Swiss Re Institute

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Credit and surety in the age of economic uncertainty

Executive summary

Trade credit insurance and surety enable global economic activity and have experienced robust growth.

Trade credit insurance (TCI) and surety play a vital role in enabling global economic activity. These insurance segments give confidence to businesses when they trade, and public entities when they invest in construction, supporting the real economy. We estimate that TCI and surety covers generated combined global premiums of USD 33 billion in 2022. They represent about 1–2% of our estimated total Property & Casualty (P&C) insurance premium volumes but, over the past 20 years, they have grown globally by about 5–6% annually on average, higher than the overall P&C market (~2%) and in line with average world gross domestic product (GDP) growth (5.5%).

TCI and surety are linked to the economic cycle, in different ways.

Each segment is differently exposed to the economic cycle. TCI is cyclical, with both premium volumes and loss ratios strongly linked to trends in global trade flows and business insolvencies, respectively. Premium volumes in contract surety, the largest segment in surety, are driven by construction activity and public investment in infrastructure and so are less strongly cyclical. Surety claims may be driven by a deterioration in overall economic conditions, particularly in the construction industry. However, there is no automatic link between the business cycle and surety loss ratios and a large part of the losses can generally be mitigated through the recovery process.

The key macroeconomic indicators for credit and surety include insolvencies, trade and construction sector trends.

Both TCI and surety protect against business insolvencies. Probability of default and all its drivers like economic and trade activity, inflation and interest rates, are key indicators for the segments. TCI protects the seller of a product against the default of a buyer, helping businesses to manage credit risk. It typically covers international goods trade, thereby underpinning global supply chains. Trends in manufacturing, supply chains and trade are key. Contract surety supports completion of public infrastructure projects by providing a performance guarantee on a contractor.

The past two economic downcycles have tested the resilience of TCI and surety underwriting.

The past two economic downcycles have tested the resilience of TCI and surety underwriting. During the COVID-19 pandemic, digitalisation and state reinsurance schemes in Europe contributed to greater continuity in TCI covers than during the global financial crisis.[1] Broader economic measures such as fiscal and monetary support and temporary changes to bankruptcy laws also reduced insolvencies to historic lows, which reduced TCI loss ratios. Good underwriting discipline contributed to the avoidance of a surge in surety loss ratios during the global financial crisis, and government support prevented a rise in insolvencies in the construction sector during the COVID-19 crisis.

A deteriorating economic environment may put pressure on trade credit insurers and surety companies.

The phasing out of COVID-19 crisis support may contribute to rising bankruptcy rates and push up claims in TCI. This trend is reinforced by the prolonged period of high inflation and weakness in manufacturing activity. Surety companies are also coming under pressure as constructions firms contend with higher interest rates, elevated inflation for wages and raw materials, as well as labour shortages. Over the medium to long term, we anticipate that large investments in infrastructure projects should sustain growth in the surety sector.

Digitalisation has the potential to enable credit insurers and surety companies to reduce costs and improve efficiency.

Digitalisation and the deployment of artificial intelligence (AI) can facilitate more efficient data collection, processing and analysis. Trade credit insurers can improve their underwriting and adjust their limits more selectively. Digital platforms are also being deployed to facilitate exchanges between stakeholders. However, in TCI they have not yet enabled insurers to expand significantly to new segments such as smaller companies. In contract surety, digital capability is becoming a key requirement to remain competitive.

[1] *Trade credit insurance & surety: taking stock after the financial crisis*, Swiss Re Institute, 1 October 2014.

Key takeaways

Trade credit insurance and surety support the resilience of businesses and of the global economy

Economic indicators that impact trade credit insurance and surety

GDP growth: economic growth drives growth in trade and construction activity that fuels the growth of credit and surety premiums. It is also a key determinant for the credit environment.

Corporate insolvencies and bankruptcies: the origin of a claim in both trade credit insurance and in surety is usually the insolvency or bankruptcy of a company. Insolvency waves lead to an increase in the frequency of trade credit insurance claims. Losses may also arise in surety, although there is no automatic link.

Trade and manufacturing: trade credit insurance is more prevalent in exporting sectors. Merchandise trade and manufacturing activity therefore drive the size of this market.

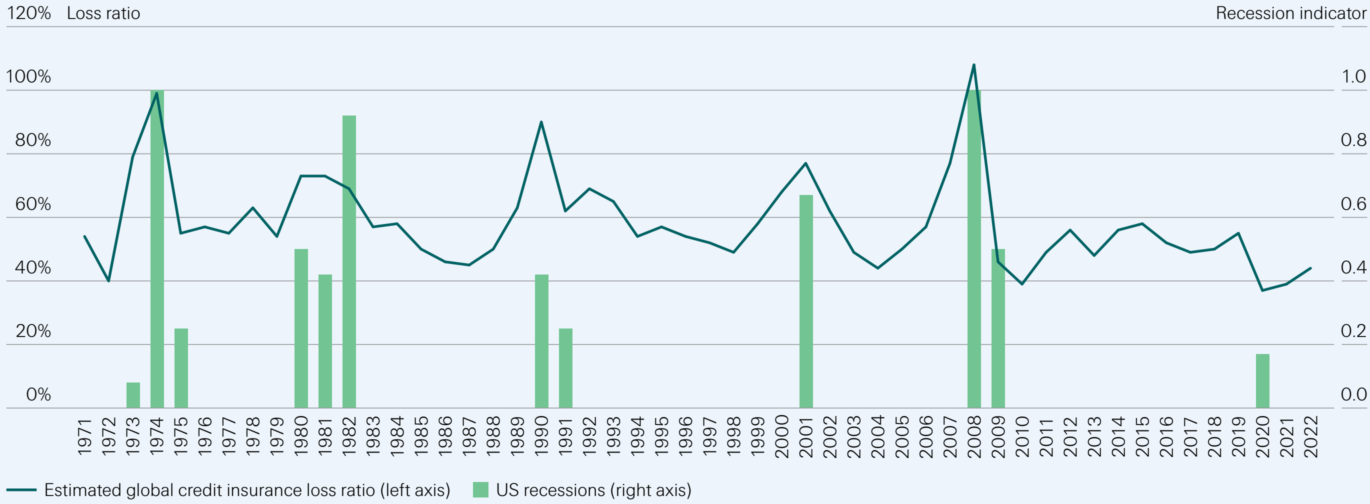
Inflation and interest rates: price changes drive volumes of insured exposures. In certain sectors, higher input prices and interest rates can lead to lower profitability of businesses. Both metrics are also key drivers of demand in relevant sectors.

Public construction spending, construction output: contract surety is the largest segment in surety and its size is driven by public construction spending in countries requiring surety bond coverages.

Source: Swiss Re Institute

Credit insurance loss ratios typically follow the trends of economic cycles

Estimated loss ratios for global credit insurance and US recession years



Note: TCI loss ratios estimated by Swiss Re. The recession indicator is US based and equals one if all 12 months of the year experienced recessionary conditions. It equals zero if no month saw a recession. Source: St. Louis Fed, National Bureau of Economic Research (NBER), Swiss Re Institute

Losses in surety can follow economic deterioration, but have no strong cyclical link. In contract surety, recovery processes can typically mitigate a large part of losses

Estimated loss ratios for US surety and US recession years

Note: the recession indicator is US based and equals one if all 12 months of the year experienced recessionary conditions. It equals zero if no month saw a recession.
Source: S&P Global Capital IQ Pro, St Louis Fed, NBER, Swiss Re Institute

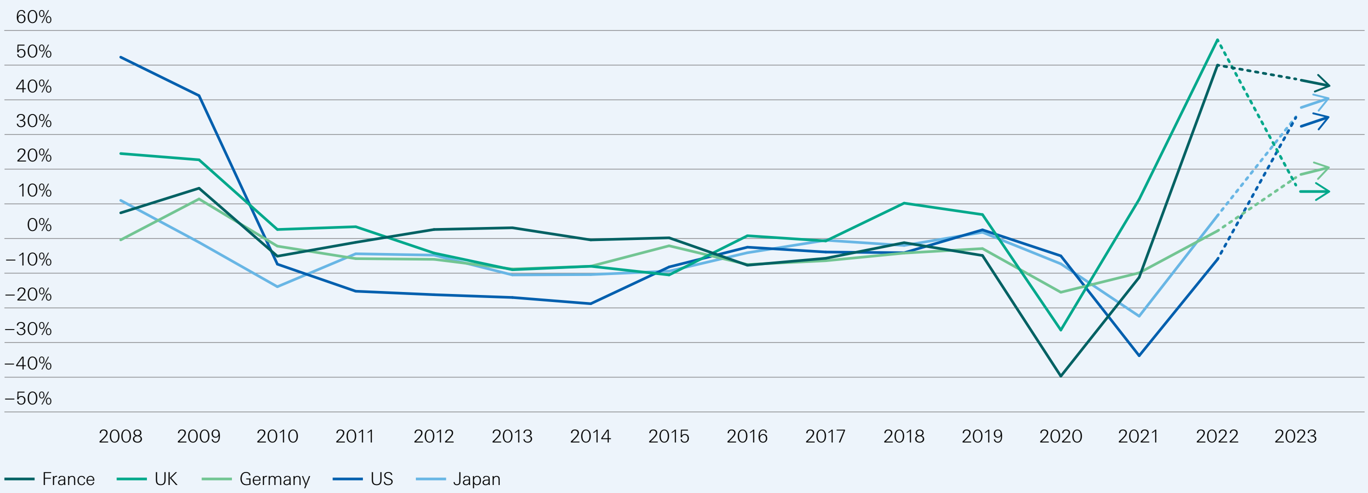
Credit insurers and surety companies are digitalising, but untapped potential remains large

Innovation	Benefits	Current implementation	Outlook
Artificial intelligence and machine learning	TCI: faster and more accurate pricing and underwriting decisions	Concentrated among large players	Insurers can sell additional services such as credit risks insights to policyholders
Distributed platforms and ecosystems	TCI: reduce transaction and policy management costs, simpler and more affordable products	Digital platforms for traditional products and for trade finance	Combining access to data and underwriting capabilities is key for success
	TCI: improve exchange of data between insurers and policyholders, fostering transparency	Buy-Now-Pay-Later solutions for business-to-business (B2B) e-commerce merchants	An increasing share of B2B transactions are shifting to e-commerce platforms
	Surety: facilitate the exchanges between stakeholders, cost savings	Digital platforms in contract surety	Increasingly a requirement to remain competitive on some markets
Distributed ledger and blockchain	Surety: greater efficiency, cost savings	Pilot programmes to digitise surety offering using blockchain	Blockchain initiatives remain experimental

Source: Swiss Re Institute

Forward-looking and diligent risk selection is key for insurers as insolvency rates normalise and the economic environment deteriorates

Registered company insolvencies, key markets



Note: annual growth rates. Dotted lines illustrate 2023 year-to-date data. Arrows illustrate the forecast likely near-term path.
Source: national statistical authorities, US courts, Swiss Re Institute

Credit insurance and surety support resilience amid economic uncertainty

Credit insurance and surety support the resilience of businesses and the global economy.

Trade credit insurance (TCI) and surety are vital enablers of economic activity globally. They support output in the real economy by giving certainty to private companies against exposure to losses when they trade goods, and public entities when they invest in construction. Together they account for 1–2% of our estimate for annual global P&C insurance premium volumes. Their market size and performance are strongly driven by macroeconomic factors, and each performs differently through the economic cycle. In the current economic environment, still-elevated inflation and the effect of rapid interest rate rises designed to tame it, create higher uncertainty and a more challenging outlook for both businesses and insurers.

TCI emerged in the 19th century; it underpins global trade flows.

TCI helps businesses to manage the credit risk of their buyers, so strengthening their resilience and supporting the economy. It emerged first in Europe, accompanying the region's 19th century economic and trading expansion, and Europe still accounts for the bulk of global premiums today. Market development accelerated after the First World War with the creation of specialised credit insurers.[2] An estimated 80% to 90% of international trade relies on some form of trade credit protection such as TCI or alternative products such as letters of credit from banks, and factoring, the selling of account receivables at a discount.[3,4] TCI is cyclical, with premium volumes and loss ratios strongly linked to trends in global trade flows and business insolvencies, respectively.

Surety bonds developed in the US to protect investment in public works.

Contract surety, the largest segment of surety bonds, supports the completion of (public) infrastructure projects by providing a performance guarantee on a contractor. The protection of construction projects through surety bonds was written into US federal legislation with the Heard Act in 1894, later replaced by the Miller Act that made it mandatory for federal construction projects, usually requiring performance and payment bonds that cover 100% of the project value on all public work in excess of USD 100 000.[5] All US states introduced similar legislation to protect state and local construction projects. Contract surety premium volumes are driven by public investment flows and its performance can be negatively impacted by inflation in construction, and higher interest and insolvency rates.

Trade credit insurance: what is it?

A seller of goods or services can buy credit insurance to protect against the risk of non-payment by a buyer.

TCI protects the seller of a product against the risk of non-payment by the buyer due to commercial risks.[6] The risks usually covered are buyer insolvency or bankruptcy and protracted default (failure to pay within a set number of days after the due date). Private credit insurers usually cover short-term credit risk with a tenor of 60 to 180 days. The key features are:[7]

- Policies are typically annual, with premiums reflecting the creditworthiness of the insured's buying clients and its expected turnover for the period.
- Contracts are typically "whole turnover", covering all of a company's trade receivables. The insurer may exclude or limit cover for individual buyers it deems not creditworthy. To avoid anti-selection bias, the insured cannot select which risks to cover.

2 *An Introduction to Trade Credit Insurance*, ICISA, June 2013.
3 *Statistical Coverage of Trade Finance – Fintechs and Supply Chain Financing*, C. L. van Wersch, IMF working papers, July 2019.
4 *Issues note on macroprudential aspects of trade credit insurance*, European Systemic Risk Board, August 2022.
5 *Credit insurance and surety: solidifying commitments*, Swiss Re, June 2006.
6 In the case of export trade, the coverage may be extended to cover non-payment related political risks.
7 Fuller explanations may be found in our earlier research on this topic: *Trade credit insurance & surety: taking stock after the financial crisis*, Swiss Re Institute, op. cit.

- Insurers normally grant credit limits on the insured's existing and potential new buyers. An insured can obtain a higher limit for a buyer during the policy period, subject to insurer approval.
- Insureds can transact with small buyers (below a certain threshold) without credit limit approval from the insurer. As such, unlike a bank, a credit insurer is not always aware of all the risks in its portfolio.
- Insurers can adjust (reduce or remove) the limit on single or multiple buyers if a buyer's financial situation deteriorates, or a recession is expected.
- Credit adjustments apply to future deliveries only: previously closed transactions remain covered, and the insurance contract remains in place.
- Most contracts have an insured retention, in which the insured carries a proportion, usually 10–20% of a potential loss. This depends on the quality of the firm's trade receivable accounts and the economic cycle. It ensures the insured is incentivised to manage trade credit risks efficiently.
- Credit insurers can recover loss payments directly from the buying client. This right of subrogation, which allows them to "stand in the shoes" of the insured and bring a suit against delinquent buyers, helps contain losses.

How credit insurance works

1. A solar panel manufacturer sells its products to domestic and foreign distributors and construction companies (the buyer, or buying client) on credit with terms of typically 60 to 180 days.

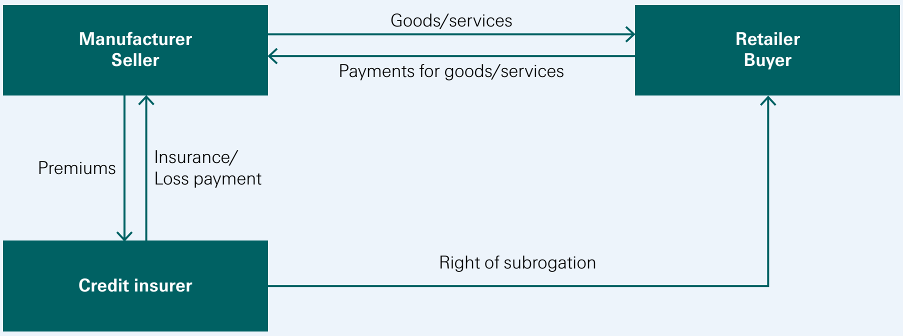
2. To protect against payment delays and/or non-payment, the manufacturer seeks protection from a credit insurer.

3. The credit insurer offers the manufacturer a policy in exchange for a premium.

4. If the buyer does not pay within a certain period after the agreed terms, the manufacturer can declare a claim to its insurer, and will receive payment for all insured outstanding debt it has with the buyer at the time of default.

5. The credit insurer has the right to reclaim payment directly from the buying client who failed to pay the manufacturer for the products.

Figure 1
The credit insurance process



Source: Swiss Re Institute

Types of credit insurance policies

Credit insurers also offer named-buyer, single-buyer and excess-of-loss policies.

Aside from whole-turnover policies, insurers offer a range of more specific covers:
- Named-buyer policies, covering the non-payment of a limited number of buyers;
- Single-buyer (or single-risk) policies, covering non-payment of a single buyer;
- Excess-of-loss policies, protecting the insured from large losses exceeding an agreed each and every loss or annual aggregate deductible; and
- Tailored services for multinationals, with a global policy service to the group covering all regional business units.

Non-cancellable covers suggest coverage certainty, but may have extra conditions.

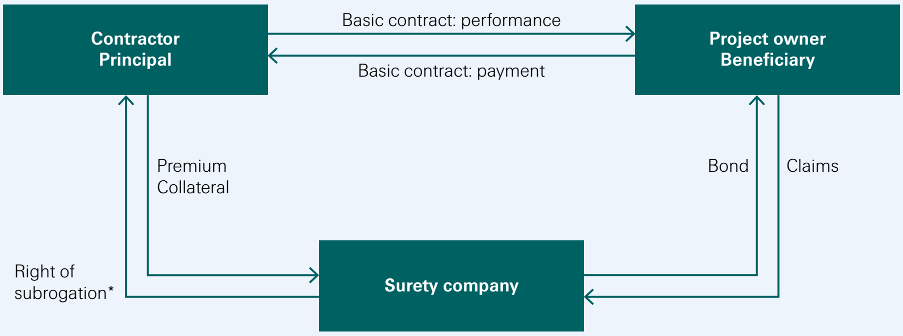
Credit insurers have also begun to offer non-cancellable limits in single-buyer and excess-of-loss segments, as well as in whole-turnover policies. The product suggests coverage certainty for the insured, but is rather aimed at sophisticated insureds who have in-house credit risk management and debt collection capabilities.

Surety: what is it?

A surety bond is a tripartite contract.

Surety, or suretyship, reduces large-scale uncertainties by guaranteeing that commitments will be met.[8] It is an insurance contract in which the insurer (a surety company) provides a guarantee to the beneficiary that a third party – the principal – will meet its contractual, legal or regulatory obligations.[9] Uniquely, the client purchasing coverage (a "surety bond") is not its direct beneficiary. A surety bond is tripartite; it is purchased by the principal but benefits the beneficiary (see Figure 2).

Figure 2
How surety works



Note: The right of subrogation provides a surety company that has paid a claim with the contractual right to recover loss payments directly from a principal who has failed to perform.
Source: Swiss Re Institute

Surety bonds usually have indefinite tenor.

Surety bonds are generally not of a fixed duration and are non-cancellable. If there is a delay in the underlying obligation between principal and beneficiary, the surety remains liable subject to the terms of the bond until the obligation is fulfilled. Even the failure of a principal to pay premiums does not release the surety company from its obligation to the beneficiary.

Collateral can substantially mitigate the risk.

A surety company typically asks the principal to sign an indemnity agreement before a bond is issued. The surety may also ask for a parental guarantee or even collateral such as cash or a pledge of assets. Strong collateral decreases the risk for the surety company, as it enhances the likelihood of recovery of a claim paid.

[8] Suretyship refers to the tripartite relationship, surety bond to the policy agreement and surety to the insurer (usually "the surety"). Surety is also frequently used as a short form of "surety line of business".
[9] The principal is sometimes called debtor or obligor and the beneficiary is sometimes referred to as obligee.

Surety bonds may be conditional or "on demand".

Conditional vs. unconditional surety bonds
Surety bonds can be either "conditional" or "on demand". Under a conditional bond, the beneficiary must provide evidence that the principal is in default to qualify for payment. If the claim is deemed rightful, the surety company will reimburse the beneficiary. In the case of an unconditional, "on-demand" bond, the surety typically has to pay out the required sum up to the bond amount whenever the beneficiary demands payment, irrespective of whether or not the principal is really in default. If it turns out that the surety bond was called unfairly, the surety can claim its money back.

Types of surety bonds

Contract bonds assure the performance of contractual obligations.

Contract surety
Accounting for about two-thirds of the global surety market, these assure the proper performance of contractual obligations, principally in public and private construction projects. Contract surety bonds can:
- guarantee that a contractor has submitted a bid in good faith and intends to enter the contract at the conditions it bids (bid bond);
- offer protection from financial loss should a contractor fail to fulfil the terms and conditions of the contract (performance bond);
- guarantee that the contractor will repay the project owner any funds received in advance and not yet fully put into the contract (advance payment bond);
- assure workers, subcontractors and suppliers that the contractor will pay them (labour and material payment bond); and
- guarantee against defective workmanship or materials (maintenance bond).

If the principal defaults, the surety company must satisfy its obligation to the beneficiary.

Contract surety in default scenarios
Surety bonds increase the likelihood of a project being completed as agreed. Whereas traditional insurance only provides a financial payout, sureties provide a performance guarantee. This means that if a default occurs, the surety company must satisfy its obligation to the beneficiary by doing one of the following: (1) assist the original contractor in completing the project; (2) hire another company to complete the work in progress; (3) pay the additional costs to the beneficiary (up to the bond amount) if the beneficiary chooses to complete the project; or (4) pay a penalty, as specified in the bond, to offset completion costs.

Surety companies' expertise and resources can help to ensure project completion.

Surety companies' experience and extensive networks of contractors generally give them greater expertise and resources to complete projects than project owners themselves. The cost of these actions is generally borne by the surety, which also benefits the project owner. A recent US study found that bonded projects both experienced a lower default rate and had lower completion costs upon default.[10]

Surety bonds also reduce uncertainty for both principals and beneficiaries.

Surety bonds can also reduce uncertainty over the success of a project. The surety company's expertise in pre-qualifying the principal assures the project owner that the principal has the financial and technical capacity to complete the project. The surety bond also enhances the principal's creditworthiness, up to the credit rating of the surety. Without the bond, the beneficiary (especially if a public entity) might be unable to award the contract to the principal or may demand stricter terms.

[10] *The economic value of surety bonds*, Ernst & Young, November 2022.

Commercial surety bonds secure the performance of legal or regulatory obligations.

Commercial surety

Commercial (or "non-contract") surety bonds secure the performance of legal or regulatory obligations. They also have a variety of purposes including:

- assuring customs authorities that an importer will pay the import duties required (customs bond);
- ensuring the proper declaration and timely payment of taxes (tax bond);
- enabling governments to secure compliance with laws protecting community safety and welfare (license and permit bonds); and
- guaranteeing the obligations of litigants to other parties and/or the court in a judicial proceeding (judicial bond).

Recent product developments

A more heterogenous product offering is supporting the growth of surety.

In recent years, new surety products, mostly non-construction related, have supported the growth of the surety sector. As surety is highly dependent on local regulations, these new products are often niche and challenging to replicate across markets. For example, in Brazil, judicial bonds have grown after a change in legislation made their acceptance mandatory for all levels of public administration and the judiciary. In North America, several insurers started writing Subcontractor Default Insurance, a product previously only provided by one insurer. This cover is purchased by contractors to protect against the risk of default by subcontractors. Finally, housing bonds have emerged in France, Israel, Bahrain and other markets. These are the equivalent of construction bonds but for private beneficiaries. They are driven by the growth of residential construction, and sometimes by partnerships between insurers and banks who require them to issue a mortgage.

Market size and structure

Credit insurance and surety generate premiums of about USD 33 billion per year.

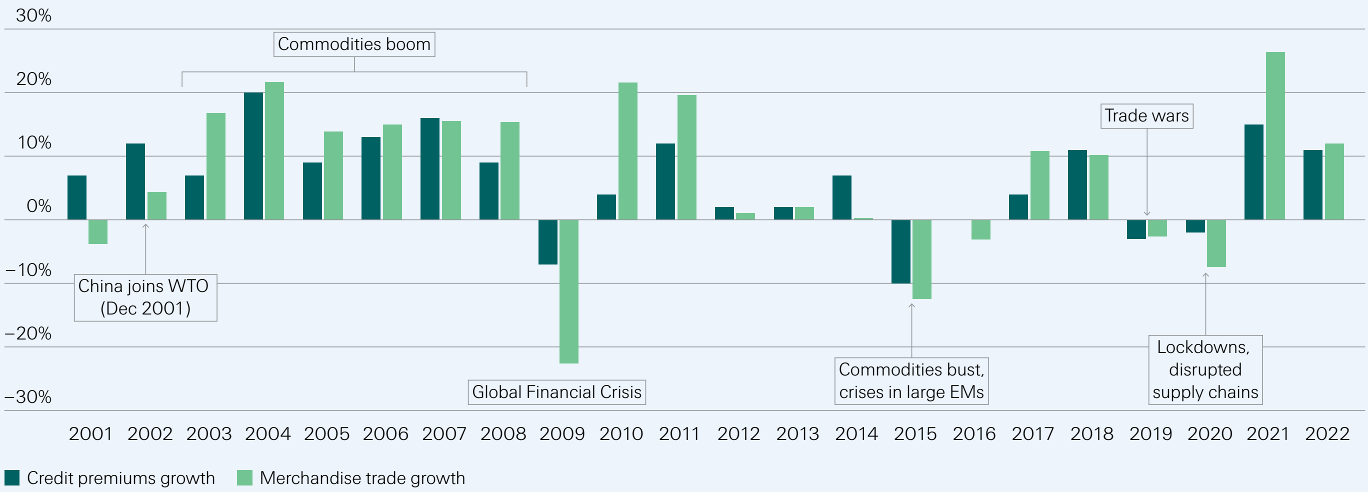
We estimate the total global premiums of credit insurance and surety reached about USD 33 billion in 2022.[11] Premiums in both TCI and surety have grown at about 5–6% annually on average over the past 20 years, higher than overall P&C premium volumes (~2% growth p.a.) and broadly in line with global GDP growth over that period (5.5%).

Credit insurance: market closely follows global trade flows

Global TCI premiums were an estimated USD 13.9 billion in 2022.

Global TCI premiums were an estimated USD 13.9 billion in 2022, up by 11% y-o-y, versus a 20-year average growth rate of around 5.6%.[12] Inflation and resilient goods trade drove strong growth in 2022. TCI premium volumes closely track international goods trade flows (see Figure 3). The International Credit Insurance & Surety Association (ICISA) estimates that credit insurance covered EUR 6.35 trillion of shipments in 2020, representing 14.5% of world trade. Industries such as metals and chemical products, retail trade, agrifood and electrical equipment are typically larger shares of insurers' exposure. The construction sector also represents a large exposure, but has typically a smaller average company size.

Figure 3
Annual growth rates of global credit insurance premiums vs growth in world merchandise value



Source: IHS Markit, Swiss Re Institute

About 59% of global premiums in 2022 were written in EMEA.

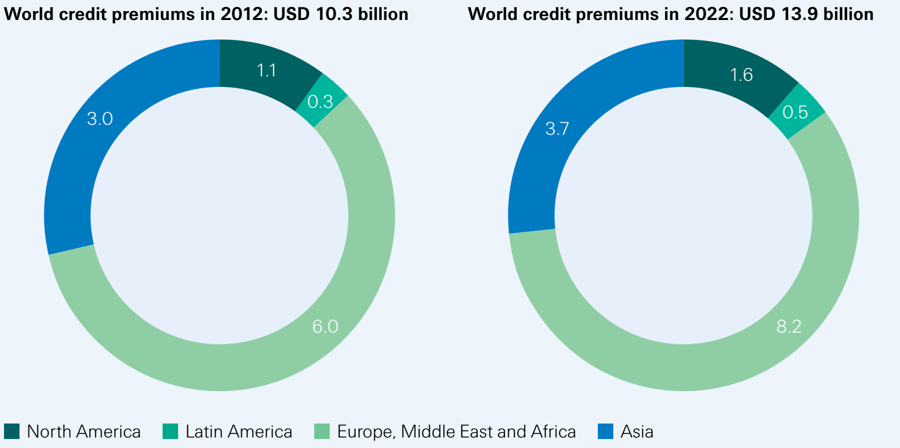
About 59% of global premiums in 2022 were written in the Europe, Middle East and Africa (EMEA) region, mostly western Europe. The EMEA share has fallen from 80% in the early 2000s due to rapid growth in Asia, particularly China. TCI premiums in Asia grew annually by around 26% on average between 2002 and 2012, compared with about 5% in EMEA and the Americas.[13] However, growth subsided between 2012 and 2022 to between 2% and 4.5% for all regions annually on average. The supply chain disruptions related to the COVID-19 pandemic led to a decrease in TCI premiums in the Americas and EMEA, and stagnation in Asia. With the economic recovery and higher inflation the market rebounded, and premium volumes grew by 12% in 2021 and 11% in 2022.

[11] Our data sample for North America includes Canada and the US; Latin America includes: Argentina, Brazil, Chile, Colombia, Ecuador, Mexico and Peru; EMEA includes Austria, Belgium, Bulgaria, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Spain, Slovenia, South Africa, Sweden, Switzerland, Turkey and the UK. Asia includes: China, Japan, the Philippines, South Korea and Taiwan.
[12] Swiss Re Institute estimates based on national data from supervisory authorities and insurance associations.
[13] All growth rates in this chapter are in nominal USD terms.

Asia generated about USD 3.7 billion of premiums in 2022, USD 3.3 billion of which were from China.

In 2022, Asia generated about USD 3.7 billion of TCI premiums, of which USD 3.3 billion were from China. Aggregated premiums for EMEA were USD 8.2 billion. The premium volume in the North American market was USD 1.6 billion in 2022. Different reasons explain the relatively low premium volumes outside Europe, such as the use of alternative bank products in economies that developed without TCI. Companies may also have developed their own credit risk management capabilities and so are less reliant on TCI.

Figure 4
Geographic distribution of credit insurance premiums, 2012 and 2022

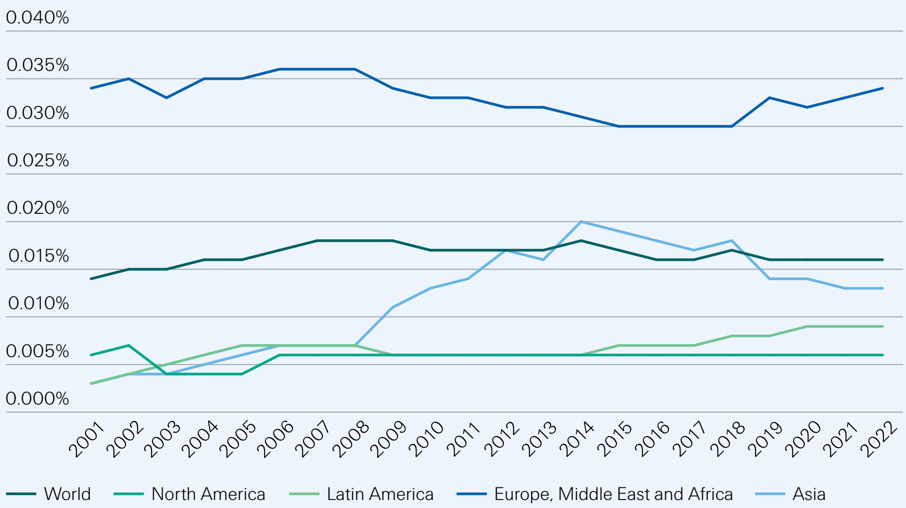


Source: supervisory authorities, insurance associations, Swiss Re Institute

TCI penetration rates have eased slightly over the last 10 years.

Global TCI penetration rates, the ratio of premiums to GDP, have declined slightly over the last 10 years, illustrating the difficulty for insurers to reach new customers such as smaller companies (see box, *The digital transformation of credit insurance and surety*, page 24). In Asia, penetration rates peaked in 2014 and have declined since, as Chinese export growth has eased. TCI has also emerged in India, although it is still far less developed than in China. Outside of South Africa, TCI is not widespread in sub-Saharan Africa, reflecting a lack of information to assess credit risks.

Figure 5
Credit insurance penetration rates (% of GDP) by world regions, 2001–2022



Source: Swiss Re Institute

The market is concentrated and highly competitive, particularly in Europe.

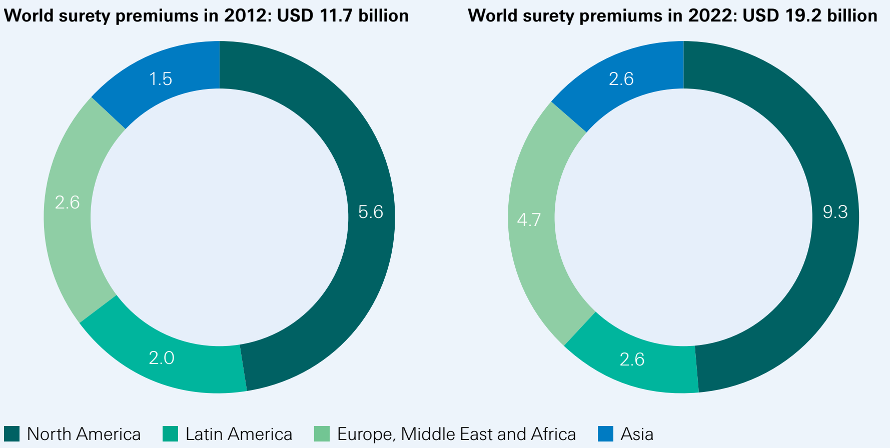
The TCI market is concentrated in a small number of private insurers, especially in Europe. The concentration reflects insurers' need for economies of scale, as TCI requires costly necessary resources that create high barriers to entry. For example, insurers need a sophisticated IT infrastructure to collect data about millions of buyers to assess their payment behaviour and credit risk, to take decisions rapidly and manage buyer, sector or country risk. Insurers also need debt recovery infrastructure to mitigate losses after claims. The market consolidated in the early 2000s as several regional entities merged into three Europe-based global groups with a combined 61% market share as of 2021.[14]

Surety: development of a heterogeneous product offering

Surety premium volumes are strongly driven by public infrastructure spending.

Surety premium volumes are strongly driven by public infrastructure spending and totalled USD 19 billion in 2022, the largest markets being the US, South Korea, Germany and Italy.[15] The global market has grown by 5.4% on average each year (2002–22). The COVID-19 pandemic led to premiums stagnating globally and falling in the Americas in 2020, but growth rates rebounded above average in 2021 and 2022 as economies reopened and construction activity resumed.

Figure 6
Geographic distribution of surety premiums, 2012 and 2022



Note: the list of markets covered is the same as described in footnote 11.
Source: supervisory authorities, insurance associations, Swiss Re Institute

The US is the largest surety market, accounting for about 45% of global premiums in 2022.

The US is the largest surety market globally, accounting for about 45% (USD 8.5 billion) of global premiums in 2022. With contract surety representing the largest share of the market, surety growth tracks public construction spending with a one-year lag (see Figure 7) and follows economic cycles. For example, US surety premiums experienced several years of sluggish growth after the global financial crisis as public sector spending on construction was cut to reduce the fiscal deficit. This led to a decline in the US surety penetration rate that has not yet recovered. Canada' market structure is similar to the US and dominated by construction surety.

[14] *Universal Registration Document*, Coface, 2022.
[15] For the market data sources, see notes to the Appendix table.

Figure 7
Growth in US public construction spending and US surety premiums growth, one-year lag

Source: Surety and Fidelity Association of America, US Census Bureau, Swiss Re Institute

Surety is widespread in Latin America due to legislative mandate.

Latin America

Surety is widespread in Latin America. In all markets except Brazil, surety is mostly construction-related and premium growth is closely linked to public infrastructure spending. Like the US, demand is supported by legislation mandating surety or guarantees for public construction projects and for a variety of commercial bonds, including judicial and tax bonds. In the past 10 years, growth in the region has slowed, and its share of global surety premiums fell to 13% in 2022 from a peak of 18% in 2014. During the pandemic, construction activity shutdown and public spending reductions in several countries lowered premium volumes.

Brazil is now the largest market in the region, ahead of Colombia and Mexico.

Brazil is the largest market with premiums of about USD 850 million in 2022, over 80% of which are made from judicial bonds. Construction-related products are relatively less relevant in Brazil due to lower infrastructure investment. Mexico was the largest surety market in Latin America in the 2000s, but its growth has stagnated in the past decade and it has been overtaken by the Colombian and Brazilian markets, which have grown rapidly since the global financial crisis.

Eroding underwriting discipline is a challenge in several markets.

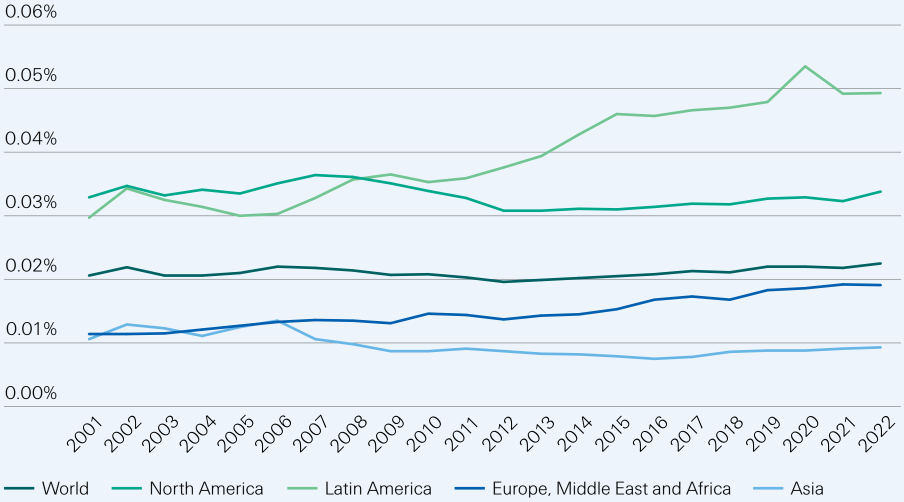
According to market sources, underwriting discipline has improved in Colombia, but remains challenging in Chile, while it is eroding in Brazil. There, the judicial bond segment was initially considered riskier, but the product has since then been successfully tested. However, fierce competition has led to a significant decline in premium rates over the last few years.

Italy and Germany are the two largest European surety markets.

Europe

EMEA wrote about USD 4.7 billion of premium in 2022, mostly in advanced economies. Banks have traditionally been the leading players in European surety markets and so surety penetration rates were lower than in other regions, but are gradually rising (see Figure 8).

Figure 8
Surety penetration rates (% of GDP) by global region, 2001–2022



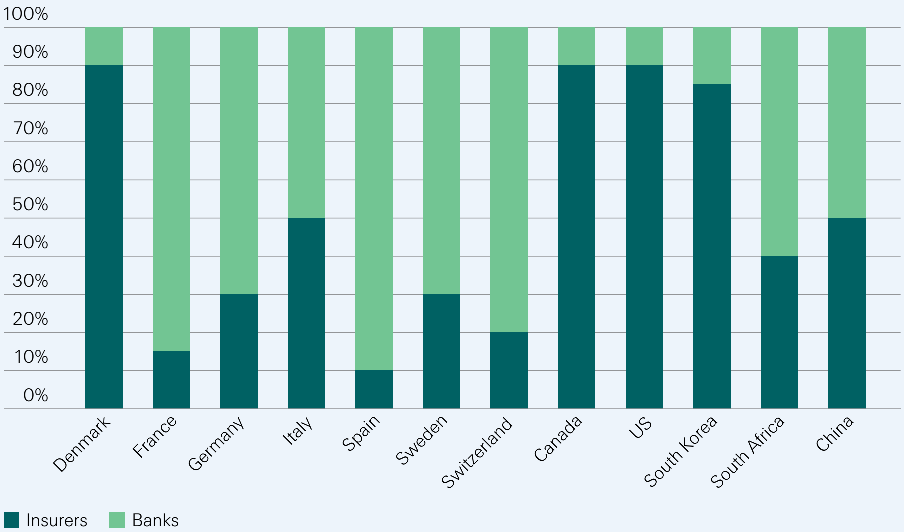
Source: Swiss Re Institute

Bank guarantees are a competing product to surety bonds.

Bank guarantees: a competing product

Like surety bonds, bank guarantees promise a sum of money to a beneficiary if a third party fails to fulfil its contractual, legal or regulatory obligations. Hence, banks compete with insurers in the surety and guarantee markets. In some markets, such as the US and Canada, insurers hold a dominant market position due to regulations restricting banks' role. However, in many European countries, the banks' market shares exceed that of insurers (see Figure 9).

Figure 9
Market share of banks and surety writers in selected countries, 2022



Source: International Credit Insurance & Surety Association (ICISA), Swiss Re estimates

Asia

South Korea is the world's second-largest surety market.

South Korea is the world's second largest surety market, and the largest in Asia, with premiums of about USD 1.7 billion in 2022. The market's large size can be explained by legal bonding requirements for public and infrastructure construction projects. There is also a large commercial surety segment including customs and tax bonds, which also benefit from mandatory bonding requirements. Japan has a developed surety market, with estimated annual premiums of about USD 100 million.

In India, a surety market is starting to emerge.

In 2022, India's regulator allowed insurance companies to issue surety bonds for government procurement. The change was motivated by the large need for infrastructure development, as the government plans to spend USD 1.5 trillion on infrastructure by 2024. However, many contractors are expected to struggle to secure guarantees from banks, many of which are considered under-capitalised.[16] Surety bonds could replace the bank guarantees, release capital and benefit the economy. While India offers a significant growth opportunity, some issues remain, such as a requirement for on-demand bonds to mirror what is currently offered by banks. As insurers' recovery rights are less protected by insolvency law in India, on-demand bonds are not attractive to them. Insurers also request a strengthening of the legal tools for indemnification and subrogation rights.

China's surety market: rapid growth since 2015

Surety insurance has developed in China since 2015.

In China, the market for construction guarantees was exclusively covered by banks and guarantee companies until 2015. For bond issuance, contractors previously had to provide a cash deposit or asset collateral. Starting in 2014, insurers tested the launch of surety bonds in some provinces. The Chinese authorities recognised the benefit of replacing cash deposits with insurance, and in 2018 the Ministry of Housing issued new regulations to facilitate the issuance of surety bonds by insurers. The Ministry also introduced more transparency, by granting grades to contractors based on their qualifications, which facilitated market development. Initially only a few pilot provinces accepted insurance surety bonds, but the growth rate has been steep. Most provinces now accept surety bonds and China generated estimated premiums of over USD 500 million in 2022, with an 8% growth rate and about 30 insurers active in the market.

It started with construction bonds and expanded to various products.

Construction bonds are the primary surety product in China, accounting for almost 90% of premiums. Their development has been boosted by digitalisation, and most bid bonds are issued through digital platforms. Insurers recently introduced other surety products, such as performance bonds, payment bonds and maintenance bonds, or other innovations replacing cash deposits. Regulatory changes allowed the offering of customs bonds in 2019, and migrant worker salary payment bonds are now a mandatory requirement in some provinces. Prepaid cards bonds are another product specific to China. It replaces the mandatory cash deposits that all corporates issuing prepaid cards are required to hold.

The surety market in China has generally experienced good results.

Insurers in China also focus on contract surety covering public projects undertaken by contractors that are state-owned enterprises (SOEs). These have particularly strong willingness to complete projects, which has to date resulted in a low number of claims. Loss ratios remain low and there have been few large losses. Customs bonds experienced a surge in claims in 2020. While these bonds were less well structured, insurers made recoveries afterwards, which shows that the process is working well. Innovations to replace cash deposits with surety products are now flourishing, and the challenge for insurers is to restrict coverage to products that are well structured and cover markets suitable for surety.

[16] *sigma* 3 /2020 – Power up: investing in infrastructure to drive sustainable growth in emerging markets, 17 June 2020.

Through the cycle: weathering crises

Economic downcycles test the resilience of credit insurance and surety.

Economic downcycles regularly test the resilience of credit insurance and surety. The last two major economic downturns have had significant implications for the profitability and global perception of TCI.

Trade credit insurance: a tale of two crises

The perception of TCI was negatively affected by the experience of the global financial crisis.

During the global financial crisis, insurers made extensive and rapid limit reductions on important buyers for the insureds. Insurers also significantly increased premium rates, which supported premium volumes. Limit adjustments are typical during crises but a lack of communication around the process led to a deterioration of the image of trade credit insurers. Penetration rates have subsequently decreased in Europe, and increased again only in 2019, linked to the deployment of digital platforms. According to ICISA, insurers have improved their communication around limit adjustments, for example by providing more explanations on their decisions and giving more advance notice.[17] Large insurers have also digitalised risk management processes to adjust limits in a targeted way (see box: *The digital transformation of credit insurance and surety*, page 24).

Limit adjustments remain a key feature to deal with economic crises.

Credit limits give policyholders more flexibility to increase trade with their buyers. In exchange, the insurer has, in principle, the right to withdraw the credit limit of a buyer at any time if circumstances demand. Limit adjustments apply to future transactions; previously closed transactions remain covered. However, it remains a highly effective instrument for insurers to lower future losses in a relatively short timeframe (60 – 180 days). These adjustments are necessary to guarantee the continuity of trade credit insurers' business in adverse economic environments. For example, credit limit adjustments were essential to rapidly reduce exposure to Russian risks after the invasion of Ukraine in 2022. Limit adjustments can also benefit policyholders by acting as an early indicator of worsening credit quality in a trading partner. Such adjustments can also reduce a policyholder's retention in monetary amounts.

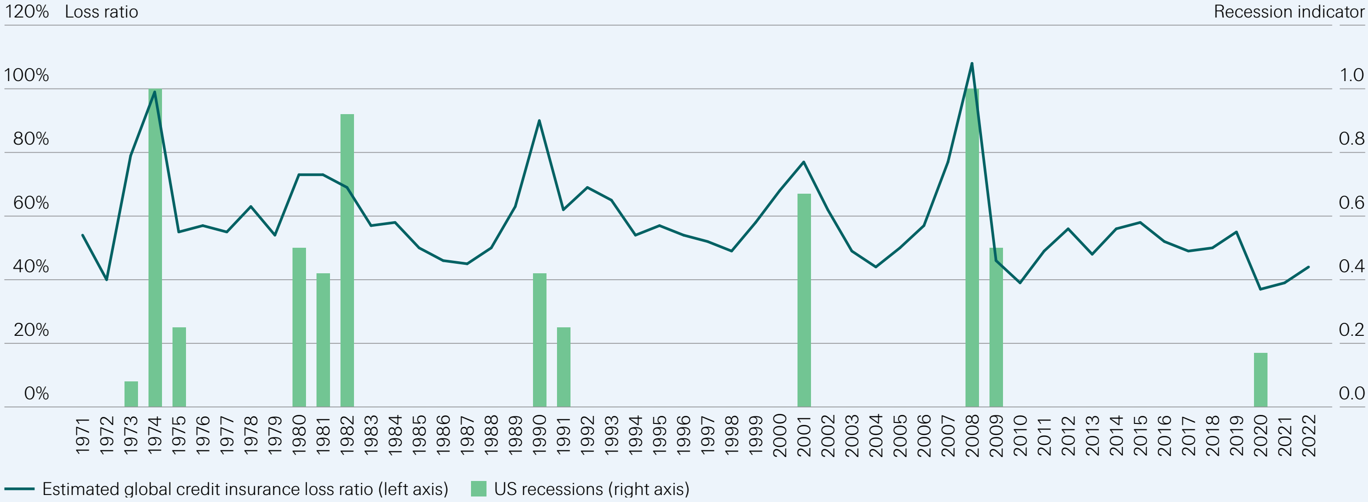
During crises, credit insurers take risk and commercial actions to mitigate losses.

Cycle management in trade credit insurance

The global economic crises of the past two decades have been characterised by a sudden increase in corporate default rates and in trade credit insurance loss ratios (see Figure 10). In these periods, insurers take measures to mitigate their losses and rapidly bring the loss ratio back to pre-crisis levels. They first reduce their exposure on the riskiest part of the portfolio. This means that cover for selected buyers in whole turnover policies is withdrawn, while the overall contracts with policyholders remain intact. Prices and policies are also adjusted, but this measure has a more delayed impact. When economic conditions improve, insured turnover increases, and combined with better terms and portfolio quality, this contributes to bringing the loss ratio back under control.

[17] *Study on short-term trade finance and credit insurance in the European Union*, European Commission, February 2012.

Figure 10
Estimated loss ratios for global credit insurance and US recession years



Note: TCI loss ratios estimated by Swiss Re. The recession indicator is US based and equals one if all 12 months of the year experienced recessionary conditions. It equals zero if no month saw a recession. Source: St. Louis Fed, NBER, Swiss Re Institute

TCI during the COVID-19 crisis

The experience of the global financial crisis coloured the response to the COVID-19 pandemic in 2020.

The experience of the global financial crisis coloured the governmental response to the COVID-19 pandemic in 2020. The restrictions to economic activity imposed by governments at the outbreak of the pandemic triggered the deepest global recession since World War II. Global GDP fell by more than 3% y-o-y in 2020. Based on the historical correlation between GDP growth and TCI loss ratios, we estimate that the latter could have surpassed the 110% peak observed in the global financial crisis.

Fears of a jump in TCI claims prompted government action.

The anticipation of a significant increase in TCI claims revived corporates' and governments' fears about the economic impact of credit limit adjustments by insurers. Without these adjustments, governments anticipated that the crisis could generate losses well beyond what insurers could absorb. Such considerations were particularly strong in Europe, where TCI penetration rates are higher.

European governments introduced "state schemes" early in 2020 to ensure continued trade credit cover.

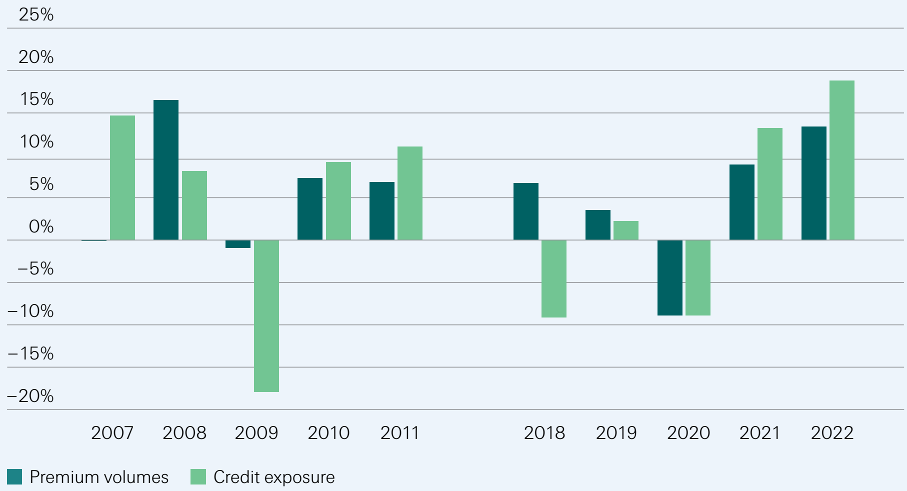
To ensure continuity of trade credit cover throughout the crisis and support companies, European governments introduced so-called "state schemes" early in 2020. These were introduced in Germany, Belgium, the Netherlands, Luxembourg, Denmark, Norway, the UK, France, Spain and Italy, and designed to enable insurers to maintain their cover despite the economic uncertainty. The schemes were approved by the European Commission and mainly took the form of proportional reinsurance treaties with cession rates between 50% and 100%, to cover a large part of the trade credit insurers' exposures. For example, the losses guaranteed by the schemes in Germany were capped at EUR 30 billion.[18] Each scheme covered exposure associated with all the policyholders in a country, both for domestic and export credit. France initially introduced a scheme to reinsure top-up covers and later added proportional reinsurance.[19] Outside Europe, for example, Canada introduced support in the form of top-up cover for large limits.

[18] *State aid: Commission approves German guarantee scheme to stabilise trade credit insurance market in coronavirus outbreak*, European Commission, April 2020.
[19] Top-up cover can be purchased by an insured on one or more of its buying clients when a primary insurer cannot provide full coverage under a policy's existing terms, due to capacity constraints or credit risk concerns. The French scheme was also available should an insurer refuse to provide coverage on a buyer.

Evidence suggests that trade credit insurers maintained a more stable cover than during the global financial crisis.

European trade credit insurers ceded a large share of their business to states through the schemes and evidence suggests this did ensure continuity in TCI cover. Globally, trade credit exposure from ICISA members decreased by about 9% in 2020, much smaller than the 18% observed in 2009 (see Figure 11). In the US, where no such schemes were in place, evidence showed a much larger reduction in exposure than in Europe between 2019 and 2020.[20] The rebound in exposure was stronger in the US than Europe when insurers adapted to the brighter outlook in 2021.

Figure 11
Year-on-year growth in TCI premiums and exposure during the global financial crisis and the COVID-19 crisis



Source: ICISA, Swiss Re Institute

Governments also extended significant support to the wider economy, much faster than during the global financial crisis.

Fiscal and insolvency regime support through the pandemic

Governments also extended significant support to the wider economy, much faster than during the global financial crisis. The aggregate volume of global fiscal easing amounted to roughly 4% of global GDP in 2020, by far the largest seen in several decades. By way of comparison, the fiscal stimulus response to the global financial crisis was just 1.6% of global GDP.[21] Emerging markets also introduced fiscal support measures and Asian exporters benefited from the positive spillovers of such actions.

Fiscal support and amendment to insolvency laws led to a decline in business insolvencies during the pandemic.

In addition, governments amended insolvency laws using a variety of tools. These included the extension of deadlines around filing or responding to bankruptcy proceedings, higher monetary thresholds required to initiate legal action or even the removal of this right, more lenient treatment from courts and other measures.[22] This led to a decline in business insolvencies in 2020 and 2021. Robust demand for goods consumption, aided by many of the fiscal crisis measures, also attenuated the decrease in premiums in 2020. This caused a divergence between GDP growth and TCI profits, which were significantly better than expected. In 2021, loss ratios reached historically low levels.[23]

The European state schemes recognised the importance of TCI for the economy.

The state schemes showed the recognition by European governments of the importance of TCI to support their economies and the resilience of supply chains. While the schemes eventually proved unnecessary to absorb trade credit claims, they helped insurers maintain their cover throughout the crisis. Governments extended the schemes into the first half of 2021 due to the continued uncertainty around the pandemic. In retrospect they were most beneficial in the first months of the pandemic, when uncertainty was highest and other support measures had not deployed to full effect.

[20] R. Litan, Y. Xu, *A Strong Recovery Requires a Healthy Trade Credit Insurance Industry*, July 2020.
[21] *sigma* 3/2020, op. cit.
[22] A more extensive list of measures taken country-by-country is available in *Impact of COVID-19 on Insolvency Laws*, Squire Patton Boggs, 25 August 2021 and A. Gurrea-Martinez, *Insolvency law in times of COVID-19*, June 2020.
[23] Swiss Re internal knowledge.

Surety: managing cycles

Surety claims are dependent on economic conditions, but there is no automatic link between the business cycle and loss ratios.

Surety is characterised by relatively prolonged periods of stable, low-loss activity punctuated by short, severe spikes. Losses in surety arise when bonded principals are not able to meet their obligations. Principals' defaults may be driven by a deterioration in overall economic conditions that adversely affects principals' turnover, margins and access to credit, or by a downturn in the construction industry that particularly impacts contract surety. However, there is no automatic link between the business cycle and surety loss ratios and a large part of the losses can be mitigated through the recovery process. In 1985–86, for example, loss ratios in the US peaked in the absence of a recession. Conversely, in Argentina, the Great Depression of 1998–2002 did not cause a spike in surety loss ratios. US sureties avoided a surge in losses during the global financial crisis due to their underwriting discipline, and government support prevented a rise in insolvencies in the construction sector during the COVID-19 crisis (see Figure 12).

It is difficult to actively manage the economic cycle in surety business.

Even when surety losses arise from the economic cycle, it is challenging to actively manage a surety portfolio because it is difficult to anticipate economic downturns two to three years ahead, the typical duration of a surety contract. Recessions also display their effect on the order book of construction companies with a delay. Hence, the likelihood of catching the right point in time to reduce or increase exposure in a surety portfolio is low. When an economic downturn becomes obvious, it is usually too late to take actions to reduce future losses. By contrast, such actions may even turn out to be pro-cyclical as a restrictive approach to new business results in missed opportunities to generate profitable business, or accelerates the demise of a contractor given its inability to secure new contracts as a result of lacking surety capacity.

Figure 12
Estimated loss ratios for US surety and US recession years

Note: the recession indicator is US based and equals one if all 12 months of the year experienced recessionary conditions. It equals zero if no month saw a recession.
Source: S&P Global Capital IQ Pro, St. Louis Fed, NBER, Swiss Re Institute

Credit and surety in the age of economic uncertainty

The world economic outlook is set to weaken as monetary policy tightening takes effect.

Forecasting the economic outlook is especially challenging at present due to high uncertainty around the impact of tightening monetary policy, which operates with a time lag of up to 18 months. Global economic activity is slowing after a cyclical recovery from the pandemic, while inflation remains persistent. Nevertheless, we see upside risks to GDP growth and a low probability of a recession in the US this year.

We forecast a global slowdown but major economies have been resilient to date.

Economic (GDP) growth drives trade and construction activity, which in turn fuels the growth of credit and surety premiums and exposure. Our forecasts see cooling global economic growth this year, though major economies have demonstrated resilience and we forecast most to continue to grow in both 2023 and 2024.[24]

Table 1
Economic indicators impacting the outlook for credit insurance and surety

GDP growth:	economic growth drives growth in trade and construction activity that fuels the growth of credit and surety premiums. It is also a key determinant for the credit environment.
Corporate insolvencies and bankruptcies:	the origin of a claim in both trade credit insurance and in surety is usually the insolvency or bankruptcy of a company. Insolvency waves lead to an increase in the frequency of trade credit insurance claims. Losses may also arise in surety, although there is no automatic link.
Trade and manufacturing:	trade credit insurance is more prevalent in exporting sectors. Merchandise trade and manufacturing activity therefore drive the size of this market.
Inflation and interest rates:	price changes drive volumes of insured exposures. In certain sectors, higher input prices and interest rates can lead to lower profitability of businesses. Both metrics are also key drivers of demand in relevant sectors.
Public construction spending, construction output:	contract surety is the largest segment in surety and its size is driven by public construction spending in countries requiring surety bond coverages.

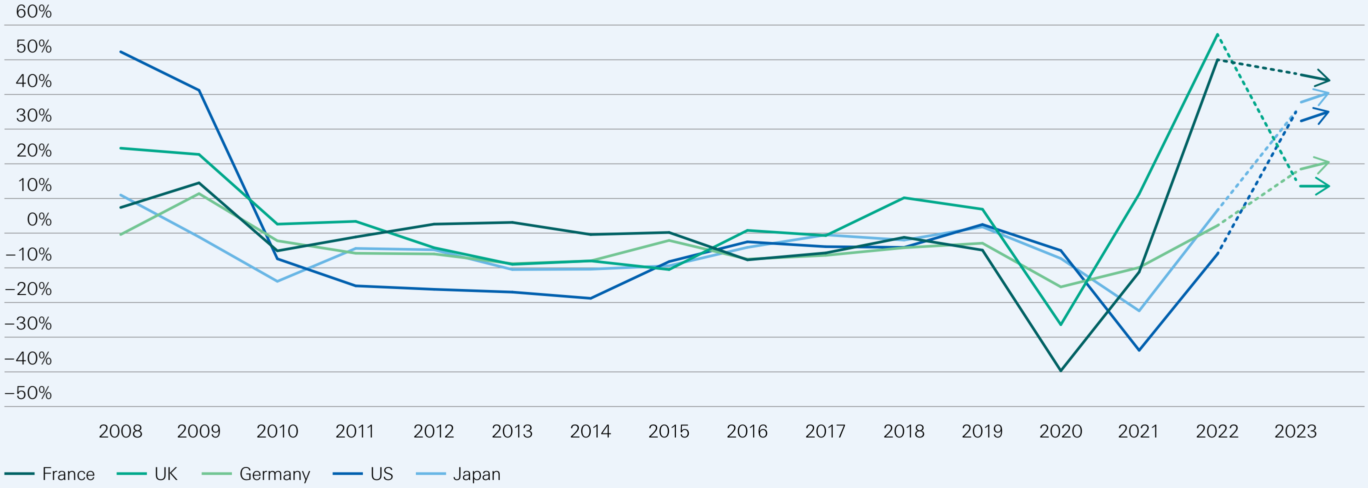
Source: Swiss Re Institute

Corporate insolvencies and bankruptcies are a key determinant of loss frequency.

Corporate insolvencies and bankruptcies are a key determinant of loss frequency in both credit insurance and surety, and are at the core of insurers' underwriting processes. They pay special attention to the cashflows of a company and monitor warning signs such as changes in payment behaviour, credit line usage or management changes. After two years at historically low levels, insolvencies increased in 2022, as pandemic government support and bankruptcy law changes were phased out. According to public data and US court filings, insolvency levels are now above pre-pandemic averages in certain markets.

[24] *Economic and financial risk insights*, Swiss Re Institute, 11 August 2023.

Figure 13
Year-on-year growth in registered company insolvencies

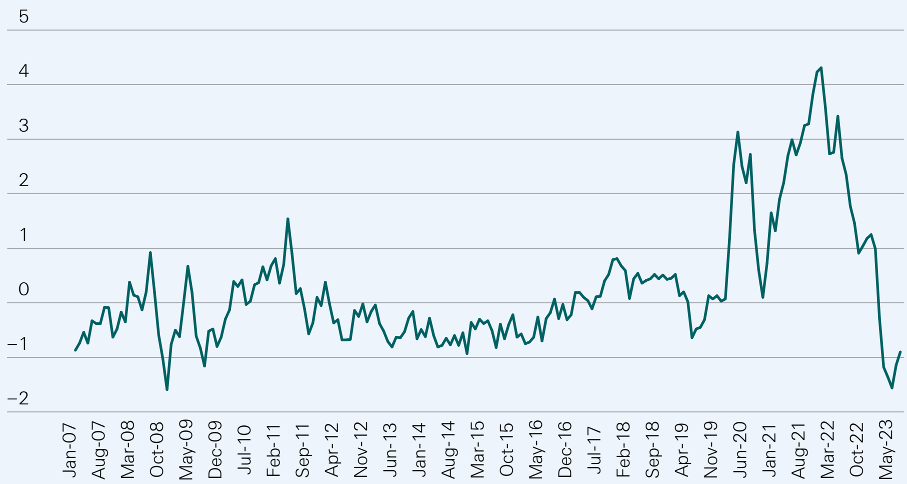


Note: dotted lines illustrate 2023 year-to-date data. Arrows illustrate the forecast likely near-term path.
Source: national statistical authorities, US courts, Swiss Re Institute

Trade flows are experiencing a period of high volatility and manufacturing activity has weakened.

Since 2019, **trade flows** have experienced considerable volatility, driven by economic and geopolitical factors. Supplier delivery times deteriorated to unprecedented degrees at the height of the pandemic in 2021 (see Figure 14). Supply chain tensions have eased in 2022, but partly due to lower demand. The World Trade Organization's goods trade forecasts expect growth in global trade volumes of only 1.7% y-o-y in 2023, before a rebound to 3.2% growth in volumes globally in 2024.[25] Leading indicators for economic activity also show a persistent weakening in the manufacturing sector, in contrast to a post-pandemic rebound in the services sector. In the US, the manufacturing purchasing managers index (PMI) has significantly underperformed its services counterpart in recent months.[26] In the Euro area, the divergence between the manufacturing and services PMIs has been historically high in the past few months, even more so than in the US. The gap is partly caused by lower demand for durable goods and strong services activity following the end of the pandemic. We expect weakened manufacturing activity in 2023 and no marked improvement in 2024.[27]

Figure 14
Global Supply Chain Pressure Index



Note: index values refer to standard deviation from its average value.
Source: New York Fed, Swiss Re Institute

[25] *Global Trade Outlook and Statistics*, World Trade Organization, April 2023.
[26] The former indicator suggests that manufacturing activity as reported by purchasing managers has declined for seven of the past eight months on a sequential basis. Typically, PMIs are seen as useful indicators of activity and correlate well with GDP growth. See https://www.pmi.spglobal.com/Public/Release/PressReleases
[27] *Spring economic Outlook*, Allianz Research, March 2023.

Inflation and interest rates are likely to remain higher for longer, adding challenges through various channels.

Inflation and interest rates are demand drivers for trade and construction activity. Higher inflation and borrowing costs typically reduce business demand, access to capital and increase interest payments, increasing the risk of insolvencies, with a potential impact on claims for insurers. Inflation in construction, commodities, energy and other goods also increases insured exposures and complicates the mitigation of losses in contract surety. After the inflation shock of 2021–23, disinflation in major economies is progressing slowly and unevenly, and central banks have already tightened monetary policy further than previously anticipated, with rate cuts in advanced economies unlikely to start before 2024. Although headline inflation is easing, core inflation, which strips out energy and food prices, remains persistently elevated with continuing price pressures in wages and services. Tighter financial conditions are also expected to temper economic growth in 2023–2024. We expect inflation and interest rates to stay higher for longer than previously anticipated.

In most key markets, the construction sector faces challenges in the near-to-medium term.

In most key markets, the **construction** sector faces challenges in the near-to-medium term due to high interest rates, skilled labour shortages, supply chain delays, and higher wages and raw material prices. However, demand remains strong and the sector has proven to be resilient through the cycle. The COVID-19 crisis did not lead to increased insolvencies in construction but impacted surety premium volumes differently by country. In the US, most construction projects continued during the pandemic, while in Latin America, construction activity slowed and governments reduced investment.

Trade credit insurance: current trends and outlook

Increasing corporate insolvencies may put trade credit insurers under pressure…

With the phase out of government support, the credit insurance loss ratio is expected to return to its historical correlation with GDP growth (see Figure 10). The normalisation of insolvencies is more advanced in Europe, with the number of monthly failures reaching pre-pandemic levels in France in early 2023. In Spain and the UK, insolvencies have rebounded above pre-2019 numbers. Countries such as the US or South Korea introduced generous support to increase firms' liquidity, which delayed the normalisation of insolvencies to 2023, and so the rise in failures in 2023 is expected to be relatively larger in North America and Asia compared to Europe, before stabilising in 2024.[28]

…but the market remains highly competitive.

Forward-looking and diligent risk selection may be key for insurers as TCI premium rates are likely to come under pressure in this highly competitive market after two years of low claims. In 2019, with trade tensions mounting, trade credit insurers took steps to improve portfolio quality by reducing exposure to lower-quality risks or vulnerable sectors, and diversifying. These actions continued throughout the pandemic and were facilitated by the economic stability that government support granted in 2021 and 2022. The low loss ratios of 2020 and 2021 due to pandemic support are now putting pressure on insurers to loosen policy terms, lower premium rates and decrease policyholder retention rates. There is a risk that insurers may loosen underwriting standards and accept risks at insufficient premium rates.

The return of inflation drove up insured credit exposure

The post-pandemic economic rebound, combined with high inflation, has driven up insured credit exposure, and demand for TCI cover typically increases in times of high economic uncertainty. Policyholders request higher limits, a trend that is reinforced by the strong dollar for insurers setting limits in euros. This should not impact the premium rates for whole turnover covers, as the premiums increase by the same factor. However, it renders the concentration on peak risks more acute.

Surety: current trends and outlook

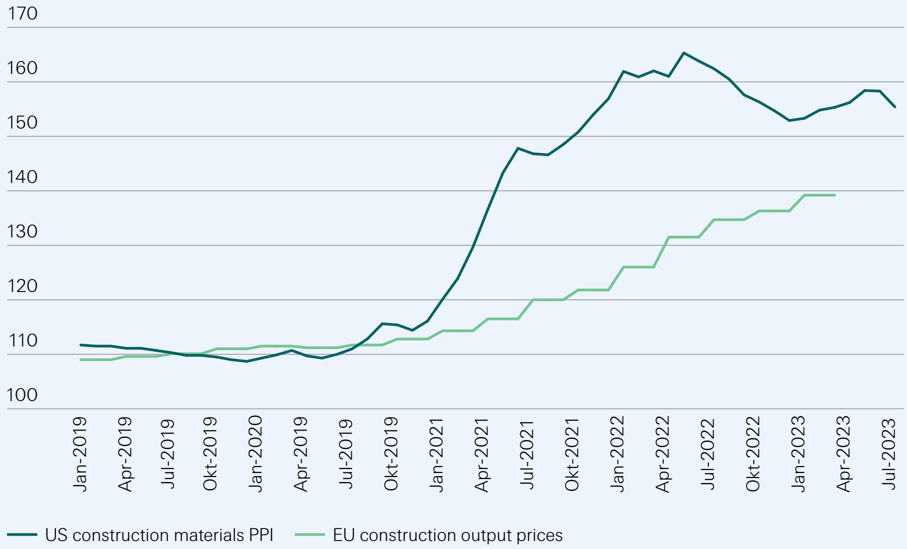
High interest rates, inflation and supply chain disruptions put contractors and sureties under pressure.

Construction companies face rising material prices (see Figure 15) as well as wages to address skilled labour shortages. Inflation, high interest rates and ongoing supply chain tensions could lead to an increase in contract surety claims by pushing vulnerable contractors into financial distress. These factors also make it more difficult for sureties to complete construction projects or mitigate losses in case of a claim. As the inflation surge was partly unexpected, fixed-price construction contracts may not provide

[28] *Insolvencies increase sharply as normality returns*, Atradius Economic Research, March 2023.

contractors with the financial flexibility to mitigate the price increases in materials. With the addition of the pandemic and disruption of supply chains, some projects were also delayed and completion has taken much longer than expected. Underlying contracts often still reflect pre-pandemic prices.

Figure 15
US and European construction sector producer price indices, 2015 = 100



Source: St. Louis Fed, Eurostat, Swiss Re Institute

Close contact with contractors to detect signs of financial distress early is key for surety companies.

Surety companies that have maintained rigorous underwriting standards will fare better in this environment. Close contact with contractors is key to detect early signs of financial distress, such as payment incidents. To mitigate the effect of inflation, negotiations between contractors and suppliers to share the burden are key. New contracts should ideally take care to ensure there is flexibility to adjust prices with suppliers and beneficiaries. For example, in Latin America, where inflation has been a long-standing issue, the transfer of price risk to the owner reduces the pressure on contractors. Another key focus of underwriters is the assessment of the business models of the contractors, and the flexibility of their supply chains. The possibility to negotiate price or replace suppliers provides them with flexibility.

Large infrastructure investments support the growth of contract surety.

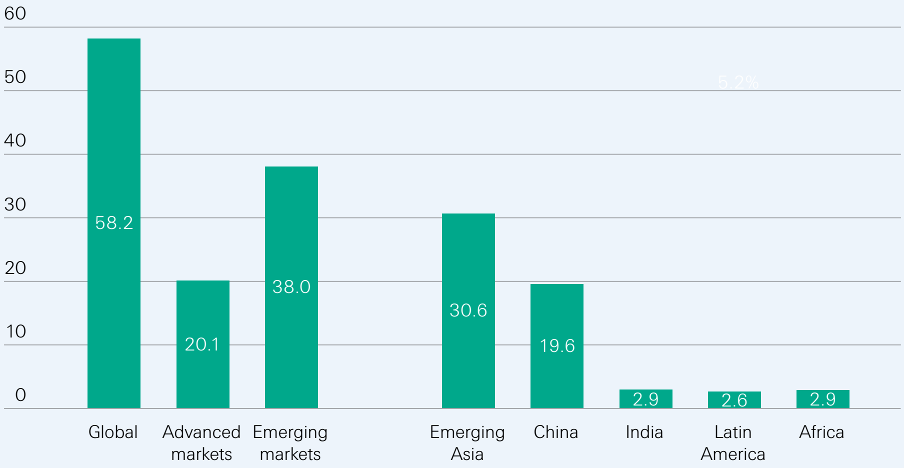
In 2019, growth in US public construction returned to almost its pre-global financial crisis level, after years of low investment. The Infrastructure Investments and Jobs Act and the Inflation Reduction Act, passed by Congress in 2021 and 2022 respectively, allocate nearly USD 700 billion of investments to renew existing infrastructure and finance the energy transition.[29] That should help to maintain investments in public construction at a high level, and support the growth of contract surety. However, their effect will take time to be felt and spread over a decade. In Europe, there is no such investment plan in place, although opportunities could arise in the medium term from an EU "Renovation Wave". This strategy was recently drafted by the European Commission and aims at boosting the renovation of buildings in the EU.[30] Investments in renewable energy production is also driving growth in some markets, such as Spain.

Most of the infrastructure that is planned to be built by 2040 is in emerging markets.

Most infrastructure forecast to be built by 2040 is focused on emerging markets (see Figure 16). This should improve productivity and drive stable growth in emerging markets. Sector-wise, investment is expected to concentrate in energy, followed by road. China, which is also due to spend heavily on rail, is forecast to be the biggest contributor, investing USD 1.2 trillion (4.6% of GDP) each year on average, making up 52% of all emerging market and 34% of global spend.[31] We expect China's recently developed surety market to support these projects.

[29] *Will the infrastructure law and Inflation Reduction Act transform American transportation? It's complicated*, Brookings, November 2022.
[30] *Renovation Wave*, European Commission.
[31] This paragraph and the following draw on *sigma* 3/2020

Figure 16
Cumulative infrastructure investment as per current trend, 2024–2040, selected markets, USD trillions



Note: Emerging Asia includes China and India.
Source: Swiss Re Institute estimates, based on data from Global Infrastructure Hub and Oxford Economics

India is the second-largest emerging market for forecast infrastructure investment.

India is the second-largest emerging market for forecast infrastructure investment, projected to contribute USD 170 billion (3.2% of GDP) each year (5% of global investment and 8% of total emerging market spend) to 2040. The India National Infrastructure Pipeline is a USD 1.5 trillion five-year plan (2019–2024) in support of Prime Minister Modi's ambition to build a USD 5 trillion economy by 2024.[32] It could benefit from the contribution of surety bonds, if regulators and providers develop a well-functioning surety market. Latin America is forecast to invest about USD 150 billion per year (2.2% of GDP) in infrastructure to 2040. Growth is expected to be higher than in the past decade, but likely below the global average as larger Latin American economies continue to struggle.

The digital transformation of credit insurance and surety

Digitalisation had a strong impact on Credit & Surety in the past years, but the outcomes fall short of expectations

Digitalisation is attracting increasing investment and is now embedded in the strategies of virtually all large insurers, a trend accelerated by the pandemic. Digitalisation enables more flexible insurance offerings, new ways of distributing products, and improvements to underwriting and risk management. However, while progress on AI development has been rapid, outcomes so far appear to have fallen short of expectations. Distributed platforms have not reached critical mass and blockchain is still experimental. The focus remains on using technologies to improve the efficiency of insurers' internal processes. Leveraging digitalisation to increase penetration rates is still a challenge. Digitalisation is also more challenging in markets with less flexible regulatory frameworks.

AI improves efficiency for trade credit insurers, but is most used by large players.

Credit insurers can use **AI** to enable faster and more accurate pricing and underwriting decisions, as it improves the collection and management of the vast amount of data they require. For example, algorithms can help to set credit limits. New data gathering tools can enable an insurer to spot changes in trade and payment behaviours early, and so manage their limits more proactively and selectively. These investments in AI tend to concentrate in more mature and competitive markets, while less established insurers still underwrite using predominantly traditional financial statement analyses. AI deployment can consequently reinforce large insurers' dominant position, as well as enable them to sell additional services such as credit risk insights to policyholders.

[32] *National Infrastructure Pipeline*, Government of India Ministry of Commerce and Industry, consulted in June 2023.

Digital platforms and blockchain can improve efficiency across the value chain.

Digital platforms are viewed as a promising potential catalyst for **TCI**. These platforms deploy Application Programming Interfaces (APIs) to connect stakeholders who are operating on separate systems. The main benefit of this improved connectivity is a reduction in transaction and policy management costs. By improving the exchange of data between insurers and policyholders, digital platforms foster transparency and help create a greater comprehension for limit adjustments. To be successful, a digital platform requires easy access to accurate data and the ability to take quick underwriting decisions, to reduce the transaction cost for the policyholder and insurer. However, many platforms do not gather all these factors, and their use is not widespread. In **surety**, platforms are considered the most promising innovation and are increasingly used to facilitate exchanges between surety companies, brokers and principals. Surety companies can also automate the issuance of bonds for pre-defined principals or amounts. As surety bonds were usually issued on paper, the digitalisation and automation of processes has a huge cost-saving potential. These platforms are becoming increasingly a differentiator for surety companies in competitive markets. In China, 95% of bid bonds are understood to be issued digitally, and digitalisation has supported the rapid development of this market. Large surety companies can develop these capabilities themselves, whereas smaller ones often rely on platforms offered by third-party sellers.

Insurers and Insurtechs have developed platforms targeting SMEs, but that segment remains largely untapped.

Digital platforms may offer a route to extend TCI to the significant and largely untapped small and medium enterprise (SME) market. By digitalising processes, platforms can reduce transaction costs and offer simpler, more affordable products to SMEs. TCI today primarily targets large firms, and SME penetration rates are low due to the challenge of their smaller scale.[33] It is hard to offer attractive rates to companies with low insurable turnover because insurers require insureds to comply with costly and time-consuming regular reporting for credit limits and risk management. Both established insurers and startups have developed new platforms, which typically offer traditional products and sometimes also single-invoice insurance and late payment insurance. However, these innovations are not yet deployed at scale and the challenge remains to create a standard platform for use by all stakeholders in the industry.

The growth of the B2B platform economy offers opportunities for insurers to offer solutions such as deferred payment options.

As business-to-business (B2B) transactions increasingly shift to e-commerce platforms, trade credit insurers are using digitalisation to provide deferred payment options, also known as Buy-Now-Pay-Later (BNPL), for buyers. Post-pandemic, an estimated 35% of B2B sales are now made digitally and the share is anticipated to grow,[34] but B2B platforms usually do not offer deferred payment, unlike traditional sales channels. Trade credit insurers have embedded their insurance product in the e-commerce transaction, using an API to connect the e-commerce platform with the insurer's system. Insurers can then combine their risk assessment capabilities with the transaction data from the platform to immediately assess the credit risk of a customer. The e-merchant is paid immediately, while the insurer or another partner takes the responsibility to collect non-payments. The customer benefits because the entire process is embedded in the checkout stage and does not delay the transaction. However, BNPL offerings for B2B e-commerce are still nascent and require insurers to have strong capabilities to price risks.

Ongoing initiatives focus on distributed ledger and blockchain technology to digitalise processes.

A further wave of initiatives is focused on deploying **distributed ledger** and **blockchain** technologies to digitalise processes. For example, an industry-wide initiative is underway to digitise surety offerings using blockchain.[35] If implemented, it would significantly reduce the manual processes associated with surety bond offering, and facilitate the exchanges between the principal, the beneficiary and the surety. However, the deployment of these technologies at large scale is hindered by concerns over data privacy and security.

[33] The UK Federation of Small Businesses reports that only 2% of small businesses buy trade credit insurance. *Paying a premium? Reforming the insurance market to work for small firms*, The Federation of Small Businesses, July 2022.
[34] *The new B2B growth equation*, McKinsey & Co, 2022.
[35] *Surety Bond Delivery and Verification*, RiskStream Collaborative, https://www.riskstream.org/surety-bonds-delivery-verification

Appendix

Premium statistics

	Credit Insurance							Surety						
	Premium volume (in USD m)		Share of world market		Premiums in % of GDP		Avg. growth rate (in USD) 2012–2022	Premium volume (in USD m)		Share of world market		Premiums in % of GDP		Avg. growth rate (in USD) 2012–2022
Market	**2012**	**2022**	**2012**	**2022**	**2012**	**2022**		**2012**	**2022**	**2012**	**2022**	**2012**	**2022**	
North America	**1 051**	**1 567**	**10%**	**11%**	**0.6%**	**0.6%**	**4%**	**5 576**	**9 316**	**48%**	**49%**	**3.1%**	**3.4%**	**5%**
Canada	269	395	3%	3%	1.5%	2.0%	4%	532	766	5%	4%	2.9%	3.9%	4%
United States[2]	783	1 172	8%	8%	0.5%	0.5%	4%	5 044	8 549	43%	45%	3.1%	3.3%	5%
Latin America	315	495	3%	4%	0.6%	0.9%	5%	2 013	2 575	17%	13%	3.8%	4.9%	2%
Argentina	19	42	0%	0%	0.3%	0.6%	8%	219	199	2%	1%	3.8%	3.0%	–1%
Bolivia	0	0	0%	0%	0.0%	0.0%	–8%	20	37	0%	0%	1.0%	1.6%	7%
Brazil	131	166	1%	1%	0.5%	0.9%	2%	482	851	4%	4%	2.0%	4.6%	6%
Chile	77	117	1%	1%	2.9%	3.4%	4%	41	140	0%	1%	1.5%	4.1%	13%
Colombia	24	47	0%	0%	0.6%	1.3%	7%	497	544	4%	3%	13.4%	14.9%	1%
Ecuador	6	9	0%	0%	0.6%	0.8%	6%	157	176	1%	1%	17.8%	15.3%	1%
Mexico	57	94	1%	1%	0.5%	0.7%	5%	577	525	5%	3%	4.8%	3.7%	–1%
Peru	2	20	0%	0%	0.1%	0.8%	24%	21	104	0%	1%	1.1%	4.4%	17%
EMEA	**6 049**	**8 222**	**58%**	**59%**	**3.2%**	**3.4%**	**3%**	**2 588**	**4 684**	**22%**	**24%**	**1.4%**	**1.9%**	**6%**
Austria	127	93	1%	1%	3.1%	1.8%	–3%	3	6	0%	0%	0.1%	0.1%	7%
Belgium[1]	122	120	1%	1%	2.5%	1.8%	0%	14	13	0%	0%	0.3%	0.2%	0%
Bulgaria	6	5	0%	0%	1.0%	0.5%	–2%	1	61	0%	0%	0.1%	6.2%	60%
Czechia	93	21	1%	0%	4.4%	0.7%	–14%	8	24	0%	0%	0.4%	0.8%	12%
Denmark[1]	25	47	0%	0%	0.8%	1.0%	6%	37	70	0%	0%	1.1%	1.6%	7%
Estonia[1]	7	17	0%	0%	3.2%	4.1%	9%	n/a	0	n/a	0%	n/a	0.0%	n/a
Finland[1]	17	18	0%	0%	0.7%	0.6%	1%	25	27	0%	0%	1.0%	0.9%	1%
France	872	900	8%	6%	3.3%	2.9%	0%	183	280	2%	1%	0.7%	0.9%	4%
Germany	1 100	1 132	11%	8%	3.1%	2.5%	0%	600	997	5%	5%	1.7%	2.2%	5%
Hungary	n/a	n/a	n/a	n/a	n/a	n/a	n/a	11	19	0%	0%	0.8%	0.9%	6%
Ireland[1]	101	197	1%	1%	4.5%	3.3%	7%	11	22	0%	0%	0.5%	0.4%	7%
Italy	574	858	6%	6%	2.7%	3.8%	4%	644	861	6%	4%	3.1%	3.8%	3%
Latvia	1	2	0%	0%	0.4%	0.4%	5%	8	16	0%	0%	3.0%	3.5%	7%
Lithuania	5	9	0%	0%	1.3%	1.2%	5%	16	21	0%	0%	3.7%	2.7%	3%
Luxembourg[3]	75	378	1%	3%	12.5%	41.0%	18%	381	888	3%	5%	63.7%	96.3%	9%
Netherlands[3,4]	1 036	34	10%	0%	12.3%	0.3%	–29%	168	252	1%	1%	2.0%	2.3%	4%
Poland	154	183	1%	1%	3.1%	2.3%	2%	84	145	1%	1%	1.7%	1.9%	6%
Portugal	41	42	0%	0%	1.9%	1.5%	0%	7	32	0%	0%	0.3%	1.1%	16%
Romania[1]	23	27	0%	0%	1.3%	0.8%	1%	54	63	0%	0%	3.0%	1.9%	2%
Slovenia	55	43	1%	0%	11.7%	6.1%	–2%	2	5	0%	0%	0.3%	0.7%	12%
South Africa[1]	156	196	2%	1%	3.6%	4.5%	2%	104	132	1%	1%	2.4%	3.0%	2%
Spain[4]	748	2 295	7%	16%	5.7%	14.6%	12%	72	259	1%	1%	0.5%	1.6%	14%
Sweden[1]	33	40	0%	0%	0.6%	0.6%	2%	50	61	0%	0%	0.9%	0.9%	2%
Switzerland	n/a	216	n/a	2%	n/a	2.6%	n/a	n/a	215	n/a	1%	n/a	2.6%	n/a
Turkey	32	77	0%	1%	0.4%	0.5%	9%	9	22	0%	0%	0.1%	0.1%	9%
United Kingdom	530	831	5%	6%	2.0%	2.4%	5%	89	180	1%	1%	0.3%	0.5%	7%
Asia	**2 950**	**3 651**	**28%**	**26%**	**1.7%**	**1.3%**	**2%**	**1 506**	**2 578**	**13%**	**13%**	**0.9%**	**0.9%**	**6%**
China[5]	2 545	3 323	25%	24%	3.0%	1.8%	3%	0	543	0%	3%	0.0%	0.3%	n/a
Japan	312	212	3%	2%	0.5%	0.4%	–4%	146	104	1%	1%	0.2%	0.2%	–3%
Philippines[1]	6	14	0%	0%	0.2%	0.3%	8%	36	81	0%	0%	1.4%	1.9%	8%
Singapore	81	96	1%	1%	2.7%	2.2%	2%	92	91	1%	0%	3.1%	2.1%	0%
South Korea	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1 202	1 719	10%	9%	9.4%	9.0%	4%
Taiwan[1]	5	7	0%	0%	0.1%	0.1%	3%	30	40	0%	0%	0.6%	0.5%	3%
World	**10 366**	**13 935**	**100%**	**100%**	**1.7%**	**1.6%**	**3%**	**11 683**	**19 153**	**100%**	**100%**	**2.0%**	**2.3%**	**5%**

1 Swiss Re Institute estimate of the split into credit insurance and surety. Published data refer to combined credit insurance and surety premiums.
2 Credit insurance premiums based on Swiss Re Institute estimates.
3 Premiums overstate the true size of the surety market as they include some mortgage guarantee business.
4 Large changes between 2012 and 2022 in the Netherlands and Spain are driven by the reallocation of the foreign operations of a large insurer from the former country to the latter.
5 For credit insurance, the bulk of reported premiums comes from Sinosure, the government-owned ECA. A part of Sinosure's premiums is likely related to the long-term export credit business typical to ECAs. In other markets ECAs are often not included in the reported premiums. As a consequence, the size of Chinese premium figures may be overstated relative to other markets. Surety premiums are based on Swiss Re Institute estimates.

Notes:
The validity of individual country data for European Economic Area (EEA) markets (particularly for credit insurance) is subject to caution. This is because multinational insurers are often writing business in all EEA markets out of their domicile under the freedom to provide services. Typically, the premium data captures all business written in a specific market by domestic and foreign companies (eg via branch offices). Occasionally, EEA premiums may be double-counted or omitted due to inconsistent reporting concepts across countries.
Surety premiums in several markets may contain some financial guarantee business.
2022 data are estimated by Swiss Re Institute for countries where published data were not available.
Source: Swiss Re Institute estimates based on national data from supervisory authorities and insurance associations

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