

FOREWORD



Paul Rawlinson Global Chair Baker McKenzie

In our digital age, it is more challenging than ever to keep a secret. Nearly everything it seems ends up on social media.

We know how hard our clients work to refine their business processes, operations and strategies to keep pace with the rate of innovation. So we were curious to uncover more about how they regard this information and keep it confidential.

Throughout history, some companies have gone to great lengths to safeguard their trade secrets. Colonel Sander's handwritten original recipe for Kentucky Fried Chicken was famously kept locked in a safe at KFC Corporate headquarters. Only two KFC executives know the recipe of the 11 herbs and spices and none of the suppliers of those ingredients have access to the entire formula.

Today's trade secrets are more susceptible to the threat of being hacked or downloaded, but they are of no less value to the companies that own them. In fact, we were surprised to find that nearly half of the 400 senior executives in our survey said their trade secrets are more important than their patents and trademarks. A majority also agreed that trade secrets are a board-level issue of growing concern, with 32% placing it among their top five issues. Given the rapid rate of innovation across global industry and the rise of cyberattacks by competitors, foreign government and hacktivist groups, we expect that concern to become even greater in the future.

This prediction was confirmed by the eight experts we interviewed for this report, including senior figures from the FBI, US Chamber of Commerce, European Commission and our own partners on the front lines of trade secret protection and enforcement.

One of the more concerning survey findings was the fact that less than one-third of companies have taken basic measures to protect their trade secrets despite the growing awareness of their importance. Unlike patents and other forms of intellectual property, it's much more difficult, if not impossible, to put the genie back in the bottle once a trade secret has become public.

That makes it even more crucial for board-level executives to better understand the threats and manage those risks by taking action.

We hope this report provides you with the insight you need to take the next steps towards greater protection and security. And please, feel free to share these findings with anyone who may also find them helpful. No need to keep them secret.



EXECUTIVE SUMMARY

Driven by the furious pace of technological advancement, companies across industries are engaged in an unprecedented race to innovate. To win business, companies must not only be smarter, quicker and more agile in their approach to innovation, but also transform how they protect the very innovations that define them.

Amid this high-speed race, the attention that companies give to protecting their trade secrets can mean the difference between success and failure. It's why an IT company will go to great lengths to safeguard its software algorithms, a life science company will conceal its early testing procedures, and an e-commerce firm will closely guard its supply chain and logistics techniques.

To better understand the role trade secrets play in today's digital age, Baker McKenzie partnered with Euromoney Institutional Investor Thought Leadership to examine how the leaders of multinational companies view their trade secrets, who they see as the greatest threats to those secrets, and what they do to protect them.

Drawing on the survey responses of 404 senior executives across five industries, we found that these executives place great importance on trade secrets. In fact, half said their trade secrets were more important than their patents and trademarks. Even more (69%) said they foresee trade secret protection becoming more critical than safeguarding other types of intellectual property given the rapid pace of tech innovation.

However, our survey results also revealed that companies are not taking basic steps to preserve their trade secrets, reflecting a disconnect between the level of importance that corporate executives place on this type of intellectual property and what their companies are actually doing to protect them.

Other key findings include:



Trade secrets and IP play an essential role in companies' brand value and corporate strategy.

In our survey, 82% of respondents said their trade secrets are an important, if not essential, part of their businesses. Among industries, 46% of financial services executives said they consider their trade secrets to be essential to their corporate strategy, followed by industrials and ICT executives (both 41%), healthcare (35%) and consumer goods and retail (27%).



Trade secret protection is a board-level issue.

Among our respondents, 61% said that protecting their company trade secrets and IP is a board-level issue, reflecting the rising value of trade secrets in our digital age. Nearly one-third ranked it a top-five concern.



One in five companies has suffered trade secret theft.

Among the companies in our survey, 20% said they've had trade secrets stolen. Another 11% said they don't know whether they've been the victim of misappropriation, indicating that the incidents of theft are likely higher. The healthcare industry is by far the most targeted, with 33% of those executives in our survey reporting that they've suffered trade secret theft, followed by industrials (18%) and ICT (17%).



EXECUTIVE SUMMARY



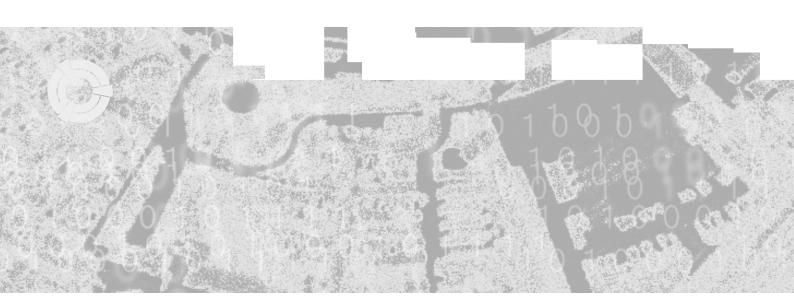
Corporate leaders most fear theft by former employees.

When asked to identify the greatest threat to their trade secrets, 32% of our respondents said they most feared having trade secrets stolen by former employees, followed by suppliers, consultants and other third parties (28%), and current employees (20%). Another 15% said they most fear rogue or state-sponsored cybercriminals or hackers.



Only one-third of companies maintain inventories of their trade secrets and have action plans for responding to theft.

Despite the heightened awareness of the importance of trade secrets, only 31% of our respondents said they have procedures in place to respond to the threat of or actual theft of trade secrets. Given that trade secrets are no longer protected once they become public, the question is how much more they should be doing to manage this risk.



TRADE SECRET THEFT: A TRILLION DOLLAR PROBLEM?

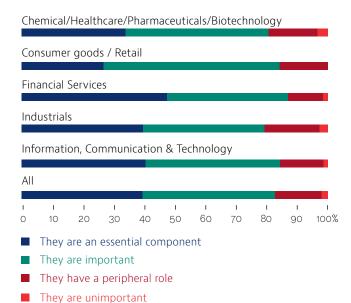
Ask any senior executive at a multinational company about trade secrets and they will likely say they play an important, if not essential, part in their corporate strategy. Such is the growing commercial power of trade secrets, defined as any confidential business information that gives a company a competitive edge, such as manufacturing techniques, computer algorithms, marketing strategies, recipes, supplier lists, and pricing information.

Unlike other types of intellectual property, trade secrets do not require filing applications with the government. To protect them, all companies need to do is take steps to keep the information confidential. Some companies opt to protect some of their intellectual property as trade secrets for that very reason – to avoid having to disclose the confidential information during the patent application process.

Because the onus to keep trade secrets a secret lies solely with the company, it's important that corporate leaders understand the magnitude of the responsibility. Although our survey results show trade secrets have captured the attention of CEOs and other board-level executives, it also shows a lack of urgency and awareness of the steps they should take to protect them.

"Many times companies are not going to know if they have had trade secrets stolen, particularly if it's a computer intrusion," says John Robertson, a supervisory special agent and the intellectual property rights liaison in the FBI's criminal investigative division. "The more savvy criminals are not going to hack into your system and steal everything in one go. They're going to break in, lurk, read emails, find out what your crown jewels are, and then extricate them in such a way that you will not know."

To what extent do trade secrets and IP play a part in your brand value and corporate strategy?



1-3%

Estimated value of trade secret theft per year as a percentage of US GDP



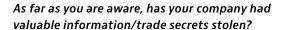
That's one of the reasons why calculating the global value of trade secrets theft is so difficult, along with the facts that different industries measure this type of theft in different ways, and some companies avoid reporting incidents for fear of reputational and financial damage.

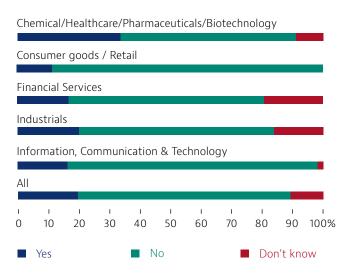
As a result, there are no official global or national statistics on the total value of trade secret theft, which means the exact size of the problem is still unknown, with only estimates to go on. Research published in 2014 by PwC and the Center for Responsible Enterprise and Trade, for example, estimated the value of trade secret theft in the US to be 1% to 3% of its GDP, the equivalent of US\$200 billion to \$550 billion per year. Extrapolating that estimate to other advanced industrial economies could put the global cost of trade secret theft in the trillions.

What is known is that the number of trade secret court cases has been rising exponentially. In the US, for example, judges in US district and state appellate courts issued rulings in 325 trade secrets cases in 2015 – roughly three times the number of judgments in 2005, according to research by professional services firm Willamette Management Associates.

Willamette's analysis shows that the highest proportion of these cases involved companies in the ICT and "miscellaneous services" sectors. Other targeted industries include chemicals, consumer products, healthcare and utilities. The study also found that business information such as customer lists, as well as technical knowhow and software, are the most commonly stolen trade secrets, and that company employees and business partners are the biggest culprits.

These findings are in line with our own survey results, as the incidents of trade secret theft continue to rise, driven by the acceleration of innovation across global industry. In turn, this rapid rate of innovation has caused trade secrets to become an increasingly preferred method of protection, particularly when speed is of the essence.





Most of the CEOs we speak to recognize the importance of trade secrets to their businesses, but we still see too many who have their 'aha!' moment when their company becomes a victim.

Mark Elliot, US Chamber of Commerce



Because trade secret protection takes effect immediately, companies often opt for this type of protection when an invention is at risk of becoming obsolete by the time they obtain a patent, or when their competitive advantage depends on being first to market.

At the same time, this wave of tech innovation has emboldened so-called threat actors. Such actors can remove vast amounts of company data in seconds, and the proliferation of internet usage has put companies at greater risk of being hacked by their competitors, foreign governments and hacktivist groups.

State-sponsored economic espionage might be the preserve of spy thrillers, but in a cyber-enabled globalized economy, it's real and rising. All of this pushes the issue of trade secrets and the importance of protecting them into corporate boardrooms. But is it being tackled the way it should?

"Most of the CEOs we speak to recognize the importance of trade secrets to their businesses, but we still see too many who have their 'aha!' moment when their company becomes a victim," says Mark Elliot, executive vice president of the US Chamber of Commerce's Global Intellectual Property Center. "Only then do they realize that they should have done more to protect their trade secrets."

In terms of where trade secrets theft originates from, which of the following are you most fearful of?





02 COUNTING THE COST OF THEFT

Nearly half of the corporate executives in our survey said their trade secrets are more important than their patents and trademarks. Even more (69%) said they foresee trade secret protection becoming more critical than safeguarding other types of intellectual property given the rapid pace of tech innovation.

The rising awareness of the importance of trade secrets is significant, but it's only the initial stage of the process. The tricky issue with trade secrets is they are only protected as long as they are kept secret. The moment the information becomes public, anyone can use it, unlike patents and other types of intellectual property that can be recovered and enforced through injunctions.

"Increasing people's understanding of the importance of trade secrets and their protection is an essential step in creating the right protections," says David Lashway, co-chair of Baker McKenzie's Global Cybersecurity Practice. "You cannot risk manage something you don't know is at risk."

One of the reasons companies often don't put the appropriate level of time, energy and resources into managing the risk to trade secrets is because of their intangible, varied characteristics. How, for example, do you determine the value of a proprietary search algorithm?

"Most companies understand the need to protect their trade secrets but the big difference is identifying which of their trade secrets are of most value, and that varies from company to company," says Kevin O'Brien, chair of Baker McKenzie's North America Intellectual Property Practice.

This question of valuation still perplexes the IP industry, to the extent that there is no universally accepted model. Consor Intellectual Asset Management, a US-based consulting firm, argues that the most appropriate valuation model for trade secrets is the net present value of future cash flows, a method used to value companies, investments and corporate assets.

Where would you rank the importance of trade secrets relative to other IP for your company?

Trade secrets are more important to our company than patents and trademarks

48%

Trade secrets are less important to our company than patents and trademarks

32%

Trade secrets are more important to our company than patents and less important than trademarks

12%

Trade secrets are less important to our company than patents and more important than trademarks

8%

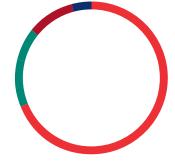
Do you foresee trade secret protection as increasing in importance relative to other IP due to the advancement of technological innovation?



■ 17% No we see them working in conjunction

■ 10% No

■ 4% Don't know

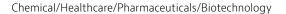


Viewing trade secrets as assets that give companies a competitive advantage that should generate future cash flows, Consor argues that companies can calculate the value of their trade secrets by multiplying three factors: the total amount of future cash flow; the discounted basis of that future cash flow as a present value; and the probability of future cash flow occurring.

The reality, however, is that many companies won't know the true value of their confidential information until it's been stolen, which can have devastating consequences. If, for example, a company spends billions of dollars developing trade secrets only to have them taken by someone who uses them to bring the product to market first, it can destroy the company.

Short of destruction, companies that fall victim to trade secret theft can face other serious consequences, such as regulatory investigations into risk controls and data protection procedures and criminal investigations. They can also be subjected to shareholder and third-party lawsuits, such as claims filed by current and former employees whose confidential information has been hacked.

"For companies, the ripple effects go well beyond losing their trade secrets and competitive position in the market," O'Brien says. Which of the following statements best describes your corporate view on trade secrets and IP protection?



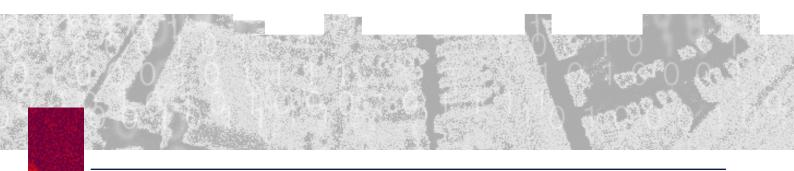


- This is a board-level issue but not within our top five concerns
- This is a board-level issue and one of our top five concerns
- This is a standard issue that is well understood
- This issue is not yet a board-level issue

Most companies understand the need to

protect their trade secrets but the big difference is identifying which of their trade secrets are of most value, and that varies from company to company.

Kevin O'Brien, Baker McKenzie



CASE STUDY: SCHOTT AG

PUTTING TRADE SECRETS UNDER THE MICROSCOPE

As a leading international technology group that specializes in making high-quality specialty glass and glass ceramics products like radiation-resistant glass lenses for cameras used to take close-up pictures of planets from outer space, SCHOTT's success depends on its ability to innovate.

Innovation, along with the quality of its ideas, has kept the German company in business for more than 130 years. It's also what has motivated the company to safeguard its inventions.

"Most of our businesses are highly innovative, so there has always been some sense of the importance of protecting our trade secrets and intellectual property in those areas," says Christoph Dahl, compliance counsel at SCHOTT, which recently won a contract to create the primary mirror on the world's largest telescope now under construction in northern Chile.

One challenge, however, was identifying the company's trade secrets and prioritizing which ones were among the most valuable.

"There are different views on what's important and what's not according to who you speak to, the business they're in and the length of time they've worked here," Dahl says.

To compile an inventory, the SCHOTT compliance office set out to identify the company's top trade secrets across each of its seven main business units — those critical business processes that distinguish its products from competitors and could hurt the company if they ever became public.

A second challenge was ensuring that all of its 15,000 employees understand what trade secrets are, why they are important and how to protect them. Given Germany's strict privacy and data protection laws, it's nearly impossible for SCHOTT to protect its trade secrets by monitoring employees using surveillance technologies. So it's had to rely heavily on education.

"Part of the problem for us, as a large international company, was communicating to all the staff," Dahl says. "It is important that the message gets across."

To spread the message, the compliance office has been running an awareness campaign for more than two years to provide on-site and web-based training and issue guidelines and policies. It's an ongoing, intensive process that evolves along with SCHOTT's trade secrets and other innovations. And it appears to be making a difference.

"Our people are now thinking much more about these issues and asking the right sort of questions," Dahl says. "They are taking it seriously."

03 RISING TRADE SECRET PROTECTIONS IN THE US, EU AND ASIA

News headlines about global cyberattacks and legal battles between tech titans have made it nearly impossible for corporate executives to ignore the issue of trade secrets. The enactment last year of two game-changing pieces of legislation – the US Defend Trade Secrets Act and European Union's Trade Secrets Directive – has helped sharpen that focus.

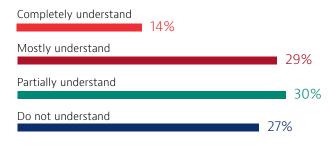
This heightened awareness was reflected in our survey, with 71% of respondents saying they completely, mostly or partially understand the implications of the DTSA on their companies, and 73% saying the same for the EU Directive. Although the laws differ in some respects, the DTSA and EU Directive share a common purpose: to create a uniform approach to trade secret protection and enforcement within the US and among EU member states.

Prior to the DTSA, US companies could seek redress for trade secret theft in federal court, but only under certain circumstances such as the company and the accused residing in different states. In many cases, companies had no choice but to sue in state court, where trade secret laws and the application of those laws differed from state to state. The DTSA now provides a uniform law under which companies can seek civil remedies for trade secret misappropriation in federal court.

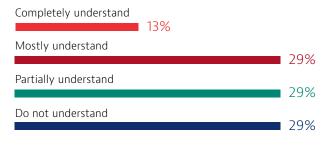
Similarly, the EU had no unified trade secrets legislation prior to the EU Directive. All member states offered some form of trade secret protection and enforcement in their national laws, but it varied from country to country. In fact, Sweden was the only one to have a law specifically protecting trade secrets.

Both the EU Directive and the DTSA define trade secrets, outline the reasonable measures companies must take to ensure their protection, and provide legal remedies for those that suffer trade secret theft, such as court injunctions and damage awards based on lost profits.

To what extent do you understand the implications of the EU's Trade Secrets Directive for your company?



To what extent do you understand the implications of the US' Defend Trade Secrets Act for your company?





No less significant, US Congress passed the DTSA almost unanimously, with politicians from across the political divide seeing eye-to-eye with the business community on an issue of great mutual importance. It was also a popular measure in the EU.

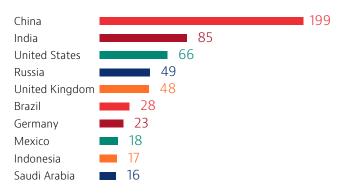
"It was one of those rare occasions when a legislative initiative didn't have a split of interests between one sector and another," says Jorge Novais, legal and policy affairs officer in the European Commission's Directorate General for Internal Market, Industry, Entrepreneurship and SMEs. "Also the initiative was welcomed by large and small companies, which was important."

Since the DTSA took effect last May, companies have already filed over 300 trade secrets cases under the new law, according to the US Chamber of Commerce. The EU Directive, which passed within weeks of the DTSA, still needs to be transposed into the national laws of each of the EU's 28 member countries, which have two years to do so. But some companies in Europe have already expressed interest in seeking recourse under the legislation.

"It's still early, but in terms of litigation and court cases, we may expect some impact," Novais says. "More important than that is the fact that companies in the EU will now have a harmonized legal framework with adequate measures, procedures and remedies available throughout the union."

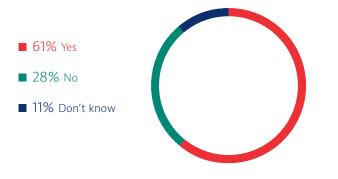
Important legislative achievements in their own right, the DTSA and EU Directive have also sparked changes in other parts of the world. Last year, for example, Japan amended its Unfair Competition Prevention Act and half of the 12 countries in the Trans-Pacific Partnership Agreement strengthened their trade secret provisions and enforcement regimes.

In your opinion, which three of your company's main export markets need to strengthen their trade secret protection and enforcement the most?



^{*} Based on the number of votes each country received per respondent

In your opinion, does trade secret protection and enforcement need to be strengthened in your country?





Companies seem to be embracing these developments, with 61% of the executives in our survey saying they would like to see greater trade secret protection and enforcement in their countries, particularly those executives based in Asia Pacific (73%). That's a sign of growing consensus given that 50% of our respondents identified China as the export market in most need of strengthening its trade secret protection laws, followed by India with 21%.

China is revising its trade secrets law to broaden the definition of trade secrets and increase the penalties for misappropriation. The changes, expected to take effect later this year, also include an explicit provision against trade secret theft by current and former employees.

India's government is also taking steps toward improvement. Last year the Indian government launched the National Intellectual Property Rights Policy designed to strengthen the country's IP protection and enforcement regime, including enacting a trade secrets law. How effective these changes will be in practice remains to be seem, but the efforts show promise.

"Couple the passage of the DTSA and EU Directive with the strengthening of the laws in Asia Pacific and you have a powerful recognition of the importance of trade secrets and the need to enforce them quickly and efficiently," Baker McKenzie's O'Brien says. "That we have all three regions working simultaneously is truly extraordinary."

Companies in the EU will now have a harmonized legal framework with adequate measures, procedures and remedies available throughout the union.

Jorge Novais, European Commission



04 WHAT COMPANIES NEED TO DO

Growing recognition among governments and companies of the importance of trade secrets and the need to protect them is a step in the right direction. But with just 31% of the executives in our survey reporting that their companies inventory their trade secrets and have action plans to respond to potential theft, there is more work to be done.

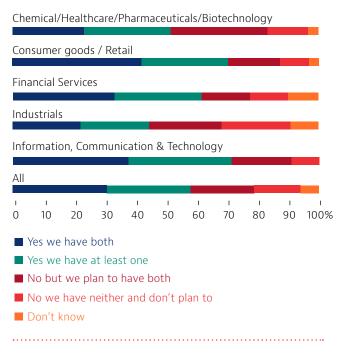
"We would encourage CEOs to apply the same focus and attention to protection of trade secrets that they apply to growing their business and meeting quarterly targets," the US Chamber of Commerce's Elliot says.

Protecting trade secrets is not typically as costly or onerous as protecting other forms of intellectual property because they do not have to be registered with the government. Preserving trade secrets requires that companies, inventory their trade secrets, limit the number of people who know the information, develop technical controls to protect their trade secrets and train employees on the importance of trade secrets. They must also test their controls and implement action plans for responding to threats and actual theft.

"Finding the best approach to protection will differ from one company to the next depending on its risk appetite," Baker McKenzie's O'Brien says. "But corporate leaders need to take the time to identify their most valuable trade secrets and determine how much their employees understand their importance."

Based on the results of that process, companies are best positioned to choose the most appropriate protective measures to take, from securing computer networks and monitoring employee electronic use to providing training, developing corporate policies, and requiring anyone who comes into contact with trade secrets to sign non-disclosure agreements.

If your company is concerned about trade secret protection, does your company identify and maintain an inventory of its trade secrets and does the company have an action plan for how to respond to actual or threatened misappropriation?



If trade secrets are a concern, is this reflected in your HR practices (i.e. drafting of employment contracts, monitoring computer downloads, exit interviews etc.)?





Of course it's impossible to protect against every vulnerability, but corporate leaders still need to take the precautions they can.

"Companies are on the front lines of the battle for trade secrets, they are the victims," Baker McKenzie's Lashway says. "They do have an obligation to identify and protect trade secrets. But if a nation state actor has prioritized stealing their trade secrets as part of its national agenda for economic growth, the idea that a company is going to be able to successfully protect itself by itself is challenging to say the least."

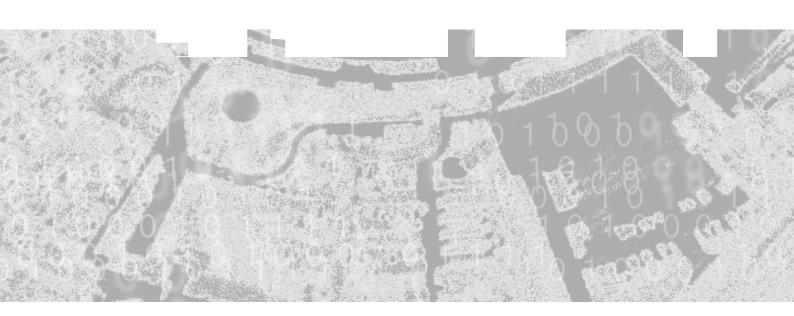
That's why governments also have an important role to play in protecting trade secrets. The protective measures companies put in place is the first line of defense, but the stronger approach is a combination of corporate action and government enforcement, including governments working together to minimize theft.

"There has been enormous work done globally to bring about collaboration on tackling cyber threats," Lashway says.

The bottom line is that corporate leaders can and should do more to protect their trade secrets and preserve these increasingly important assets. Their future of their companies may depend on it.

If a nation state actor has prioritized stealing trade secrets as part of its national agenda for economic growth, the idea that a company is going to be able to successfully protect itself by itself is challenging to say the least.

David Lashway, Baker McKenzie



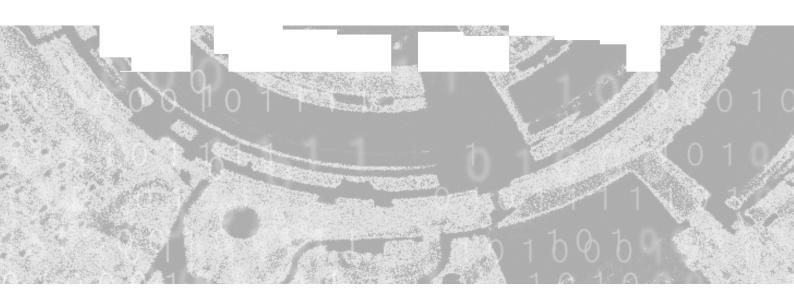
DEFINING OUR TERMS

For the purposes of this report, we use the definition of a "trade secret" in the 2016 US Defend Trade Secrets Act. Under the DTSA, trade secrets are defined as, "all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing if (A) the owner thereof has taken reasonable measures to keep such information secret; and (B) the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information.

ABOUT THE RESEARCH

In conducting the research for this report, Euromoney Institutional Investor Thought Leadership surveyed a total of 404 senior executives from multinational companies across five industries. Most of the respondents (172) were C-suite executives (chairmen, CEOs, CFOs, CIOs and board members), followed by (138) senior legal and compliance executives (General Counsel, Head of Compliance, Head of IP) and other senior executives (94).

The respondents mostly came from the following five industry sectors: consumer goods and retail; information, communications and technology; chemical, healthcare and pharmaceuticals; financial services; and industrials. Geographically, most respondents (164) are based in Europe, the Middle East and Africa, followed by the Americas (124) (primarily North America), and Asia Pacific (116).





INTERVIEWS

In addition to the quantitative analysis, we conducted eight in-depth interviews with experts in the trade secrets and IP field, including two senior company executives, who because of the sensitivity of the subject, did not want to have their names and company disclosed.

The six on-the-record interviewees are:



John Robertson Supervisory Special Agent Intellectual Property Rights Liaison Federal Bureau of Investigation



Kevin O'BrienChair, North American Intellectual
Property Practice Group
Baker McKenzie



David LashwayCo-Chair
Global Cybersecurity Practice
Baker McKenzie



Jorge Novais Gonçalves Legal and Policy Officer Internal Market, Industry, Entrepreneurship and SMEs European Commission



Christoph Dahl Compliance Counsel SCHOTT AG



Mark Elliot
Executive Vice President
Global Intellectual Property Center
US Chamber of Commerce





Industrials

Information, Communication & Technology

- They are an essential component
- They are important
- They have a peripheral role
- They are unimportant

Which of the following statements best describes your corporate view on trade secrets and IP protection?

Chemical/Healthcare/Pharmaceuticals/Biotechnology



- This is a board-level issue but not within our top five concerns
- This is a board-level issue and one of our top five concerns

50

60

70

80

90

100%

■ This is a standard issue that is well understood

40

■ This issue is not yet a board-level issue

30

20

Where would you rank the importance of trade secrets relative to other IP for your company?

Trade secrets are more important to our company than patents and trademarks.

48%

Trade secrets are less important to our company than patents and trademarks.

32%

Trade secrets are more important to our company than patents and less important than trademarks.

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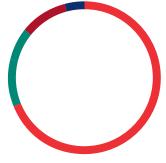
Do you foresee trade secret protection as increasing in importance relative to other IP due to the advancement of technological innovation?

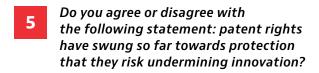
■ 69% Yes

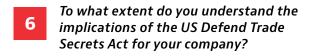
■ 17% No we see them working in conjunction

■ 10% No

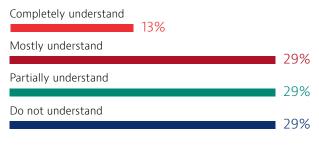
■ 4% Don't know

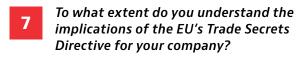




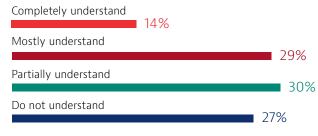


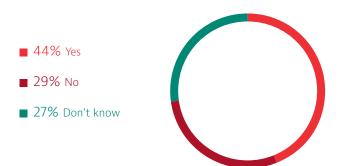


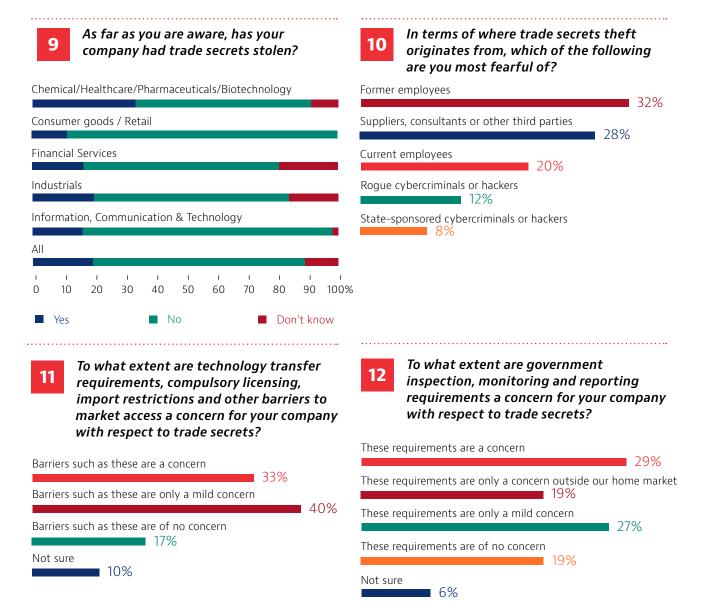




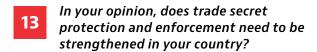


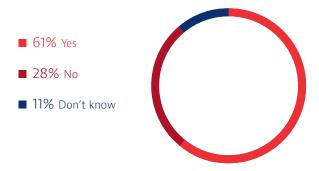




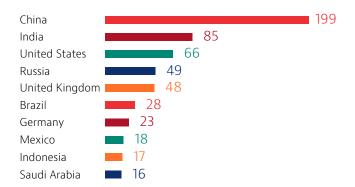








In your opinion, which three of your company's main export markets need to strengthen their trade secret protection and enforcement the most?



* Based on the number of votes each country received per respondent

If your company is concerned about trade secret protection, does your company identify and maintain an inventory of its trade secrets and does the company have an action plan for how to respond to actual or threatened misappropriation?

If trade secrets are a concern, is this reflected in your HR practices (i.e. drafting of employment contracts, monitoring computer downloads, exit interviews etc.)?

