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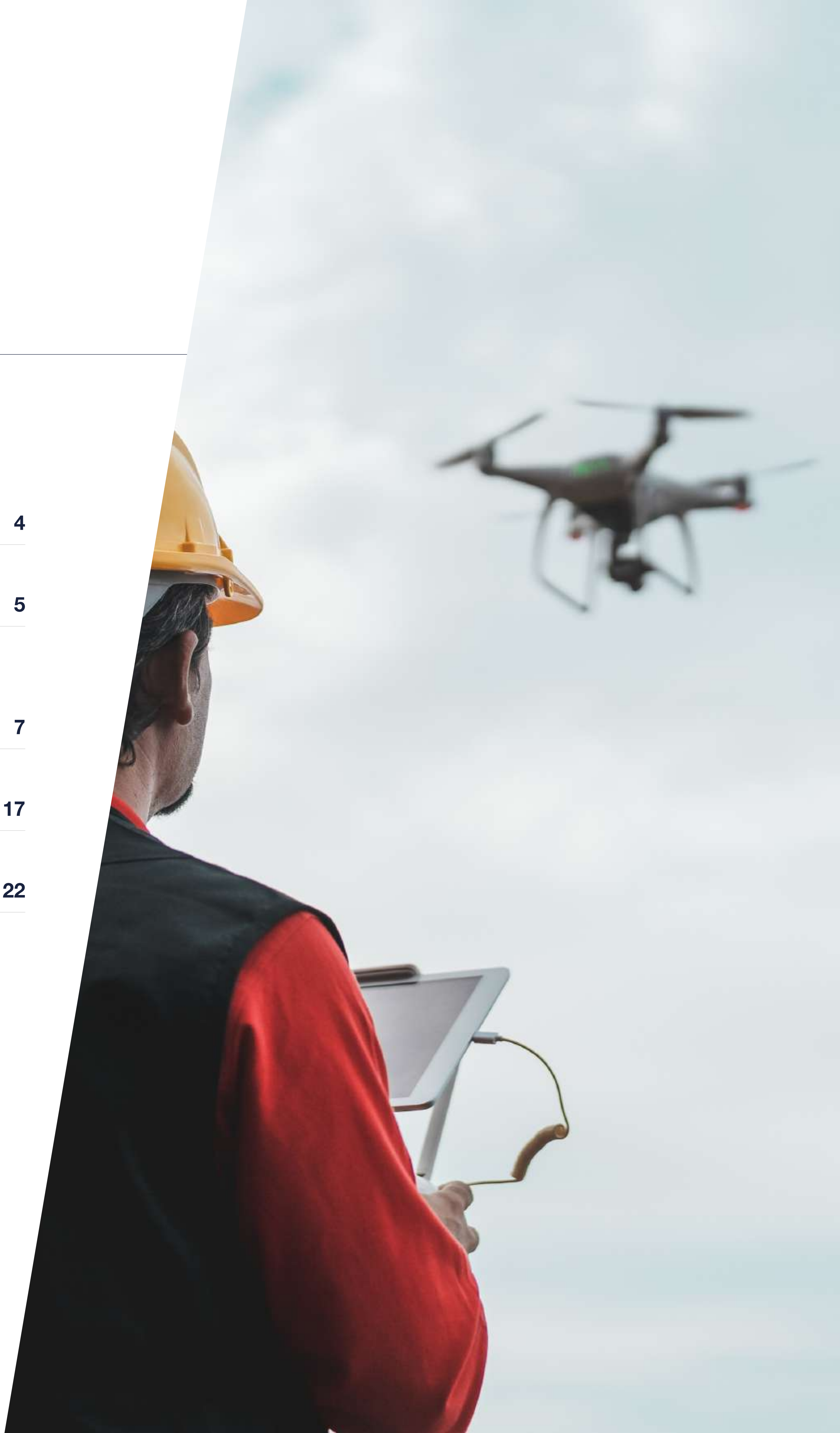
SOURCING IT UP

Growth opportunities in the TIC sector

CONTENT



In this White Paper, we express our strong favor for the Testing, Inspection, and Certification (TIC) sector. Our conviction stems from the sector's impressive resilience, steady growth, and three megatrends that are expected to boost its expansion even further.

First and foremost, the TIC sector has proven to be particularly resilient, as evidenced by its ability to weather the Covid-19 pandemic. Major listed TIC companies managed to maintain a relatively stable EBITDA margin despite a decline in revenue, a testament to their adaptability and strength in uncertain times.

Furthermore, the TIC sector has demonstrated consistent organic growth driven by a continuous outsourcing trend. Factors such as inflation, tightening regulatory requirements on quality, safety, and environmental impacts, and growing consumer awareness of product quality, safety, and sustainability have all contributed to this growth.

Additionally, we have identified three megatrends that we believe will fuel the sector's expansion. The first is the increasing demand for ESG solutions for existing and new clients. The second is the rise of industrial relocation, which presents new opportunities for safeguarding the supply chain. The third is the technological and digital transformation of the industry.

Mergers and acquisitions have always been a key strategy for global TIC companies to achieve higher growth. Regional competitors backed by Private Equity firms are also vying for a larger market share, indicating that M&A activity in the sector is poised to accelerate.

Global TIC sector: a resilient market driven by ongoing outsourcing trends, favorable regulatory environment, and raising consumer awareness

Conformity assessment is a global market worth over EUR 200 billion in 2020 and is expected to exceed EUR 250 billion in 2025, with a projected compound annual growth rate (CAGR) of 4.6%.

We believe this sector is attractive due to its resilience, steady growth, and three additional trends that are expected to push growth even further.

The TIC sector is particularly resilient because:

- TIC companies serve almost all industries, including construction, manufacturing, food and agriculture, energy, and chemicals, among others.

- The sector plays a critical role in ensuring the safety, quality, and reliability of various products and services, protecting public health and safety, the environment, and consumers.

The steady growth of the TIC sector is mainly driven by:

- A continuous outsourcing trend accelerated by inflation. Currently, independent TIC companies account for around 40% of the total conformity assessment market, while the remaining 60% is occupied by insourced entities or governments. Outsourcing of TIC services is primarily driven by cost-saving incentives and regulatory requirements on independence.

- Tightening regulatory requirements on quality, safety, and environmental impacts.

- Growing consumer awareness of the importance of quality, safety, and sustainability of products, particularly in the food and pharmaceutical sectors.

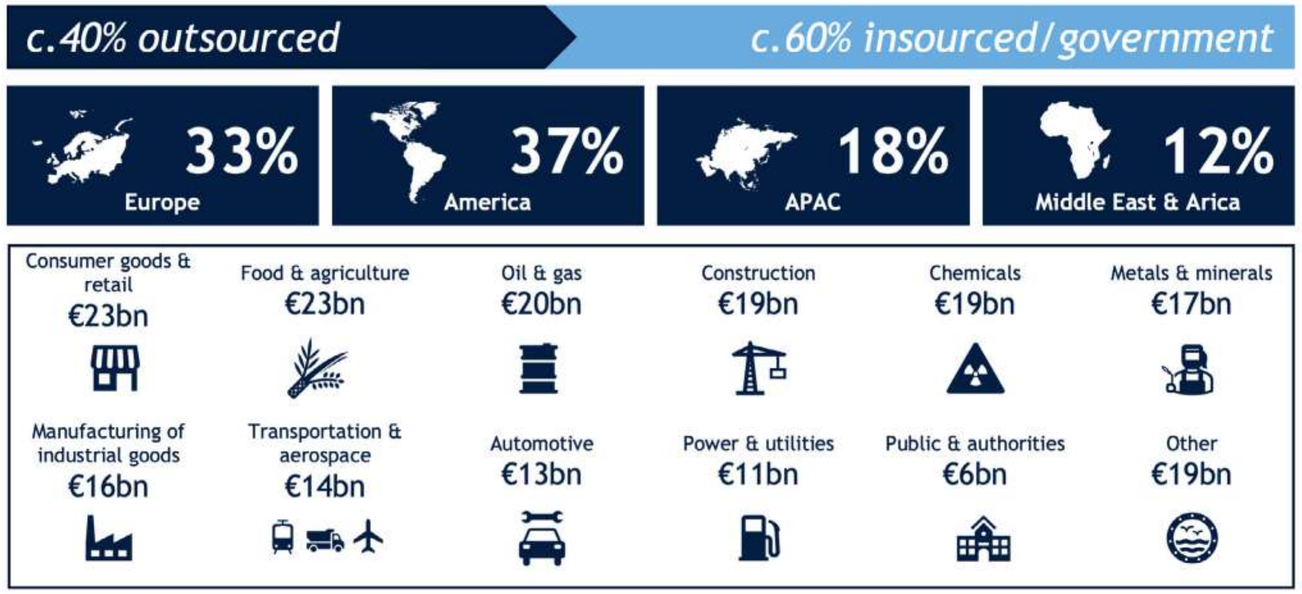
In the coming years, we have identified three mega-trends that will boost growth in the sector (more details in the report's following section):

- Opportunities in ESG (Environmental, Social, and Governance) solutions for existing and new clients.

- Industrial relocation, creating new opportunities to safeguard the supply chain. This relocation is driven by cost-reduction incentives, decreasing dependency on certain regions, and Europe's ongoing aim to attract foreign investments.

- Technological and digital transformation.

FIG. 1: A >EUR200BN MARKET BY END-MARKET AND GEOGRAPHY



Source: Stifel Equity Research, Bureau Veritas*

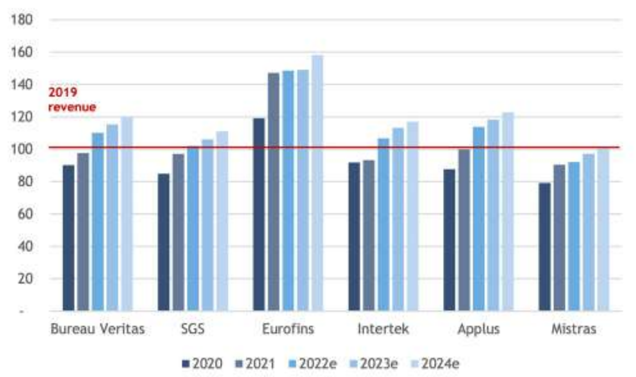
A growing sector despite challenging macro headwinds in a post-Covid era

The TIC sector has demonstrated remarkable resilience in 2020, as major listed TIC companies managed to maintain a relatively stable EBITDA margin, despite a decline in revenue. This highlights the sector's ability to weather unexpected challenges and adapt to changing market conditions.

Two years after the outbreak of the pandemic, businesses are looking ahead with renewed optimism, and there are promising signs that economic activity is back to normal. This is an exciting time for many companies, who are eager to resume growth and explore new opportunities.

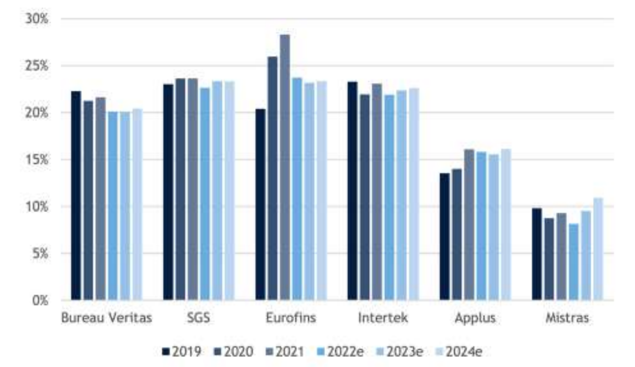
In 2022, despite various global challenges such as geopolitical conflicts, labor shortages, and pandemic-related lockdowns, major listed TIC companies have continued to thrive. In fact, these companies have been able to sustain revenue growth and maintain stable EBITDA margins, indicating their robustness and ability to navigate a volatile market. Looking forward, even with inflation and an economic recession on the horizon in 2023, there is reason to be hopeful, as these companies are well-positioned to weather the storm and emerge even stronger in the years to come (Fig. 3).

FIG. 2: CHANGE IN REVENUE VS. 2019 (BASE 100)



Source: Companies, analysts

FIG. 3: RESILIENT EBITDA MARGIN 2019-2024E



Source: Companies, analysts

Over the short and medium terms, there are 4 major trends bringing both challenges and opportunities:

• **Increasing costs in an inflationary world.** TIC companies are directly impacted by wage inflation and indirectly impacted by volatile energy inflation. Wage inflation should calm down in H2 2023, but energy inflation, which impacts the various end-markets of TIC companies, is set to last longer. Energy cost Inflation will mostly impact lab-testing activities negatively but could be beneficial for inspection, audit, and certification-related activities depending on the end-market.

• **Pricing pressure due to competition.** While some end-markets in some geographic regions are dominated by global TIC companies, the overall TIC market is fragmented. Competition with many other players in a fragmented market increases the complexity of price increases. Even in an inflationary backdrop, increasing prices is still not easy. For example, prices in France have decreased in most segments due to increased competition, technological development, and laboratory industrialisation. Even taking into consideration inflation, pricing is expected to remain stable or increase just slightly.

• **End-market diversification.** Diversification in non-cyclical and niche end-markets could help TIC companies secure revenue in the coming economic recession and improve margins.

• **Technological transformation.** With the accelerated digitalisation of the TIC industry due to Covid, remote testing and inspection were less affected than on-site activities. Although these activities are still relatively small and on-site inspection rebounded post-Covid, TIC companies were able to leverage technology to stand out from competitors and improve operating efficiency. Sensors, AI-empowered cameras, and more efficient tracing/testing processes thanks to SaaS solutions could not only help TIC companies to decrease operating costs but also improve client experience.

These trends will accelerate TIC companies' strategic focus on both scale and differentiation (Fig. 4)

FIG. 4: STRATEGIC FOCUSES ON SCALE AND DIFFERENTIATION

Source: Stifel Equity Research*

Three mega-trends boosting growth: opportunities in ESG solutions, industrial relocation, and technological transformation

Besides macro challenges, ESG is one of the most important opportunities for the future transformation

Pressure on the environmental sustainability of the business is rising:

• **Regulators are toughening their stance.** Sustainability is a growing issue for governments and regulators, especially in Europe. In September 2020, the EC presented its revised environmental targets for 2030, calling for a reduction in GHG emissions of 50-55% compared to 1990 levels, while it was initially targeting a reduction of 40%. Meanwhile, governments and regulators will apply additional constraints and standards on the sustainability of business operations. NGOs such as Greenpeace and The Children's Fund will also want to be able to assess the sustainability of business more efficiently and will look for the best tools and measures to do this

• **Pressure from the investment community is on.** Investors are placing sustainability at the core of their investment decisions. In a letter addressed to all CEOs BlackRock CEO Larry Fink pointed out that "climate risk will impact both the physical world and the global system that finances economic growth", concluding that "in the near future – and sooner than most anticipate – there will be a significant reallocation of capital". All financial intermediates will need the right methodology to identify ESG risks, report to supervisory authorities and publish their reports where necessary

• **Pressure also stemming from consumers.** Among the millennial generation, consumer choices are increasingly driven by ecological concerns and sustainability. Technology and social networks enable and encourage consumers to make more environmentally conscious choices and the change is happening fast. Brands are adapting their communication, production, and operations to include a greater focus on the ecological dimension.

Companies have no choice but to adapt to this new business environment, but this is clearly not easy. Although ESG is widely mentioned, it is still a very broad concept to manage in terms of subjects and the stakeholders involved (Fig. 5).

FIG. 5: ESG IS A BROAD CONCEPT CONCERNING A WIDE SET OF STAKEHOLDERS

Source: Stifel Equity Research, European Council*

As pressure from all stakeholders increases, corporations face three main challenges:

• The first is to adapt their operations to make them more environment-focused by changing their supply chains and operating or producing processes. Appropriate measurements and monitoring need to be developed as well

• More insight and data on their actual ecological impact should also be included in their communication. More accurate and detailed ESG disclosures could be required by growing investor concerns.

• The additional costs of having visibility at a company-wide level.

Hidden in these challenges are huge opportunities for TIC companies:

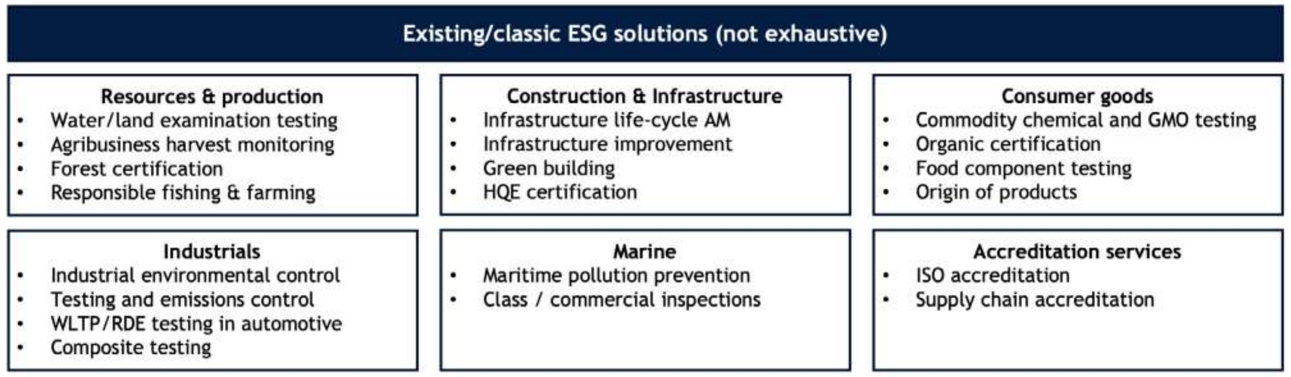
• Corporates are struggling to establish a clear path and to define objectives.

• Well-defined objectives need to be set across different stakeholders (such as employees, end-market customers, investors, suppliers, etc.) as well as across different geographic regions where legislation could be different.

• Once the approach and objectives are defined, corporates also need standards to follow on a regular basis.

As such, whereas ESG was not a traditional domain for TIC companies, it is becoming increasingly essential especially for large international TIC companies, such as Bureau Veritas and SGS that already cover certain ESG subjects with a clear aim to expand (Fig. 6)

FIG. 6: LARGE TIC COMPANIES ALREADY COVER THE MARKET WITH A CLEAR AMBITION TO EXPAND



Source: Stifel Equity Research, Bureau Veritas, SGS*

Just as in all end-markets where regulation is one of the important drivers, ESG reporting is creating more opportunities for TIC companies.

For example, the directives relevant to TIC companies are the following

• **The European deforestation directive.** In December 2022, EU legislators reached an agreement to pass a new law guaranteeing that products sold in the EU are not linked to the destruction or degradation of forests.

• **Corporate Sustainability Reporting Directive (CSRD).** In November 2022, the Council gave its final approval to the CSRD. CSRD introduces more detailed requirements to ensure that large companies and listed SMEs are required to report on sustainability subjects. CSRD will take place in four stages starting in 2025 for fiscal year 2024 depending on the size and status (listed/private) of the company. CSRD requires broader publication of a significantly wider field of environmental aspects including action plans over the medium and long terms, social and human rights factors, governance, etc. All assurance companies including TIC companies were approved to provide assurance. More importantly, **the obligation to provide a sustainability audit will be implemented gradually, offering TIC companies opportunities to expand their offering in this domain.**

• **Carbon Border Adjustment Mechanism (CBAM).** CBAM sets out a clear path to realise the EU's ambitious target of a 55% reduction in carbon emissions compared to 1990 by 2030 and to becoming a climate-neutral continent by 2050. CBAM imposes a carbon charge on carbon-intensive products imported by the EU, and **importers need to buy CBAM certificates from an independent verification organisation.**

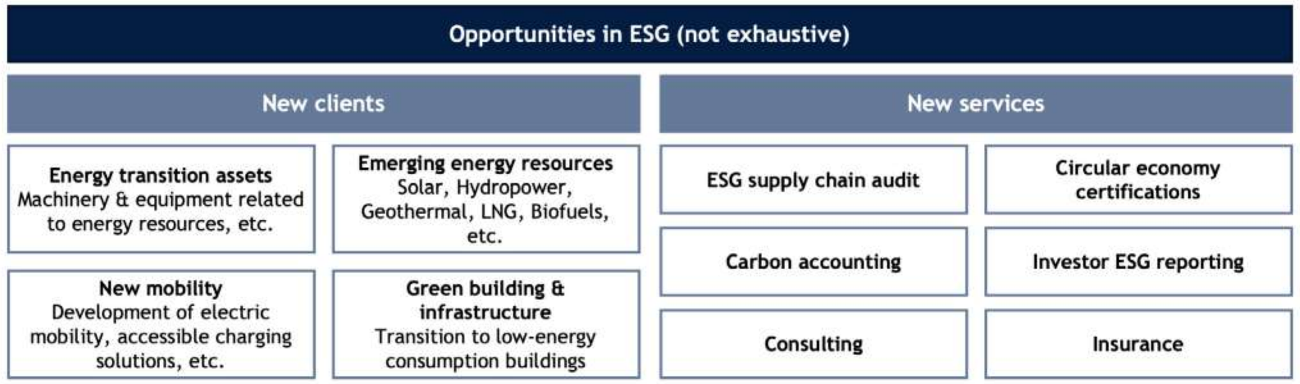
• **The Corporate Sustainability Due Diligence Directive (CSDDD),** requires that companies identify, prevent or at least mitigate, and ultimately terminate, adverse impacts on human rights and environmental protection by them, their subsidiaries, and their supply chain partners

• **The EED (Energy efficiency directive),** together with other EU energy and climate rules, ensure that the new 2030 target to reduce greenhouse gas emissions by at least 55% (compared to 1990) can be met. **This directive introduces the broader application of energy audits, stricter requirements on technical competence for energy auditors, and more demanding planning and follow-up of comprehensive energy assessment**

As well as tighter regulations, consumer awareness is also another driver. The circular economy could be a good example of a combined effect of the change in regulations and arising consumer awareness. On the one hand, countries in the EU are actively implementing measures to make economy-consistent choices more attractive for consumers: providing information on product labels, introducing tax breakers for certain repair services, and subsidising specific circular activities. On the other hand, consumers are willing to pay more for eco-friendly products.

Driven by both consumer awareness and regulation, there are opportunities to attract new clients and offer new services for existing clients (Fig. 7).

FIG. 7: OPPORTUNITIES IN ESG

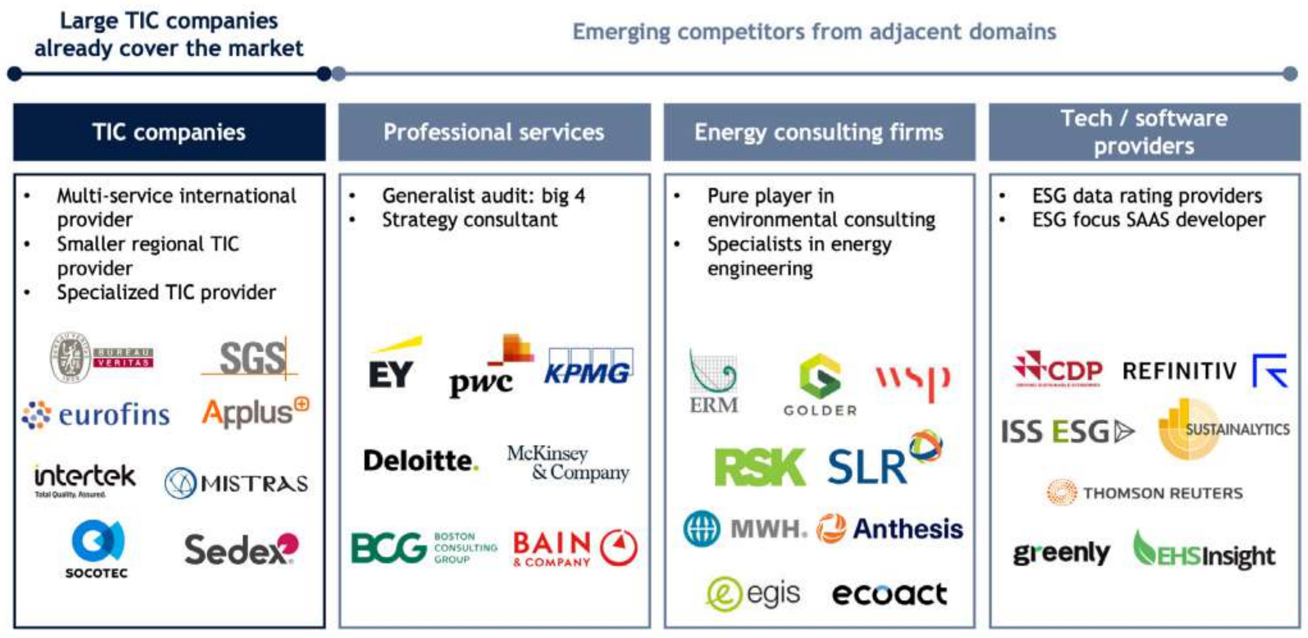


Source: Stifel Equity Research, Bureau Veritas*

As ESG is not a brand-new topic, there are already different players and emerging start-ups active in this domain (Fig. 8). For example, traditional financial auditors are expanding their expertise in non-financial reporting auditing, while strategy consultancy firms are leveraging their proximity with management to advise on ESG-related subjects and some start-ups offer SaaS solutions to monitor energy consumption, etc.

As such, it's important for TIC companies to emphasize their independence, expertise, and global reach to differentiate from other players. As companies are separating financial and non-financial reporting, which creates opportunities for TIC companies to enter. Additionally, TIC companies are better positioned to leverage their technical know-how, especially in the assessment phase, and capable of providing further information about whether the client company could succeed in its transition plan.

FIG. 8: COMPETITORS IN ESG SOLUTIONS (NON-EXHAUSTIVE)



Source: Stifel Equity Research*

New opportunities in safeguarding the supply chain thanks to a gradual industrial relocation driven by cost-reduction incentives, decreasing dependency on certain regions, and Europe's ongoing aim to attract foreign investments

Over the past two decades, the world has evolved at an unprecedented pace, driven by climate change, exponential economic growth in developing countries, and changing demographics. Companies are frequently deciding to implement new cost and production strategies. The increasing price pressure imposed by both customers and competition, together with rising personnel costs, make companies want to produce at the lowest cost possible.

Relocation of production or supply chains to lower-cost countries is one of most important strategies for cost reduction and is the main driver of industrial relocation occurring across all geographic regions.

There have been five core trends in the past which might continue in the future:

- **Inflows of relocation projects are much lower than outflows in Western Europe.** This is primarily due to legislative changes regarding CO2, other laws protecting the environment, and the relatively expensive workforce. Most industrial factories leaving this region are heading to Asia, Eastern Europe, South Africa, and the United States where energy or workforce costs are considerably lower.

- **Southeast Asia is receiving industrial plants from Europe, the USA, Japan, Korea, and China thanks to its attractive labour costs.**

- **Northern Africa & Western Africa harbour major opportunities** with very rapid population growth. Due to political instability and energy certainty, becoming a destination for the relocation of factories is still at a starting point.

- **The US is attracting energy-consuming industrials from Europe and elsewhere in the world.**

- **Potential in Southern America is harmed by political, economic, and legal instability.**

The Covid-19 pandemic created additional tension as it disrupted global supply chains, which are highly interconnected and vulnerable to regional disruption, providing companies an incentive to relocate factories to resolve high dependency on certain regions.

In the post-Covid era, as well as cost-reductions, companies are taking other elements into consideration such as geographic risks and regional balance.

For example, many TIC end-markets rely on China for components or even manufacturing processes, and missing components or sharply decreased production can stop business operations. In this case, companies have had to reduce reliance on China by relocating factories elsewhere:

- **Higher-end manufacturing is moving into India for its vast land and growing population.** Apple has already moved some of its iPhone production sites to India and is trying to reduce its reliance on China by moving its iPad manufacturing as well.

- **Vietnam witnessed an accelerated increase in foreign investment post-Covid.** In 2021, the country attracted c. EUR30bn of FDI up 9% compared to the prior year. Almost 60% of the investment went into manufacturing (apparel, footwear, electronics, and electrical appliances) and the processing sector.

- **FDI in Thailand surged three times between 2020 and 2021.** As the second largest economy in Southeast Asia, Thailand accelerated its upgrade on the value chain in manufacturing and is becoming a production hub for car parts, vehicles, as well as electronics. International companies, Sony and Sharp for example, and Chinese companies, such as solar panel producer JinkoSolar, are moving their production to Thailand in order to benefit from lower labour costs and avoid geopolitical tension.

- **Even before the Covid-19 lockdowns crippled China's manufacturing sector, Bangladesh has been welcoming the supply-chain shift away from China and now eyes a bigger slice of the pie.** The government is working to attract more investments other than the garment sector such as pharmaceuticals and agriculture processing.

- **Covid-19 boosted the manufacturing shift out of China into Malaysia, and tech investments are still surging thanks to lower labour costs and US-China trade tensions.** For example, in recent years, Malaysia attracted investments from US chip giant Micron for a total amount of over USD300m. In 2021, Malaysia's FDI inflows beat a five-year record of EUR48bn, contributed to by electronics manufacturing and vehicles.

Moreover, Europe and especially Eastern Europe, is attracting industry reshoring in the wave of industrial automation as the labour-intensive industries set to benefit the most from automation are apparel, footwear & textiles, furniture and fixture, transport equipment, capital goods, and fabricated metal products.

Compliance is an important factor across the entire supply chain and relocation adds complexity to ensure the safety, quality, and reliability of end-products. As a result, relocation widens the scope of services: testing, inspecting, and certifying products, processes, production methods, services, systems, bodies, and personnel throughout the supply chain.

TIC companies are here to help reduce compliance risks, meet international standards and increase efficiency throughout each step of the supply chain (Fig. 9).

FIG. 9: SAFEGUARDING THE ENTIRE SUPPLY CHAIN

TIC companies help clients to reduce compliance risks, meet international standards and increase efficiency throughout each step in the supply chain

	Design & planning	Manufacturing	Commissionning	Operation & maintenance
Challenges	Uncertainty with new locations Difficulties in estimations of costs, QA and QC Risks and requirements in quality management Inefficient knowledge of local legislation requirement	Supply chain optimization Complexity in multi-tier supply chains Manufacturers/suppliers not compliant with specifications and standards	Delays Cost overruns Non-compliance to QA & QC HSE non-compliance	Insufficient qualified resources to understand and implement of relevant standards Problems with defining liability in case of non-conformities Deployment of new technology
TIC solution	Market access Supplier selection Transparency in quality level Specification review Planning of inspection	Supplier assessment Vendor inspection Pre-shipment inspection Materials testing	Construction supervision Loading & discharge supervision On-site inspection Technical staffing Commissioning inspection and NDT	Prevision of maintenance Failure damage analysis Risk-based inspection Equipment/material life cycle assessment

Source: Stifel Equity Research, Bureau Veritas, SGS, TUV Rheinland*

Traditionally, the focus of TIC companies on the supply chain is to mitigate a set of predictable risks. Relocation is not only about changing manufacturing location but also part of supply chain optimisation and transformation . Companies are trying to implement processes that could reduce operational risks and adhere to ethical and sustainable practices.

Meanwhile, the offerings of TIC companies are evolving and expanding by integrating big data analytics, new technologies, and ESG solutions (Fig. 10)

FIG. 10: EXPANDING OFFERINGS IN SUPPLY CHAIN

Big data	New technologies	ESG in supply chain
Inventory prediction Product quality and temperature control Order fulfillment & real-time tracking Prediction on machine maintenance	Virtual assessment Digital inspection Augmented inspection SaaS for quality management, compliance, product tracking, fleet management, etc.	Energy efficiency Working conditions Human rights Risk management Reporting & disclosure

Source: Stifel Equity Research*

TIC companies are moving towards technological and digital transformation

Technological and digital transformation trends are opening opportunities for TIC companies to provide dedicated offers to their clients, despite directly impacting their operations.

This trend has been accelerated by the Covid-19 pandemic as sanitary restrictions have indeed forced the profession to adapt its organisation and certification processes to ensure continuity of services to its customers. Remote or virtual testing and inspection activities have been significantly less affected compared to on-site activities.

Leveraging technology and digitalisation is making remote or virtual testing and inspection activities increasingly common in the industry. The use of connected devices (such as drones, inspection robots, remotely operated vehicles, etc.) was not only very helpful during the pandemic but has also enabled TIC companies to inspect dangerous or hard-to-reach areas (corrosion inspections on ships, audits of Seveso plants or wind turbine blades, etc.) while generating savings on certain expenses, particularly travel costs. Digitalization and automation are ongoing in testing laboratories as well, allowing TIC companies to better control their costs while increasing productivity.

Besides connected devices, there are also other technology trends disrupting the sector, such as smart sensors, cloud, and cybersecurity, big data and analytics, connected devices, automation, virtual and augmented reality, etc. (Fig.11).

FIG. 11: MAJOR TECHNOLOGICAL AND DIGITAL TRENDS

Source: Stifel Equity Research*

To succeed in technological and digital transformation, there are five core dimensions:

• **Developing a compelling digital vision, strategy and road map.** SGS embedded digitally in all of the company's business lines.

• **Digitising customer engagement.** Bureau Veritas has launched a global platform to help companies improve the performance of their business systems to meet ISO standards.

• **Transforming and digitising operational processes.** SGS has initiated IT transformation for all global IT systems that will provide self-service technologies for customers, an integrated digital platform for partners, and productivity solutions for employees. SGS has also invested massively in digital lab platforms. Bureau Veritas, where experts use an in-house IT tool, G-Inspect, to reduce the duration of certain inspections carried out during major shutdowns of process facilities such as nuclear control centres and refineries. They enter their remarks directly onto a tablet and send out the conclusive report promptly, thereby allowing clients to begin restarting the equipment or to carry out necessary repairs quickly.

• **Hiring people with digital skills and experience.** SGS, Bureau Veritas, and TÜV SÜD, for example, appointed a senior executive in charge of digital, responsible for coordinating all digital efforts of the companies' various business units. DNV-GL created a new digital solutions organisation, which it staffed with digital experts from across the company

• **Building new digital businesses and ventures, including M&As.** Bureau Veritas, for example, has launched a traceable label to give consumers insight into a product's journey through the supply chain. TÜV SÜD launched a project with the German Research Center for Artificial Intelligence to test and certify AI systems used in autonomous driving, while SGS established a partnership with Glenfis, an IT systems and services certification firm. TÜV SÜD expanded its cybersecurity capabilities by acquiring Acertigo AG, a firm that provides compliance services for the payment card industry./

Leading TIC companies have started digitalization. Midsize companies (rev < EUR1bn) and many smaller companies focusing on the regional markets or specific end-market have also begun adopting digital technologies, but these efforts need to be significantly increased in order to keep up.

Overview of European markets by geography: France, Germany, Nordic countries

France: a tightly regulated market

The TIC market in France has enjoyed stable growth over the past two decades, including the financial crises in 2008-2009. Between 2000 and 2019, the market grew by 6% annually on average, mainly driven by two factors: a surging trend of outsourcing in both private and public sectors; the expansion of services and offerings, such as the start of water testing in 2006. 2020 was the only year with a negative growth rate due to the Covid-19 pandemic, which crashed the building and construction sector and resulted in changes lasting for coming years. Due to the impossibility of carrying out services under normal conditions in 2020 and afterwards, a catch-up effect was then seen in 2021 and 2022

The French TIC market is mainly driven by:

• **The tightening of regulations and new precautionary measures following each scandal,** as shown in Fig.12. Activities greatly increased following the mad cow and avian flu crises. TIC operators provide their expertise, notably by developing appropriate tests to detect contaminated products and validate the compliance of facilities or procedures. Operators in this sector have also benefited from various scandals and accidents (Lactalis in the food industry, Volkswagen in the automotive industry, Mediator in the pharmaceutical industry, Fukushima in the nuclear industry, etc.).

• **Increasing French consumer concerns about the traceability of products.** The rise of themes such as sustainable development, global warming, or corporate social responsibility also affects the sector positively. Especially since companies are adopting certifications and labels to differentiate themselves from their competitors

• **Scientific progress** enabling increasingly advanced analyses concerning animal and human health.

• **Internationalisation of economic trade** prompting a surge in goods and merchandise flows and therefore greater needs for controls and inspections. At the same time, the strengthening of intra-sector rivalry slows activity growth in terms of value, due to the intensification of price competition.

FIG. 12: GROWTH IN THE FRENCH TIC MARKET

Source: Xerfi, Stifel Equity Research*

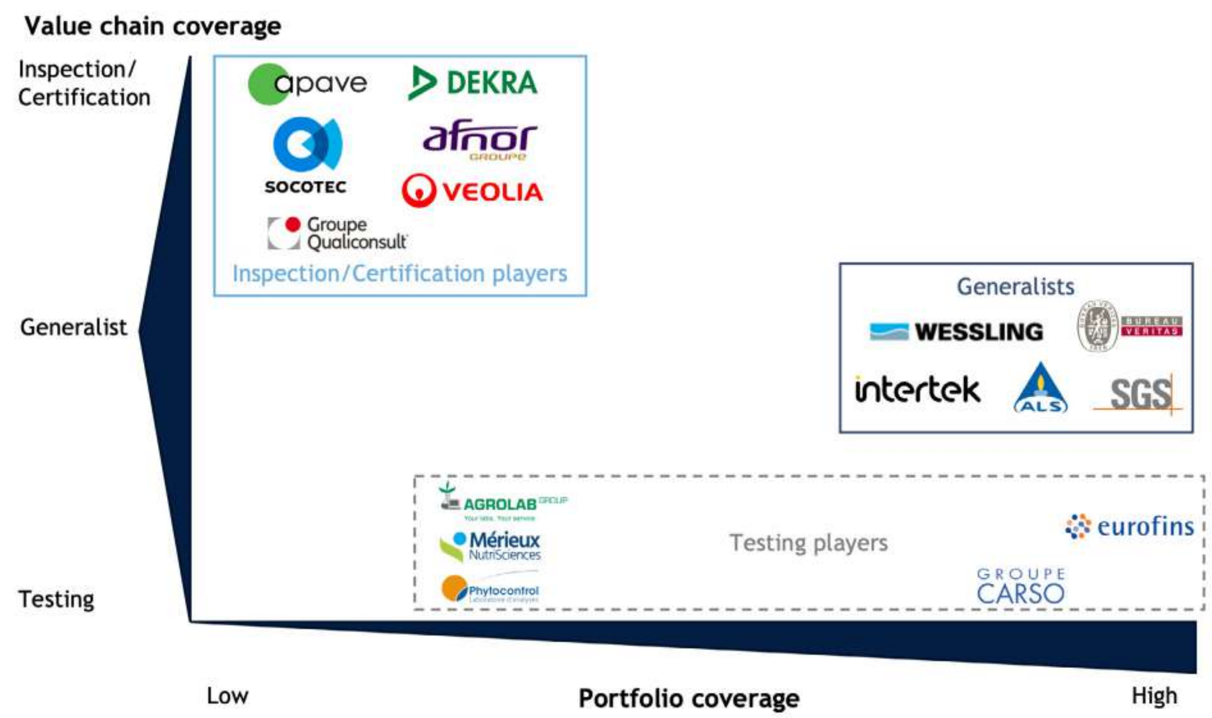
There are three major types of players in the French TIC market (Fig. 13):

• Companies with presence focused mainly or exclusively on laboratory testing. Players could either cover a wide range of end markets, such as Eurofins or Groupe Carso, or just one end market, such as Merieux.

• Inspection/certification specialists without presence in testing and they are important clients for pure testing companies such as Groupe Carso.

• Generalists who provide services across all TIC offerings with a highly diversified mix of end markets.

FIG. 13: MAJOR TIC PLAYERS IN FRANCE



Source: Stifel Equity Research, BCG*

2023 is set to be another year of growth. Industrial and construction activities will continue to grow, creating more products or sites to be tested or inspected. Despite a potential economic slowdown , this growth will be supported by the entry into application of new measures on 1st January 2023, with, for example, the tightening of standards for establishments classified as Seveso or the introduction of new non-financial reporting obligations for large companies within the framework of the European taxonomy. TIC companies will be mandated to certify compliance with these new obligations by the professionals concerned.

Over the medium-term, French TIC companies are set to accelerate their technological and digital transformation, continue their external growth strategy, and look for international expansion.

Germany: the largest European market with the automotive industry holding an important part

The German TIC market is the largest European market valued at c. EUR20bn in 2020 and expected to grow at a CAGR of 5.7% out to 2026 to reach c. EUR29bn.

In Germany, TIC services are provided by both private and public organisations, with the German Accreditation Body (DakkS) responsible for accrediting TIC organisations. The TIC market in Germany is known for its high level of technical expertise and strict adherence to international standards such as ISO and EN. TIC services in Germany are in high demand across many industries, including automotive, construction, and medical devices. German TIC companies are also known for their international reputation and many of them have branches or partners all over the world.

Stringent environmental regulations and arising health safety concerns increase the importance of the TIC market's role to ensure that construction, manufacturing, services, and products meet the standards and regulations in place in Germany.

The automotive end-market accounts for a significant part (c. 25% in 2020) of the overall German TIC market. Among all sectors, automotive accounts for c. 20% of exported products. The automotive industry is growing and bringing more opportunities for TIC companies. The German government emphasizes the need for regular testing of all cars to make sure they adhere to German safety regulations. Moreover, rising automotive production is set to boost demand for TIC services in the future. The German government's goals, such as putting six million electric vehicles on the road by 2030, are creating additional demand from the automotive sector.

The German automotive industry is also known for its focus on innovation and technology, and the TIC market is no exception. Many TIC providers in Germany offer advanced testing and inspection services, such as virtual testing and simulation, as well as services related to advanced driver assistance systems (ADAS) and autonomous driving.

In terms of sub-sectors, the German testing sector is more mature compared with the French market with lower price competition pressure, and this market has the following main features:

- Food, water & environment, and building are the largest segments, comprising jointly over 80% of the testing market value.

- The food end-market experienced strong consolidation activities. Moreover, it's also a market where the outsourcing rate is already very high, and clients are willing to pay a higher price for more elaborate tests or faster results.

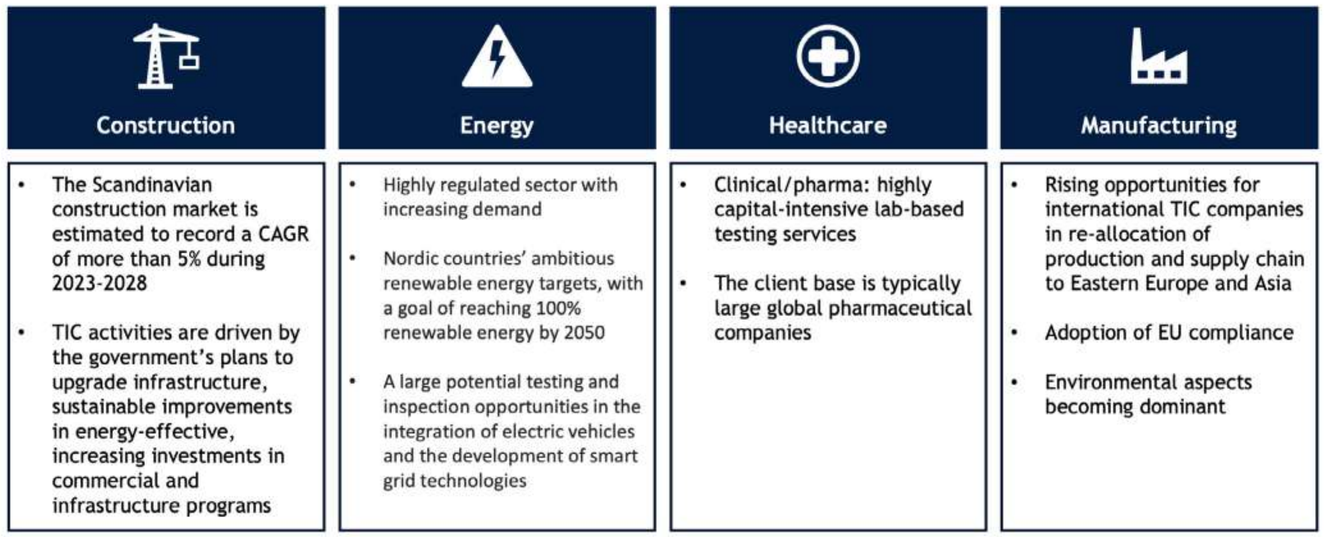
- There are still consolidation opportunities in pharma and water & environment

In Germany, there are several major players in the testing, inspection, and certification industry. Some of the largest and most well-known companies include TÜV SÜD, TÜV Rheinland, Dekra, Bureau Veritas and SGS

Nordic countries: well-developed markets with strong potential in sustainability and supply chain relocation

The TIC sector in the Nordic countries (Denmark, Finland, Norway, and Sweden) is well-developed and serves a variety of industries, including construction, energy, healthcare, and manufacturing

FIG. 14: CORE TIC END-MARKETS IN THE NORDIC COUNTRIES



Source: Stifel Equity Research*

The Nordic TIC market is dominated by global leaders and large regional players:

• In Denmark, Dansk Standard is one of the major players in the TIC sector. The company provides a wide range of services, including product testing and certification, inspection, and technical consulting. Another notable TIC company in Denmark is Dansk Teknologisk Institut (DTI).

• In Finland, FINAS is the national accreditation body and is responsible for accrediting TIC companies. Tukes, the Finnish Safety and Chemicals Agency, is responsible for product safety and provides testing and inspection services. Other major TIC companies in Finland include Kiwa Inspecta, SGS and Bureau Veritas.

• In Norway, Det Norske Veritas Germanischer Lloyd (DNV GL) is a major player in the TIC sector. The company provides a wide range of services, including product testing and certification, inspection, and technical consulting. Another notable TIC company in Norway is SINTEF.

• In Sweden, SWEDAC is the national accreditation body and is responsible for accrediting TIC companies. TIC companies in Sweden include SP Technical Research Institute of Sweden, SGS, and Bureau Veritas.

Fragmented TIC market with vast M&A opportunities

Although in certain geographic regions or segments, TIC activities could be dominated by a few global players, the overall TIC market is highly fragmented. There are vast consolidation opportunities in agri-food, industry, building & infrastructure and the certification segments.

FIG. 15: A BROAD AND HIGHLY FRAGMENTED MARKET OFFERS HUGE EXTERNAL GROWTH OPPORTUNITIES

End-markets	TIC Fragmentation	TIC Competitive environment
Marine & Offshore	Medium	12 members of the International Association of Classification Societies (IACS) class more than 90% of the global shipping fleet.
Agri-Food & Commodities		
Agri-Food	High	A few global players. A large number of local players.
Commodities	Medium	A few global players. A few regional groups and specialized local players.
Government services and international trade	Low	Four main players for government services.
Industry	High	A few large European or global players. Many highly specialized local players.
Buildings & Infrastructure	High	A few regional players. Many local players.
Certification	High	A few global players and quasi-state-owned national certification bodies, and many local players.
Consumer Products	Medium	A relatively concentrated market for toys, textiles ad hardline products. Fragmented markets for electrical products and electronics.

Source: Stifel Equity Research, Bureau Veritas*

M&A has always been a core strategy for global TIC companies to add more icing to the cake

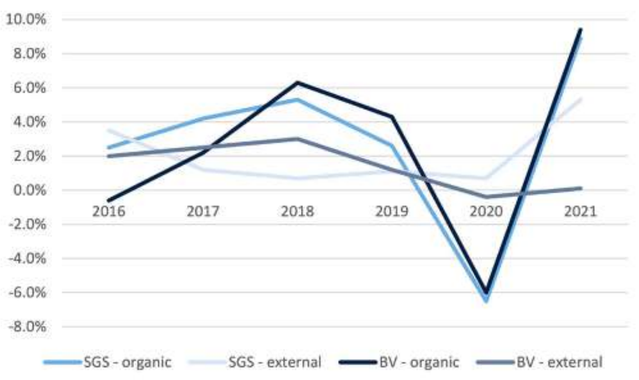
Global TIC companies are constantly looking for bolt-on acquisitions to generate additional growth beyond growing the business organically. If we take SGS and Bureau Veritas, two companies in BG's coverage, for example, we find that:

• M&A activities are good ways of to achieving higher total growth. Between 2016 and 2019, SGS had average organic growth of 3.7% and external growth of 1.6%, while, Bureau Veritas grew 3.1% organically and 2.2% externally on average.

• Both companies kept spending on bolt-on acquisitions in a selective and disciplined way.

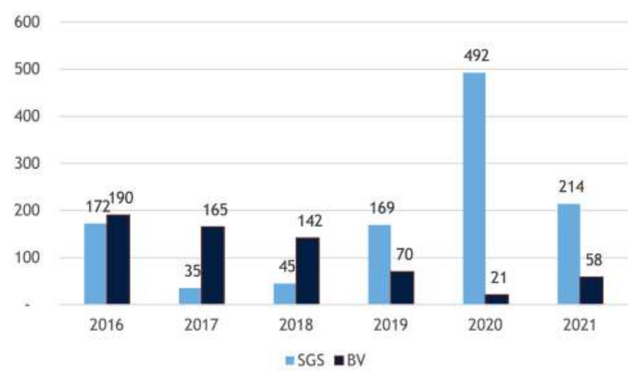
• The amount spent on acquisitions decreased slightly at Bureau Veritas due to the unavailability of targets fitting their acquisition strategy despite Bureau Veritas' strong appetite for M&A.

FIG. 16: CHANGE IN ORGANIC & EXTERNAL GROWTH



Source: Companies

FIG. 17: CHANGE IN ACQUISITION SPENDING (LCY M)



Source: Companies

In general, there are three M&A strategic priorities for global TIC leaders:

• Gaining access to new geographies by acquiring a local player with licenses to operate.

• Acquiring supplementary expertise to offer full solutions.

• Entering new segments.

In terms of sector preferences:

• Bureau Veritas will focus on online retail, energy transition conformity assessment, sustainability assurance, asset lifecycle solutions, and cyber security compliance. In recent months, Bureau Veritas has made several acquisitions to strengthen its position in the United States. In June 2022, the group acquired Advanced Testing Laboratory, a player in scientific sourcing services for various North American markets (consumer health products, cosmetics & personal care and medical devices). Three months later, it acquired CAP, a company specialised in construction services in Florida, and Galbraith Laboratories, a US player specialised in analytical solutions for industry.

• SGS prioritises food, healthcare life science, cosmetics and cyber security compliance. For example, in October 2021, the group acquired two French companies: Idea Tests (cosmetics testing) and Nutrilabo (food testing).

FIG. 18: M&A STRATEGIC PRIORITIES

Source: Stifel Equity Research, Bureau Veritas, SGS*

Private equity investments are involved in the TIC sector and regional competitors backed by financial investors are eyeing a bigger market share

Acquisition strategies are very capital-intensive and require significant financial resources. Several of the industry leaders, notably Bureau Veritas and SGS, are publicly traded. In order to accelerate their development and compete for size, some of their regional challengers have chosen to open their capital to one or more private equity firms

Meanwhile, private equity firms see the TIC sector as an attractive investment opportunity due to its growing demand, stable revenue, high margins, global growth potential, and consolidation opportunities:

• Growing demand: The TIC sector is growing due to increasing regulations and standards in various industries, such as construction, engineering, and consumer goods, leading to rising demand for TIC services.

• Recurring revenue: TIC services are often recurring in nature, as companies require regular inspections and certification, providing a stable and predictable revenue stream.

• High margins: TIC companies typically have high margins, which can be attractive to private equity firms looking for profitable investment opportunities.

• Globalization: Growth in international trade has increased demand for TIC services, providing a global growth opportunity for TIC companies.

Socotec is one of the examples of TIC companies backed by private equity firms. Back in 2008, Socotec started its LBO journey with Qualium and five years later the company continued in the portfolios of Cobepa, BIP Investment Partners and Five Arrows Principal Investments in 2013. Later on, Socotec was sold to Clayton Dubilier & Rice in 2019. As Socotec aims to accelerate its growth to become one of the world's top five TIC companies alongside Bureau Veritas, Intertek, SGS and Eurofins, the company was always a consolidator in the market.

Its competitor Apave announced in July 2021 that PAI Partners would acquire a 30% stake in its capital. In December 2021, Carso announced a re-organisation of its capital around the healthcare specialist Archimed. Capza and Siparex also completed the round of financing alongside the group's founders. Carso group intends to accelerate its international growth and expand its range of services. Carso has set itself the goal of doubling its turnover within the next five years by playing the role of consolidator in the fragmented European testing market.

TIC companies are very selective in M&A transactions while PEs pay higher multiples for their aggressive build-up strategies

As personnel expenses represent more than 50% of revenue on P&L accounts, TIC companies face fewer structural advantages compared to other industries that can achieve economies of scale. Additionally, TIC company employees have some bargaining power when it comes to salaries, and operating leverage is limited for many services, as capacities cannot be easily transferred or replicated in other locations.

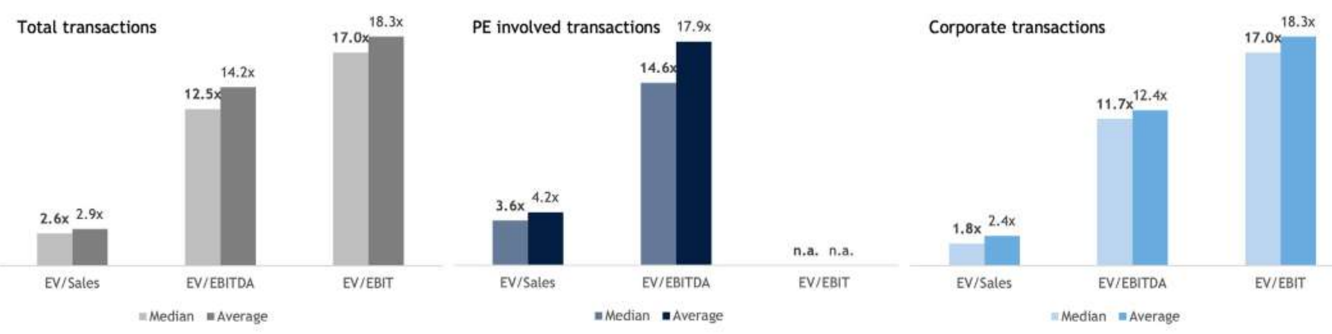
Therefore, TIC companies should be selective when choosing M&A activities, and listed TIC companies are even more demanding. For example, Bureau Veritas has strict and rigorous financial criteria:

- Quick returns with an IRR above 15%
- Superior organic growth and margin at least at the group margin level
- Reasonable multiples: EBIT multiple paid at around 9x on average

Being EPS accretive is a very important criteria for listed TIC companies. Private equity firms have a more aggressive strategy of build-ups.

After analysing transactions over the past five years (only transactions with available financial information, the list is included in the appendix), we noted that corporates are prudent in terms of multiples while private equity firms pay higher multiples than corporate acquirers.

FIG. 19: CORPORATES ARE CAUTIOUS ON VALUATION WHILE PRIVATE EQUITY FIRMS PAY HIGHER MULTIPLES



Source: MergerMarket, Orbis, Companies, press

M&A activities are expected to accelerate. Despite the short-term negative impact of Covid in China, we believe the TIC sector has a bright future

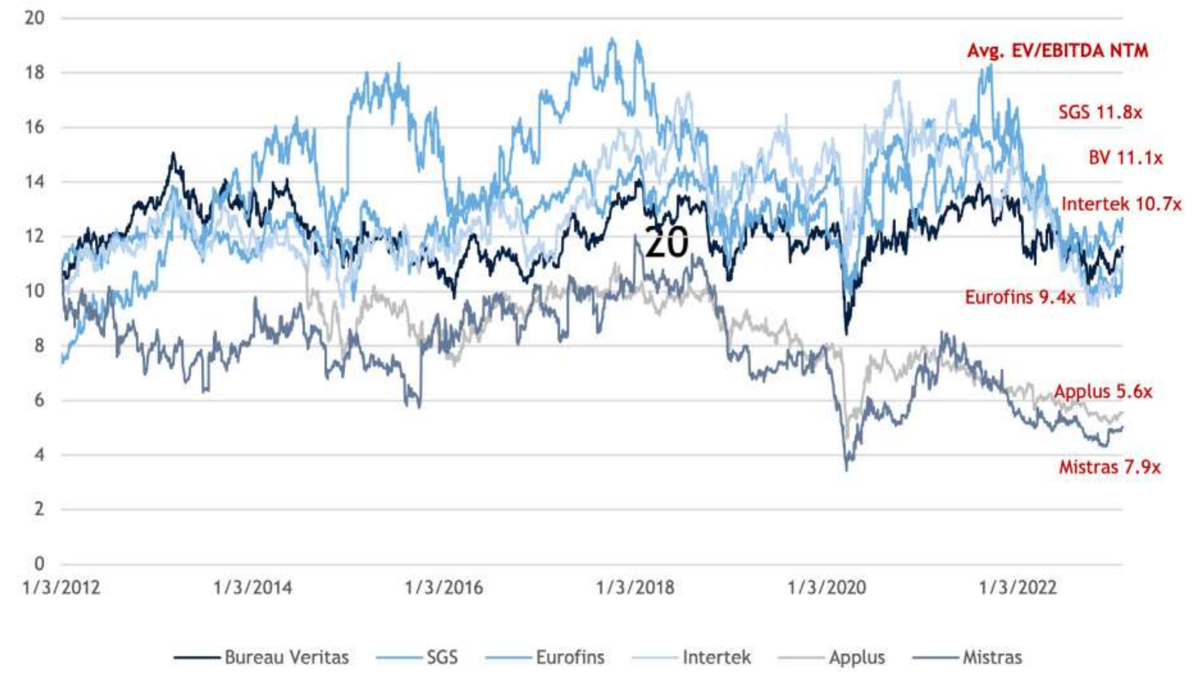
On top of steadily rising demand for TIC services, M&A is one of the most efficient strategies to add additional growth, to transform digitally, and to enter a new services field or geography.

Despite the volatility seen during Covid, valuations of leading TIC companies have not deteriorated and are today just slightly below pre-Covid levels. Considering the surge in Covid cases in China that continues to impact consumers, as well as the manufacturing and construction sectors for several global TIC companies, we expect no valuation rerating by the stock market in the short-term (six months) but we do believe in the bright future of the TIC sector in the mid and longer-terms.

We expect M&A activities to accelerate in the near future. Even though listed TIC companies are cautious in terms of valuation, with their solid performances on the stock market, they could pay higher multiples for good quality assets.

FIG. 20: CHANGE IN VALUATION MULTIPLES OF LEADING TIC COMPANIES

EV/EBITDA NTM	Bureau Veritas	SGS	Eurofins	Intertek	Applus	Mistras
Current trading as of 06/02/2023	11.6x	12.7x	11.0x	11.4x	5.6x	5.0x
Pre-Covid average 03/01/2012 to 02/12/2019	11.9x	13.1x	11.9x	12.9x	6.6x	6.3x
Historical average 03/01/2012 to 06/02/2023	11.1x	11.8x	9.4x	10.7x	5.6x	7.9x



Source: Reuters

Appendix – Comparable transactions over the past five years

Appendix – Comparable transactions over the past five years

FIG. 21: COMPARABLE TRANSACTIONS OVER THE PAST FIVE YEAR

Date	Target	Cty	Acquiror	Cty	EV (€m)	EV/Sales	EV/EBITDA	EV/EBIT
Jun-22	Environ-Lab (100% Stake)	Italy	Eurofins Environment Testing LUX	Luxembourg	8	1.26x	7.4x	n.a.
Jan-22	Element Materials Technology Group	United Kingdom	Temasek (Government of Singapore)	Singapore	6,197	7.75x	28.8x	n.m.
Oct-21	Hydro-X Group (100% Stake)	United Kingdom	Marlowe	United Kingdom	35	1.71x	8.6x	n.a.
Oct-21	VinciWorks (100% Stake)	Israel	Marlowe	United Kingdom	63	n.m	20.1x	n.a.
Oct-21	Intega Group	Australia	Kiwa	Netherlands	293	1.17x	10.2x	33.4x
Sep-21	Santia	United Kingdom	Marlowe	United Kingdom	5	6.42x	n.a.	n.a.
Aug-21	Zetec	USA	Previan Technologies	USA	298	5.70x	21.4x	n.a.
Jul-21	Apave Group (33% Stake)	France	PAI Partners	France	670	0.74x	9.6x	n.a.
Jul-21	Tentamus Group	Germany	BC Partners	United Kingdom	1,000	3.33x	n.a.	n.a.
May-21	SAI Global Assurance Pty	Australia	Intertek Group	United Kingdom	547	3.62x	15.7x	n.a.
Feb-21	GBA Gesellschaft fuer Bioanalytik	Germany	Ardian	France	1,394	6.97x	n.m	n.a.
Feb-21	British Engineering Services	United Kingdom	Inflexion Private Equity Partners	United Kingdom	256	4.28x	27.4x	n.m
Feb-21	BTP Consultants	France	Apax Partners	France	n.a.	n.a.	12.5x	n.a.
Dec-20	Soil & Foundation Company	Saudi Arabia	Applus Services	Spain	25	0.79x	n.a.	n.a.
Dec-20	Millbrook Proving Ground	United Kingdom	UTAC CERAM	France	145	1.60x	11.9x	n.a.
Dec-20	QPS Evaluation Services	Canada	Applus Services	Spain	42	2.63x	n.a.	n.a.
Nov-20	SYNLAB Analytics & Services	Germany	SGS	Switzerland	550	2.72x	16.2x	n.a.
Oct-20	Besikta Bilprovning i Sverige	Sweden	Applus Services	Spain	101	1.72x	11.5x	15.0x
Sep-20	Reliable Analysis	USA	Applus Services	Spain	67	2.79x	n.a.	n.a.
Jul-20	AGQ Labs International (35% Stake)	Spain	Portobello Capital Gestion; SGECR	Spain	125	2.53x	12.5x	n.a.
Jun-20	Normec Group	Netherlands	Astorg Partners	France	350	3.57x	14.6x	n.a.
Dec-19	Opus Group	Sweden	Searchlight-Geilen consortium	USA	444	1.79x	8.9x	21.9x
Nov-19	Centro De Analise E Tipagem De Genomas	Brazil	Eurofins Scientific	Luxembourg	10	1.10x	n.a.	n.a.
Nov-19	LGC Group	United Kingdom	Cinven Partners; Astorg Partners	France	3,503	6.40x	19.9x	n.m
Oct-19	Diagnosys Test Systems	Ireland (Republic)	Astronics Corporation	USA	6	0.77x	n.a.	n.a.
Sep-19	The Socotec Group (33% Stake)	France	Clayton, Dubilier & Rice	USA	1,800	2.57x	n.a.	n.a.
Feb-19	Chemical Analysis Pty	Australia	Eurofins Australia New Zealand	Luxembourg	8	1.96x	12.1x	n.a.
Jan-19	Trinity Fire and Security Systems	United Kingdom	Premier Technical Services Group	United Kingdom	18	0.43x	12.8x	19.1x
Dec-18	Onstream Pipeline Inspection Services	Canada	MISTRAS Group	USA	126	4.34x	9.1x	13.7x
Oct-18	Guardian Electrical Compliance	United Kingdom	Premier Technical Services Group	United Kingdom	14	1.46x	n.a.	6.7x
Oct-18	TestAmerica Laboratories	USA	Eurofins Scientific	Luxembourg	151	n.a.	n.a.	n.a.
Sep-18	AquaServa Netherlands	Netherlands	Normec Group	Netherlands	8	1.00x	8.0x	n.a.
Aug-18	Alchemy Systems	USA	Intertek Group	United Kingdom	414	n.a.	n.a.	n.a.
Jun-18	Intertek NTA	United Kingdom	Intertek Group	United Kingdom	10	2.84x	n.a.	n.a.
Apr-18	Covance (Food Solutions business)	USA	Eurofins Scientific	Luxembourg	554	4.43x	n.a.	n.a.
					Median	2.57x	12.5x	17.0x
					Average	2.92x	14.2x	18.3x

Sources: Mergermarket, Orbis, Press releases, CFNews, Press

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