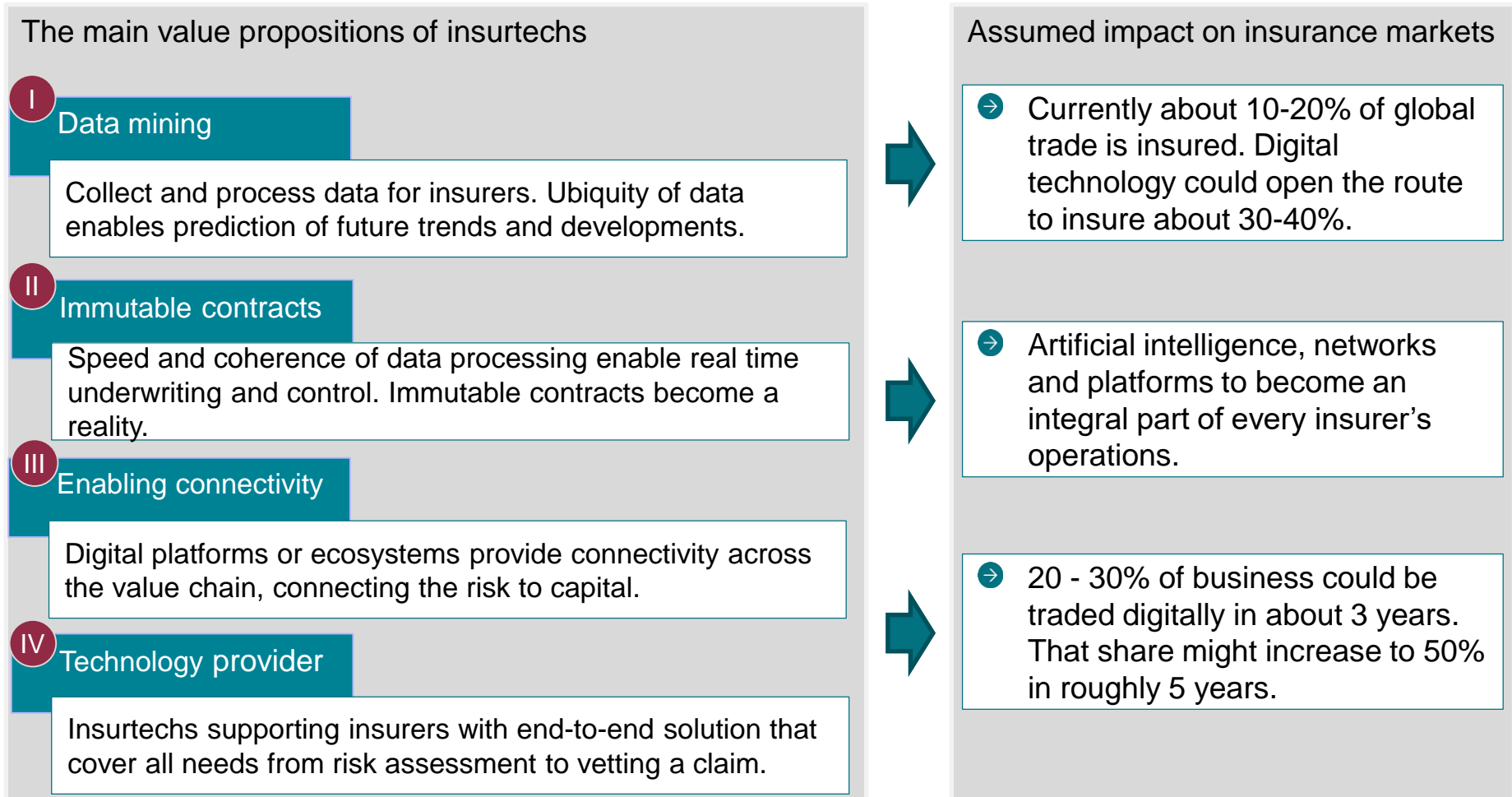
# Digitization as a service to insurers is the main value proposition

## Insurtechs to contribute to a significantly increase in credit and surety penetration

- ➔ While the established insurance model is underwriting and, ultimately, 'people led', the insurtechs are data driven. Insurtechs help insurers to collect and process data as the ability and speed with which they are analysed has become decisive. Their ubiquity, the speed with which data increased and the technology that enables to process them are steadily replacing the value of historical experience for an insurer's risk management and underwriting.
- ➔ Facilitating immutable or smart contracts is a further proposition of the insurtech providers. Due to insurers' dependence on legacy systems they are too slow to compete in the new digital realities. The volume and speed with which data is processed enables real time underwriting and affords the ability for a synchronized approach that is less prone to mistakes. Therefore, immutable contracts become an important ingredient in the digital world.
- ➔ The next step is to provide connectivity. Insurers are keen to provide a product which is understandable, less laborious and encompasses the whole value chain from the risk origination to the ultimate risk carrier. To provide this connectivity is the ambition of the digital platforms or ecosystems.
- ➔ Finally, instead of entering into some kind of competition to the insurers, some insurtechs understand themselves as service providers, supporting the insurers with the technological means for an end-to-end solution that possibly covers all needs from risk assessment to vetting a claim.
- ➔ The insurtech players are cautious regarding the impact of their technology on the credit and surety markets. Those that provide solutions to digitize insurance clients envision that eventually the technology will be an integral part of every insurer's operations.
- ➔ Some insurtechs predict that if currently about 10-20% of global trade is insured, in the long-run digital technology could open the route to insure about 30-40%. They see the digital transformation as an opportunity to expand into those market segments currently underserved.
- ➔ The insurtech players agree that it is unlikely that credit insurance will become fully digitized and automated. The part of the business that can be commoditized will eventually run with little human intervention. They predict that potentially 20-30% of business might be traded digitally in about 3 years and that the share could increase to 50% in roughly 5 years.
- ➔ They expect that regulators will endorse a further digitization of the sector to improve its transparency and resilience, in particular when faced with large crises such as the current COVID-19 pandemic.

# Digitization as a service to insurers is the main value proposition

Credit insurance transitioned from an underwriting to a data-driven business model





# Impact from the COVID-19 pandemic

4



# Intervention of policymakers helped weather COVID-19 crisis

## Insurance market declined only mildly as insurers put up their game

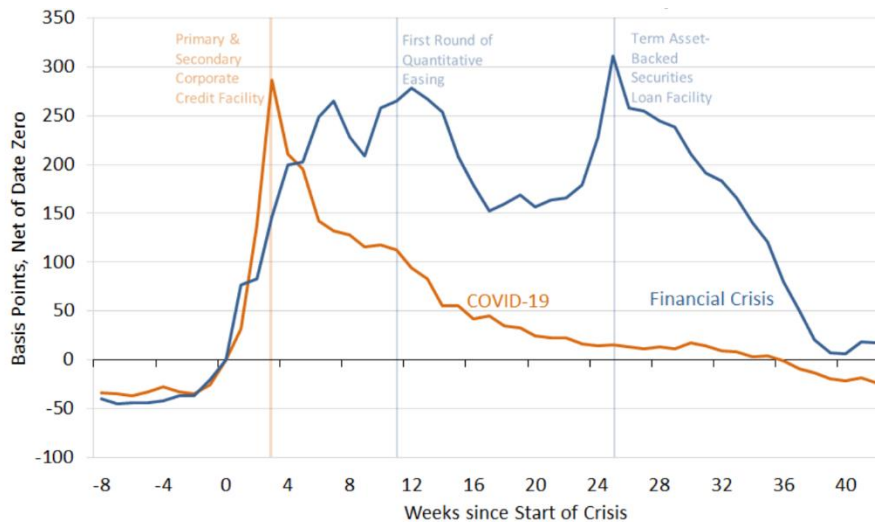
- Ultimately, 2020 was less of a nightmare to the insurance industry than anticipated. Despite initial concerns, global premiums only dropped by -2.1% in 2020. Property insurance even registered an increase of +1.1% while life insurance contracted by -4.1%.\*
- Compared to the Great Financial Crisis policymakers and central banks took far swifter action and supplied markets with unprecedented amounts of liquidity. As a result, financial markets recovered much faster, staging what many commentators labelled as a *K-shaped recovery*, with the financial services and the technology sector quickly rebounding while SMEs, the hospitality, the entertainment and the food services sector lagged behind.
- In July 2020 Allianz predicted liquidity needs of US\$ 8 trillion as working capital requirements (WCR) increased due to longer payment delays and rising inventory. Similarly, insurers expected an “insolvency time bomb” (Allianz, 07/20) to explode as economies emerged from the lock-downs and supportive policy measures could be lifted prematurely. However, on the flip-side, insurers also warned that current support measures prop up ‘zombie companies’, merely raising the spectre of insolvencies in the mid- to long-term.
- According to market pundits, the COVID-19 crisis caused or accelerated two fundamental trends that are here to stay. Firstly, customers’ expectations of their insurers have risen substantially. During the crisis customers learned to demand a more robust service that includes both the management and prevention of risks.
- Secondly digitization was the single most important factor that contributed to the resilience of the non-life insurance sector during the pandemic. The rapid transition to digital processes is perceived to have avoided a standstill in new business, as insurers were able to continue both their operations and distribution.
- Our interviewees confirmed both perceptions. Although the trend towards digitization had been ongoing, the COVID-19 crisis had an accelerating effect. Insurers increased their investment in their digital infrastructure to assure the ability to work from home. Furthermore, COVID-19 led to an accelerated use of electronic binding and signatures, which increased from 50% in the pre-COVID era to 100% currently.
- Access to data and the ability to spot market deterioration early also helped to improve risk management, manage exposures and trim portfolios. Due to the use of artificial intelligence insurers were able to focus on their key risks and to even strengthen their client relationships during the crisis.
- Through an ongoing exchange of data, insurers helped their clients to weather the crisis and to spot emerging risks early on. Furthermore, the close link and data exchange between insurers and clients improved the transparency and understanding for necessary adjustments of credit limits – something that still led in the Great Financial Crisis to a lasting disruption of client relationships as customers were just confronted with credit limit decisions.

\*according to Allianz Insurance Report 2021

# Intervention of policymakers helped weather COVID-19 crisis

## Digitization strengthened client relationships during the pandemic

### Evolution of median credit spreads COVID-19 vs. the Great Financial Crisis



NOTES: The figure shows the change in corporate bond spreads relative to the spreads on day zero. For the financial crisis, day zero is Sept. 15, 2008; for COVID-19, day zero is Feb. 28, 2020.  
SOURCES: TRACE (FINRA), Mergent FISD and authors' calculations.

Source: Federal Reserve Bank of St. Louis, USA

### Impact of COVID-19 on Credit & Surety insurers\*

Pandemic led to a decline of our top line 33%

We accelerate our investments in digitization 33%

We invested in digital technology to strengthen organization and distribution 25%

We used digital technology to improve our risk management 9%

\*several mentions were possible

➔ The impact of the Great Financial Crisis and COVID-19 pandemic on credit spreads differs significantly

➔ Due to swift and massive intervention spreads in the COVID-19 crisis returned to pre-crisis level quickly

➔ In proportional programmes the pandemic led to a decline in top line

➔ Digitization at the forefront of responses to the crisis

# Key findings revisited

- ➔ Only a fraction of the global trade and trade receivables market is uninsured today, although credit insurance could largely enhance the security in cross border trade and working capital needs. Similarly, surety insurance might help to secure more infrastructure and construction projects.
- ➔ With the proliferation of data, the ability to store, sieve and analyse it, digitization has become the most promising avenue for innovation in credit and surety insurance alike.
- ➔ Data has become the new means of production in Credit & Surety. With the ability to process large amounts of data, credit and surety insurers are able to accelerate their underwriting, improve risk management and reduce cost.
- ➔ To process data, artificial intelligence is the most widely used technology, well ahead of digital ledger technology or distributed platforms.
- ➔ However, the technology substantially widens the gap between smaller insurers with less resources available to those which are larger and have access to more funding and expertise. As a result, the less advanced insurers produce at higher cost and rely on less sophisticated means of risk management.
- ➔ During the COVID-19 pandemic digitization became decisive as a means to continue business but also to assess risks as they emerged, adjust limits and strengthen client relationship as a partner throughout the crisis.
- ➔ Digitization thus increased in relevance from a means to improve efficiency – enabling insurers to better assess risks and reduce cost – to a tool assuring the resilience of insurers and their client relationships during the crisis.
- ➔ However, digitization still remains predominately a defensive technology, necessary to remain competitive, but it is yet to open new avenues for product innovations that grow volume.

# Key findings revisited

## Digitization strengthens industry, but largely remains a defensive measure

- ➔ Credit and surety remain niche insurance lines, although their potential could be far greater
- ➔ Digitization is seen as the most promising avenue for innovation
- ➔ Data has become the new means of production
- ➔ Artificial intelligence is the most widely used type of digital technology
- ➔ Digitization widens the gap between smaller and larger insurers
- ➔ During the COVID-19 pandemic, digitization converted from an efficiency to a resilience play
- ➔ However, innovations that would expand the market are yet to be seen

# Disclaimer

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**Thank you**

A woman with short blonde hair, seen from behind, stands in a high-rise office looking out at a dense city skyline. A large, bright red arrow is superimposed on the image, pointing diagonally upwards from the bottom left towards the top right. The city features numerous skyscrapers and a river in the foreground.

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