

# Risk Nexus

Counterfeit products: new risks in global value chains



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Cover: Counterfeit products have infiltrated the complex supply-chains of global companies.

## About Risk Nexus

Risk Nexus is a series of reports and other communications about risk-related topics from Zurich.

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# Foreword

**Counterfeit products have become a global phenomenon, affecting all industry sectors, some to an alarming extent. They pose serious health and safety risks to consumers. Counterfeiting is also causing widespread damage to the economy, society, and the environment, accelerated by the online economy and the tight links with international organized crime and the shadow economy.**



Even worse, by infiltrating the complex supply chains of global companies, fake products or product components are significantly increasing the probability of costly and reputation-damaging product recalls and liability claims. Companies should assess their exposures to these new risks in global value chains and proactively take measures to manage them.

Through our customers, Zurich's Risk Engineering unit has seen first-hand how counterfeiting cases raise complex supply and liability issues. However, there is still a low level of awareness about this problem, both in the private and public sectors. This combination of high significance and low awareness has motivated us to produce this publication. Our goal is to share some eye-opening counterfeiting cases across industries, to highlight the changing nature of the risks related to them, and to collect best practices against the global problem of

counterfeiting from a range of stakeholders and points of view. We refrain from mentioning the names of companies that became victim of counterfeiting. But where notable action or best practices against counterfeiting are public information, we do mention company names for clarity.

I hope you find the insights and best practices collected in this Risk Nexus publication both inspiring and useful for your own risk management either in business or as a consumer.

A handwritten signature in blue ink, appearing to read 'Robert Gremlı', written in a cursive style.

**Robert Gremlı**  
**Global Chief Risk Engineering**  
**Officer, Zurich**

## 1. Executive Summary

**Counterfeiting is the practice of manufacturing products, often of inferior quality, and selling them under a brand name without the brand owner's authorization. Even though counterfeits are sold at a lower price, it is an extremely profitable illegal business because counterfeiters do not have to invest in research and development, design, marketing and after-sales service.**

Such profitability has seen counterfeiting expand from its traditional core markets of luxury goods and art in recent years. It is now present, for example, in the automotive, chemicals, consumer electronics, foods and beverages, agricultural products and pharmaceuticals industries. For businesses in these sectors, its presence causes concern over loss of revenue and reputation as well as loss of consumer trust.

The purchase of a counterfeit product may seem like a good bargain, particularly as the fall-out from the 2008 financial crisis continues to constrain household budgets. Yet counterfeits pose real risks to consumers, whether or not they are aware that the product is a fake. For example, counterfeiters routinely ignore health and safety regulations, which results in many counterfeits being 'laced' with unsuitable, and often harmful, substances to cut production costs. Counterfeits also have negative consequences for workers, public finances and the environment.

But the most worrying, and most widely underestimated, aspect of counterfeiting is the pace at which it is evolving. The impact of a globalized economy, digitalization and investment by international organized crime groups is rapidly enhancing the production and organizational quality of counterfeiting. In many cases, this has led to anti-counterfeiting technology being bypassed and elaborate initiatives – such as the establishment of an entire fake company – to pass products off as legitimate.

Recent cases have shown that counterfeiters quickly adopt any new fabrication and packaging technologies that assist their illicit activities. In future this might include, for example, 3D printing and other advanced, computer-controlled manufacturing techniques, which in principle allows for the production of fake goods directly in the targeted markets, avoiding risky imports through customs.

The increasing sophistication of counterfeiters means that their products are no longer limited to cheap imitations sold on the black market. Given new opportunities provided by globalization and outsourcing, counterfeits are now infiltrating distribution chains, masquerading as authentic products to wholesalers and retailers. Counterfeits are also entering official supply chains as intermediate products, for example as parts of automobiles or aircraft. The difficulty for distributors and manufacturers in identifying fakes exposes them to liability claims where the offending products cause harm to consumers, costly product recalls and expensive lawsuits.

To respond effectively to the threat posed by counterfeiting, governments, regulators and the private sector must work together. Regulation must be applied more consistently at a regional and global level and be cognizant of where loopholes may lie in order to close them. Governments must similarly address counterfeiting on a broader basis, with an emphasis on raising public awareness, protecting intellectual property (IP) rights and customs enforcement.

Businesses must prioritize the fight against counterfeiting as a board level issue. They should look to increase their internal resilience around IP and supply chain management, and consider new technology to identify fakes. Greater understanding of a firm's market and customers will also be helpful in these efforts, as will collaboration with industry peers and authorities at a national and international level. Finally, companies should assess their insurance coverage to clarify the extent to which risks posed by counterfeits are covered. They can then take appropriate action, drawing upon the risk engineering and safety expertise of insurance providers where necessary.

# Section 2

Not just fake handbags:  
The new risks of the global  
counterfeiting business



Counterfeiting is an extremely profitable illegal business because upfront investments in research, development, design and marketing do not have to be made and guarantees are not provided.”

**Counterfeits are a growing and often underestimated risk for consumers and companies. While many people still associate counterfeits with a cheap handbag bought on a holiday, today all types of trademarked industrial products are faked and sold worldwide. Many sectors are affected in previously unexpected ways, especially because counterfeit intermediate products are now entering the supply chains of companies, the armed forces and even space agencies. These developments not only pose health and safety risks to consumers, they also create the risk that companies will be faced with high costs to settle liability claims or recall products. In this section, we show that counterfeiting is now a major global business and elaborate on the real risks posed by fake products.**

Counterfeit products have probably existed as long as the originals themselves. Counterfeiting is the practice of manufacturing products, often of inferior quality, and selling them under a brand name without the brand owner’s authorization.<sup>1</sup> Counterfeits thus illicitly use the reputation of an established and trusted brand. Although they are sold at lower prices than the original goods, counterfeiting is an extremely profitable illegal business because upfront investments in research, development, design and marketing do not have to be made and guarantees are not provided. All that is needed is to produce, ship and distribute the faked goods. Further, producing an inferior copy of a product can be extremely cheap, as low quality and low safety standards prevail, and expensive manufacturing steps or costly ingredients (such as the active ingredient of a medicine) are omitted. Sweatshop labor or inferior workforce is often employed, whilst environmental and other protection standards are usually ignored.

The luxury goods industry has a long history of combatting counterfeit products. Certain countries and markets<sup>2</sup> are notorious for the fake handbags and

watches that are sold on the streets. Despite considerable efforts by luxury goods manufacturers to fight fakes, the majority of seized illicit items at the borders of developed economies are still watches, clothing, handbags, wallets, sunglasses, shoes, accessories, perfumes, cosmetics and body care products.

But ‘knock-offs’ are not limited to luxury goods. Today, counterfeit finished products or parts are affecting a wide range of industries, including the automotive, chemicals, pesticides, consumer electronics, electrical components, foods and beverages, agricultural products, pharmaceuticals, packaging materials, tobacco, toiletries and household products industries. Counterfeiting has a long history and is a widespread problem in the art market. In the financial markets, cash and bullion coins are merely the most obvious targets: Recent cases of fraudulent brokers who sold counterfeit car insurance certificates or faked contracts for investment products, illicitly using the names of trusted financial services companies, have shown that counterfeiting is not only a problem which affects manufacturers, but also service providers.

<sup>1</sup> International Trademark Association, <http://www.inta.org/TrademarkBasics/FactSheets/Pages/Counterfeiting.aspx>.

<sup>2</sup> See, e.g., the annual Notorious Markets List by the Office of the US Trade Representative, [http://www.ustr.gov/sites/default/files/FINAL-PUBLISHED%202013\\_Notorious\\_Markets\\_List-02122014.pdf](http://www.ustr.gov/sites/default/files/FINAL-PUBLISHED%202013_Notorious_Markets_List-02122014.pdf)

## The evolving face of counterfeiting

Michael Ellis, the Head of INTERPOL's Trafficking in Illicit Goods and Counterfeiting program, comments on the evolution of counterfeiting: "Counterfeiting has become a shared problem which touches all corners of the world, across industries, commodities, and countries. In our experience, the predominant common denominator in all types of intellectual property crime, and illicit trade, is the central involvement of transnational organized criminals who control the manufacture and distribution of illicit goods worldwide on an industrial scale." Today, INTERPOL also sees websites that are professionally constructed to deceive consumers into believing they are buying a genuine product, but it is not until the consumers have received the inferior quality fake item that they realize they have been conned. As a result, their first point of contact with the brand holder is a complaint. "Developments in technology have allowed for better quality printing and packaging, resulting in much higher quality counterfeits. Coupled with the opening of the global economy, this allows for swifter movement of goods and materials, faster movement of funds, and ease of movement of individuals, meaning counterfeiters and criminals can exploit these global trends to their advantage. Such is the scale of potential profits today that in many countries worldwide organized criminals behind this trade can wield disturbing and alarming pressure on legitimate enterprises."

## Counterfeiting is now big business

The counterfeiting business has grown significantly in the last two decades, in the wake of globalization and the online economy. The economic crisis after 2008 has further accelerated its growth, as many consumers have become more price-sensitive.

Since 2010, INTERPOL has coordinated more than 20 major multinational enforcement operations against trafficking in illicit goods and counterfeiting<sup>3</sup> which have uncovered an increasing degree of transnational organization of counterfeiters. Counterfeiting has become a truly global business. The OECD estimates that the international trade in counterfeiting and piracy in 2007 amounted to up to USD 250 billion.<sup>4</sup> According to the same study, international

counterfeit trade more than doubled between 2000 and 2007. However, these figures include neither domestic production and consumption of counterfeits, nor online sales of counterfeits. Frontier Economics estimated the total value of counterfeiting and piracy to be from USD 455 billion to USD 650 billion in 2008.<sup>5</sup> These numbers amount to 2-7 percent of world trade.

Figures 1 and 2 show the estimated annual retail value of recent seizures by the EU and U.S. customs and their composition in terms of product categories in 2013, respectively. The figures for U.S. and EU seizures are both around USD 1 billion. By comparing this with the above estimate for the total value of the counterfeit market, we can see that these seizures amount to a small fraction of the global trade in counterfeit products.

<sup>3</sup> See <http://www.interpol.int/en/Crime-areas/Trafficking-in-illicit-goods-and-counterfeiting/Operations>

<sup>4</sup> OECD (2009): Magnitude of counterfeiting and piracy of tangible products: an update.

<sup>5</sup> Frontier Economics (2011): Estimating the global economic and social impacts of counterfeiting and piracy. Report commissioned by Business Action To Stop Counterfeiting And Piracy (BASCAP), February 2011.

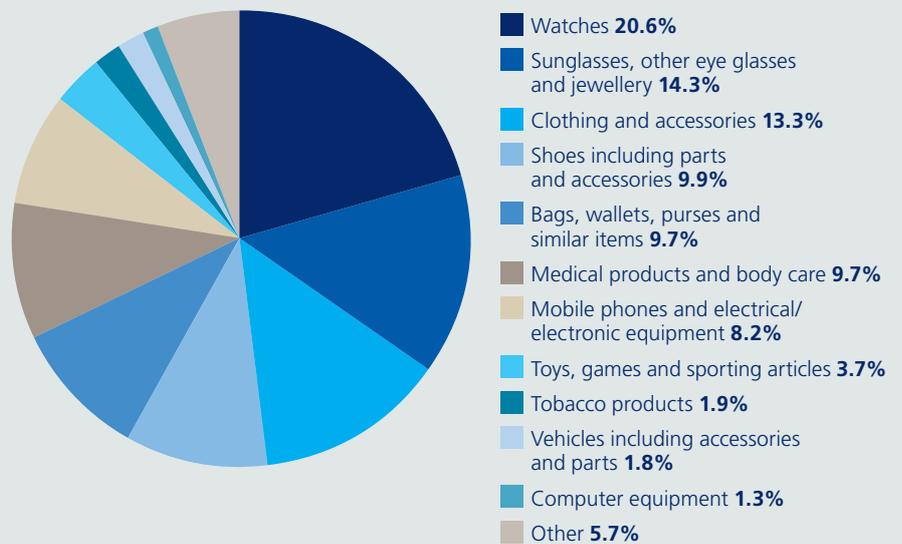
Figure 1a: Domestic retail value of goods seized by EU customs 2010-2013, in EUR billion



Source: European Commission: Report on EU customs enforcement of intellectual property. Results at EU border 2011-2013

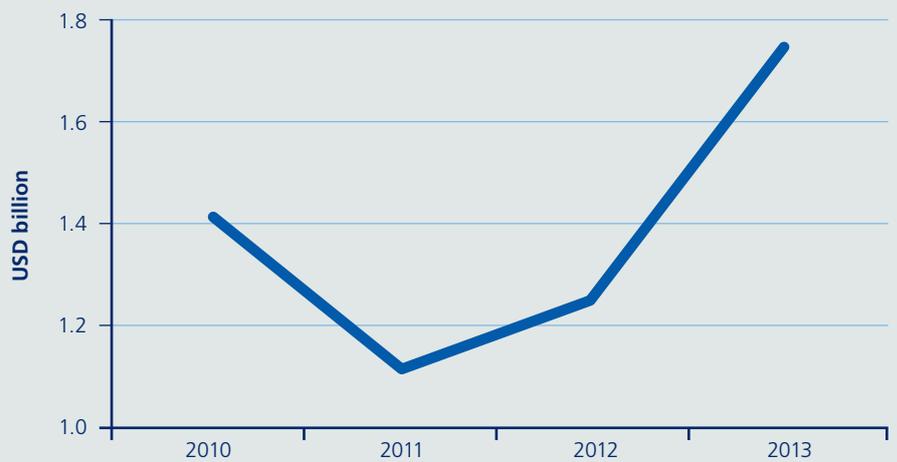
Figure 1b: Categories of goods seized by EU customs in 2013, by retail value

The total domestic retail value shown amounted to EUR 0.77 billion, and the number of cases was 86,854. The top five source economies of provenance were China (72 percent), Hong Kong (8 percent), Turkey (7 percent), Malaysia (3 percent), and Morocco (2 percent).



Source: European Commission: Report on EU customs enforcement of intellectual property. Results at EU border 2013

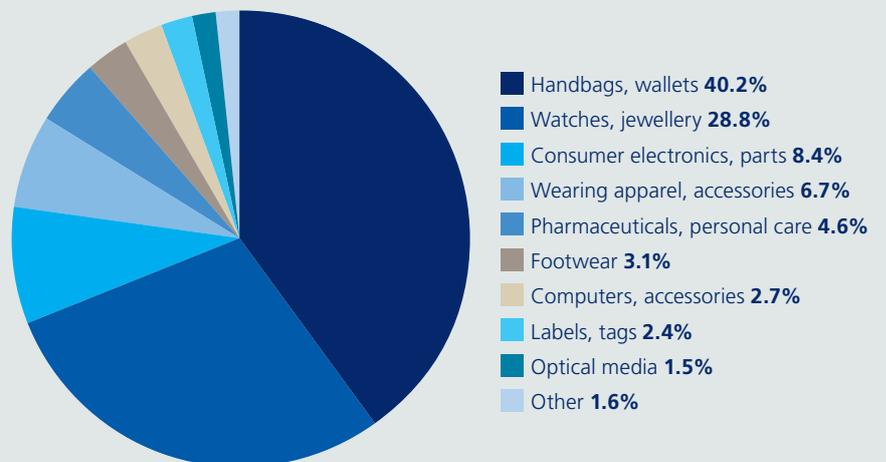
Figure 2a: Manufacturer's suggested retail price of goods seized by U.S. customs 2010-2013, in USD billion



Source: U.S. Department of Homeland Security: Intellectual Property Rights: Fiscal year 2011-2013 seizure statistics. Prepared by U.S. Customs and Border Protection, Office of International Trade

Figure 2b: Categories of goods seized by U.S. customs in 2013, by retail value

The total manufacturer's suggested retail price was USD 1.74 billion, and the number of seizures 24,361. The top five source economies were China (68 percent), Hong Kong (25 percent), India (1 percent), Korea (less than 1 percent), and Singapore (less than 1 percent).



Source: U.S. Department of Homeland Security: Intellectual Property Rights: Fiscal year 2013 seizure statistics. Prepared by U.S. Customs and Border Protection, Office of International Trade

## Fakes create real risks for consumers and companies

Counterfeiting has growing and widespread negative impacts and its proliferation is a cause for significant concern. The most obvious concern for companies is the loss of revenue due to counterfeits and the erosion of their reputation, brand value and exclusivity. But some industries are even more concerned about the damage to health and property that can be caused by counterfeits, as well as costly product recalls and liability disputes. The list of fake products that pose severe health or security risks to consumers is already long and keeps on growing.

Examples of such counterfeit goods, usually disguised under the name of a trusted brand, include: apparel containing toxic chemicals; ill-designed electronic devices such as hair straighteners or smartphone chargers that can cause electric shocks or fire; toothbrushes that pose a choke risk; alcoholic beverages containing dangerous levels of methanol; olive oil adulterated

with engine oil; foodstuff such as almond powder that contain cheaper and allergenic substances like peanuts; toothpaste that contains banned chemicals such as lead; unsafe diabetes treatments sold online without prescription; and sub-standard pesticides that pose health risks to farmers.

Counterfeits typically do not satisfy the same health and safety standards as the originals. They are usually produced with cheaper materials and workmanship and have lower performance and quality, reliability and durability. Counterfeits are not tested and certified to meet applicable standards. As a result, they can pose serious safety and health risks to consumers who are not aware that the product is a counterfeit or contains fake parts. As an illustration of the broad range of areas where safety and security risks emerge from counterfeit products, Table 1 provides an overview of the different categories of goods seized due to safety and security concerns by U.S. authorities in 2013.

Table 1: U.S. seizures due to safety and security concerns, 2013. The total number of seizures was 3,622

Type of product	Estimated retail value (USD million)
Pharmaceuticals and personal care	78.6
Consumer electronics/parts	21.6
Critical technology components	17.3
Batteries	8.0
Ball bearings	3.4
Sporting goods	2.9
Automotive	2.1
Cigarettes	1.5
Chemicals	0.7
Knives	0.5
All others	0.6
<b>Total</b>	<b>137.1</b>

Source: U.S. Department of Homeland Security: Intellectual Property Rights: Fiscal year 2013 seizure statistics. Prepared by U.S. Customs and Border Protection, Office of International Trade



Consumers may not be aware of the invisible threat which counterfeiting poses to their personal safety, to society and to the economy.”

Many consumers shopping for a ‘good deal’ regard buying a counterfeit as a minor offense. They may not be aware of the invisible threat which counterfeiting poses to their personal safety, to society and to the economy. Counterfeiters avoid import duties and sales taxes, depriving society of substantial tax revenues. They usually observe very low environmental, health and safety standards. And their far-reaching exploitation of resources has a detrimental impact on the economy, society and the environment. Accounting for a significant proportion of total world trade, counterfeiting causes considerable economic harm and poses societal challenges. From a macroeconomic perspective, counterfeiting discourages investments in innovation and also foreign direct investment, and thus has a direct negative impact on economic growth.<sup>6</sup>

### Employment

Counterfeits are usually manufactured covertly and under much poorer working conditions than health, safety and other regulatory norms would dictate. They are also often in violation of child labor laws. As a result, workers may be exposed to exploitation and serious health and safety risks. And as counterfeiting affects the sales volumes, prices, costs, investment and brand value of firms, it also has a

direct impact on (legitimate) employment levels in the affected businesses. Based on modeled estimates for the UK and Mexico, extrapolated to the G20 economies, Frontier Economics estimates job losses to be 2.5 million.<sup>7</sup>

### Public finances

As counterfeiters operate outside the law, complete tax avoidance is commonplace. Counterfeiting also imposes a high cost on the affected communities in terms of law enforcement and other anti-counterfeiting activities. There are also the costs involved with responding to public safety, health and environmental consequences of counterfeits to consider. The annual cost to G20 economies due to lower tax revenues and increased spending has been estimated to be EUR 62 billion.<sup>8</sup>

### Environment

Counterfeiting can pose serious environmental risks, for example through the unlawful disposal of toxic dyes and chemicals used in counterfeit production. Substandard counterfeit agrochemicals such as pesticides<sup>9</sup> can also cause environmental damage, which could spread to food chains and harm wider ecosystems. The disposal of seized counterfeits containing unknown chemicals may also be hazardous.

<sup>6</sup> OECD (2007): The Economic Impact of Counterfeiting and Piracy.

<sup>7</sup> Based on data for 2006 and 2007. Frontier Economics (2009): The Impact of Counterfeiting on Governments and Consumers. Report commissioned by BASCAP.

<sup>8</sup> Frontier Economics (2009): The Impact of Counterfeiting on Governments and Consumers. Report commissioned by BASCAP.

<sup>9</sup> See, e.g., <http://www.illegalpesticides.eu>

# Section 3

A world of opportunity:  
Counterfeiting comes of age



The online economy has provided counterfeiters with opportunities for dramatic organizational improvements.”

**As shown in the previous section, counterfeiting has become a global business, exposing consumers and companies to a number of severe risks. The risks posed by the growing pervasiveness of counterfeiting are a serious concern. But more importantly, the very nature of this risk is becoming more severe. Counterfeiters are increasingly well organized, and some of them sport sophisticated technical capabilities as they apply new technologies, including original manufacturing equipment and state-of-the-art packaging systems. Several trends are responsible for this development.**

### Increasing global organization of counterfeiters

Many counterfeit goods from East Asia transit through free-trade zones, for example in the United Arab Emirates, in order to disguise the origin of the products and apply logos to unbranded products close to the destination markets in Europe.<sup>10</sup> Such findings highlight the growing international organization of counterfeiters.

### The key role of transnational organized crime groups

The key role that transnational criminal organizations play in the production and trade of counterfeits is well documented.<sup>11</sup> Counterfeiting offers high profitability, comparable to the narcotics trade, but with significantly lower risks for perpetrators because penalties for these crimes are much lower. It is proven that many of the well-known organized criminal groups, e.g., from Italy, Japan, and Hong Kong, have entered the business of counterfeit goods, linking counterfeiting directly with their other criminal activities.<sup>12</sup> Through activities such as the narcotics and firearms trades, money laundering, corruption, extortion, contraband and the trafficking of illegal immigrants, many criminal organizations have the people and means at their disposal to distribute and sell illicit goods internationally.

### New opportunities in the online economy

The online economy has provided counterfeiters with opportunities for dramatic organizational improvements.

The internet and spam mail are widely used for the marketing and sales of counterfeit luxury goods, such as perfumes and watches, and ‘lifestyle’ drugs such as doping substances for amateur athletes, or medicines to treat conditions such as erectile dysfunction, obesity, baldness and wrinkles. But this is only the tip of the iceberg. E-business platforms are notorious markets for counterfeit goods, although many of them are making significant efforts to counter this problem.

Alibaba Group, the owner of the online marketplaces Taobao and Tmall (which both rank among the top 20 most visited websites globally, ahead of eBay<sup>13</sup>), took an aggressive stance in advance of its IPO filing in the U.S. and announced that it is investing USD 16 million a year to combat counterfeits, while eBay announced that it had spent USD 20 million in its Buyer Protection Programs, which include reimbursing buyers for fake goods.<sup>14</sup> It also speaks for itself that 72 percent of all seizures conducted in 2013 at the EU customs due to a suspected infringement of intellectual property were related to postal and courier traffic, the typical delivery channel for e-shopping.<sup>15</sup>

The internet plays an important role in the growth of counterfeiting by enabling criminals to organize themselves more securely and anonymously. Informal internet-based networks, rather than traditional organized crime groups, are increasingly responsible for the distribution of counterfeit medicines. Informal online pharmacy networks have escaped detection for up to 10 years before being dismantled.<sup>16</sup>

<sup>10</sup> The Globalization of Crime – A transnational organized crime threat assessment (2010), United Nations Office on Drug and Crime, <https://www.unodc.org/unodc/en/data-and-analysis/tocta-2010.html>

<sup>11</sup> See e.g. United Nations Interregional Crime and Justice Research Institute (UNICRI), “Counterfeiting, a global spread, a global threat” (2008). Available from [http://www.unicri.it/news/files/2007-12-01\\_ctf\\_2k8\\_final.zip](http://www.unicri.it/news/files/2007-12-01_ctf_2k8_final.zip).

<sup>12</sup> Such links include shared trade routes, counterfeiting as a source of financing of other illegal activities, counterfeiting as a tool to launder proceeds from other crimes, receiving payment for drugs or firearms from other criminal groups in counterfeit goods to avoid having to launder any money, using illegal immigrants for the distribution and sale of counterfeits, etc. See UNICRI (2008), p. 115 f.

<sup>13</sup> According to Alexa’s Top 500 sites on the web, visited on 13 October 2014, <http://www.alexa.com/topsites>

<sup>14</sup> Fighting fakes: ahead of IPO, Alibaba takes a tougher line, Reuters (2014), see <http://www.reuters.com/article/2014/05/13/us-alibaba-group-counterfeits-idUSBREA4C09120140513>

<sup>15</sup> See the Report on EU customs enforcement of intellectual property rights – Results at the EU border 2013

<sup>16</sup> Pharmaceutical Crime and Organized Criminal Groups, Public Version, INTERPOL, 2014, see the website <http://www.interpol.int/en/Media/Files/Crime-areas/Pharmaceutical-crime/Pharmaceutical-Crime-and-Organized-Criminal-Groups>

## How counterfeiters faked an entire company

One of the most ambitious counterfeiting enterprises was reported in The New York Times<sup>17</sup> in 2006. Not satisfied with faking the products of a major Japanese electronics company, a well-organized group of counterfeiters faked an entire company. They built a network together with more than 50 electronics factories in mainland China, Hong Kong and Taiwan; carried fake business cards; commissioned product R&D in the company's name; signed production and supply orders; and erected bogus company signs at some of their factories. They collected royalties for 'licensed' products and issued fake warranty and service documents. The counterfeiters even developed their own range of consumer electronics products under the Japanese company's name, which was very surprised when it received customer complaints about these products, which it neither made nor provided with warranties.

## Growing technical sophistication of counterfeiters

Over recent decades, the manufacturing skills of some counterfeiters have become increasingly sophisticated. This makes counterfeits more and more difficult to detect, for example for the watch industry. In many cases, special technology is needed to distinguish the fake from the original. Counterfeiters are also paying greater attention to presentation, for example by procuring and reusing original packaging with valid lot numbers, or by forging guarantee slips, seals of quality, or even product approval marks from independent certification bodies.<sup>18</sup>

As a consequence, the scope of counterfeits has broadened considerably and today concerns highly regulated industries such as the pharmaceutical, medical, automotive, aviation and aerospace sectors. Even military supply chains are not immune: In 2014, two people pleaded guilty to a charge of importing counterfeit microchips from factories in China and selling them as military-grade components to the U.S. Navy.

## Undermining anti-counterfeiting technology

In the 'arms race' against counterfeiters, product security and tracking features have become increasingly sophisticated, too. However, it is a fair assumption that most anti-counterfeiting technologies such as holograms, tamper-evident closures, tags, markings, RFID labels, etc., can be copied within 18 months after they appear on the market.<sup>19</sup> The quest for better security features has already reached the molecular level with 'nano barcodes' consisting of three-dimensional polymer patterns, or quantum dot tags that contain tailor-made nanoparticles with specific optical properties. But anti-counterfeiting technologies can also be corrupted.

An example was provided by one of the world's largest drug companies which wanted a chemical tracer that could be applied in an ink to vials of a well-known drug for treating pain and inflammatory disorders. Chemical tracers are designed to have very specific chemical or optical properties, enabling the reliable

<sup>17</sup> Next step for counterfeiters: faking the whole company, New York Times, May 1, 2006, see [http://www.nytimes.com/2006/05/01/technology/01pirate.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2006/05/01/technology/01pirate.html?pagewanted=all&_r=0)

<sup>18</sup> See the White Paper from CSA International: The Threat of Counterfeit Product Approval Marks Warrants Aggressive Detection and Enforcement Action, March 2006.

<sup>19</sup> Nanotechnologies for anti-counterfeiting technologies, Briefing No. 8 of ObservatoryNANO, a multi-stakeholder initiative co-funded by the European Commission (2010).



International Data Corporation (IDC) estimated that in 2011 at least a third of PC software used worldwide was counterfeit.”

identification of genuine products. Without knowing their exact formula, it can be very difficult to duplicate them. The company signed a USD 2.5 million deal in 2010 with a joint venture between another company and Australia’s Commonwealth Scientific and Industrial Research Organization. However, in 2013 it turned out that instead of a custom-designed, secret formula, the chemical tracer sold to the drug company was simply a widely available chemical, so the security code could easily have been duplicated by counterfeiters.<sup>20</sup>

### Fakes in the realm of information technology, cyber business and cyber crime

The rapid digitalization of society and the economy has created many new cyber business opportunities for counterfeiters. The scope goes beyond the well-known problem of fake hardware components or accessories for computers, tablets and smartphones. International Data Corporation (IDC), a market research and advisory company, estimated that in 2011 at least a third of PC software used worldwide was counterfeit.<sup>21</sup> Sometimes users or enterprises are not even aware that software is not genuine, especially if they receive it preinstalled on PCs. Further, IDC assumes that in 2013 one third of counterfeit software contained malware, and PCs were infected as a result.

There have been several cases in which a trusted company brand was abused to disguise other forms of cyber crime, such as phishing with fake electronic bills from a telecom company that contain a corrupted link. There are also many well-known E-mail scams which employ a trusted company name to build the recipients’ trust, for example those that claim that an insurance company has guaranteed a lottery win, which needs to be claimed through an obscure intermediary who asks that his fee be paid in advance. While these cases are not counterfeiting in the strict sense, they highlight the opportunistic nature of cyber criminals and show how easy it is to abuse a brand name in the cyber domain.

### Taking advantage of new technologies

New technologies will also further extend the breadth and availability of counterfeits. In 3D printing, for example, products are fabricated layer by layer, which can take place at any site equipped with a 3D printer, the raw materials such as plastics or metal powders, and software containing the instructions needed to print the desired object. Counterfeiters could use 3D printing to reduce production costs. In targeted consumer markets, on-site 3D printing could also offer an attractive alternative to risky illegal imports from low-cost production countries.

<sup>20</sup> How the CSIRO cheated a global drugs giant, Sydney Morning Herald, April 11, 2013, see <http://www.smh.com.au/technology/sci-tech/how-the-csiro-cheated-a-global-drugs-giant-20130410-2hluf.html>

<sup>21</sup> See the White Paper: The Dangerous World of Counterfeit and Pirated Software (2013), sponsored by Microsoft, <https://www.microsoft.com/en-us/news/download/presskits/antipiracy/docs/idc030513.pdf>

# Section 4

Under the radar: How counterfeiters infiltrate company value chains



The infiltration of counterfeit products into companies' regular supply and distribution chains is a disturbing trend."

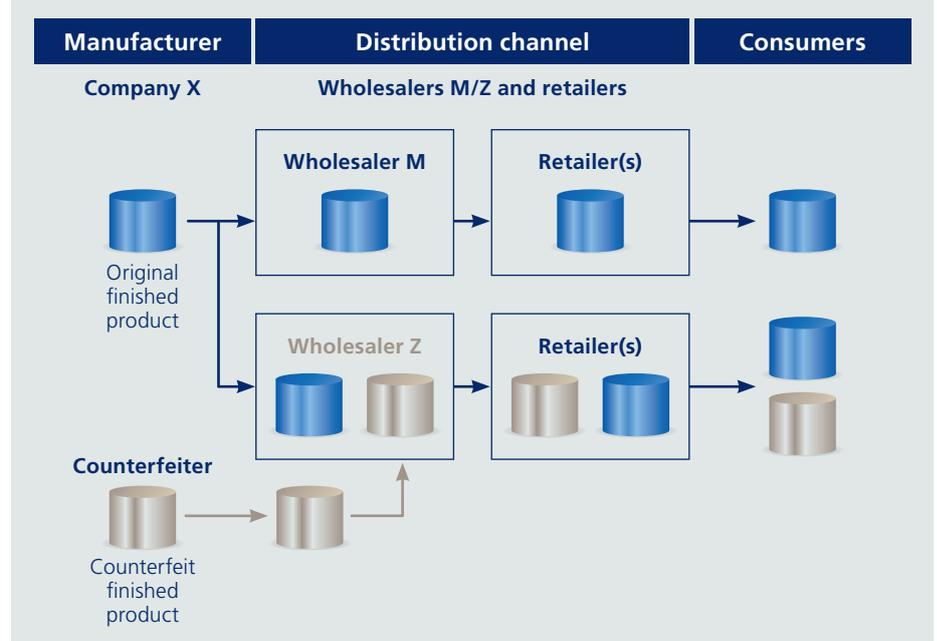
Together with the increasing organization and sophistication of counterfeiters, the infiltration of counterfeit products into companies' regular supply and distribution chains – which are the two legs of their value chains – is a disturbing trend. Organized criminal groups use official distribution channels for fakes to generate clean money which they can use for their operations. The infiltration problem also fundamentally alters the risk landscape for manufacturers, wholesalers, retailers, and consumers. In the following section, we discuss how counterfeits infiltrate distribution chains and supply chains, and how different types of product liability are judged in these scenarios in cases of bodily injury or property damage. The section concludes with a summary of the risks to manufacturers, wholesalers and retailers from counterfeits.

### Infiltration of distribution channels and its consequences

When sophisticated fake products enter legitimate distribution chains, it becomes practically impossible for consumers to detect them. This scenario is shown in Figure 3. In contrast to cheap fake items bought on the street, where consumers in search of a 'good deal' are aware of the fake, the consumer is truly deceived about

the genuineness of the product. This typically occurs where the requirement to comply with qualitative standards creates inherent consumer trust. Examples include medicines, electrical appliances, foods and beverages, toys, and automotive and airplane spare parts. High-quality fake luxury goods are sometimes sold at moderate discounts, making them appear more like a genuine product.

Figure 3: Illustration of a scenario where a wholesaler (Z) introduces a counterfeit finished product into the official distribution channel of company X





Counterfeit versions of a blockbuster cancer drug appeared twice in U.S. medical practices and clinics in 2012.”

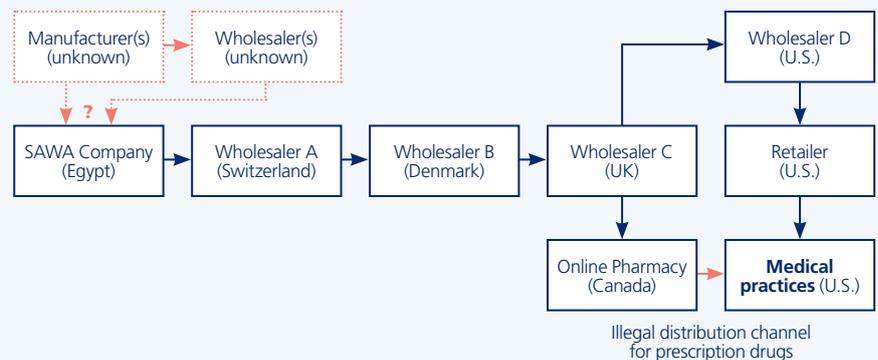
The case study below illustrates infiltration scenarios which happened recently in the U.S., when a fake drug for the treatment of cancer appeared in medical practices and clinics. In these scenarios, counterfeit

finished products were sold to consumers through official retailers of the original producer, after being introduced into the distribution channel – whether knowingly or not – by wholesalers.

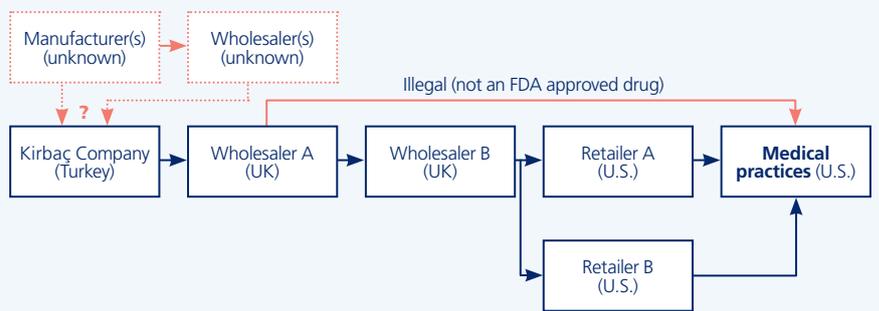
### The 2012 case of a counterfeit blockbuster cancer drug in the U.S.

For a long time, it seemed improbable that complex and expensive drugs – with their high-quality packages and security features – could be faked, not to mention be used in clinical treatments. However, counterfeit versions of a blockbuster cancer drug appeared twice in U.S. medical practices and clinics in 2012. The two instances concerned the same dosage form of the drug, which was correctly packaged and labeled, but did not contain any active ingredient.

The supply chains in both instances turned out to have spanned several jurisdictions. In the first case, as shown in the figure below, the source could be traced to an unregistered Egyptian company named SAWA which had provided false address details to the Swiss wholesaler and on a website. The suppliers of the counterfeit drug to SAWA remain obscure. The Danish wholesaler who brokered between the Swiss wholesaler and a UK-based wholesaler turned out to have had two managing directors who had already broken the law a few years earlier, when they illegally imported medicines to Denmark through another wholesale company which had its license revoked as a consequence. One retail channel went through a Canadian online pharmacy, even though this is an illegal channel for prescription medicines in the U.S.



In the case of a second distribution network, the fake cancer drug was labeled with the brand name used for the Turkish market and similarly, the source was traced to an unregistered, non-existent Turkish company named Kirbaç. In this particular chain, the owner of a U.S.-based retailer who sold the counterfeit drug to medical practices pleaded guilty of distributing “adulterated prescription drugs”. He offered discounts of 14 to 60 percent, according to the government, and asked doctors to keep the price list confidential.



In both instances, the FDA had sent warning letters to a targeted group of medical practices to inform them that they may have bought unapproved medications that may have included the counterfeit cancer drug. It was not clear whether any patients had actually received the counterfeit drug. No adverse events were reported to the Food and Drug Administration (FDA).

These two cases were not the only recent events concerning fake pharmaceutical products. In April 2014, counterfeits of a different blockbuster drug, against breast cancer, appeared in the UK, Finland, Germany, Austria, and Sweden, following the theft of some original vials of the medication in Italy. In some doses of the fake drug, the active ingredient was strongly diluted; others did not contain any active ingredient at all and some showed clear signs of tampering, which compromised the sterility or potency of the product. The fake drugs were introduced into the regular supply chain by using false reference numbers, Italian labels, and ‘Bollini stickers’ (which are numbered labels for the Italian market).

(Sources: FDA, Reuters, Wall Street Journal, Bloomberg)

From an insurance perspective, if bodily injury or property damage occurred in a situation as shown in the above case study, patients might then sue their physicians, the hospitals, the retailer, or the manufacturer of the original drug. The retailer can subrogate against the wholesaler that introduced the fake product into the distribution channel.

However, the manufacturer of the original product will face defense costs for any claims filed against him, although his product did not cause any bodily injury. In addition, the manufacturer will also incur expenses for a product recall if requested by any governmental authority. Recall expenses related to counterfeit products are usually not insured.



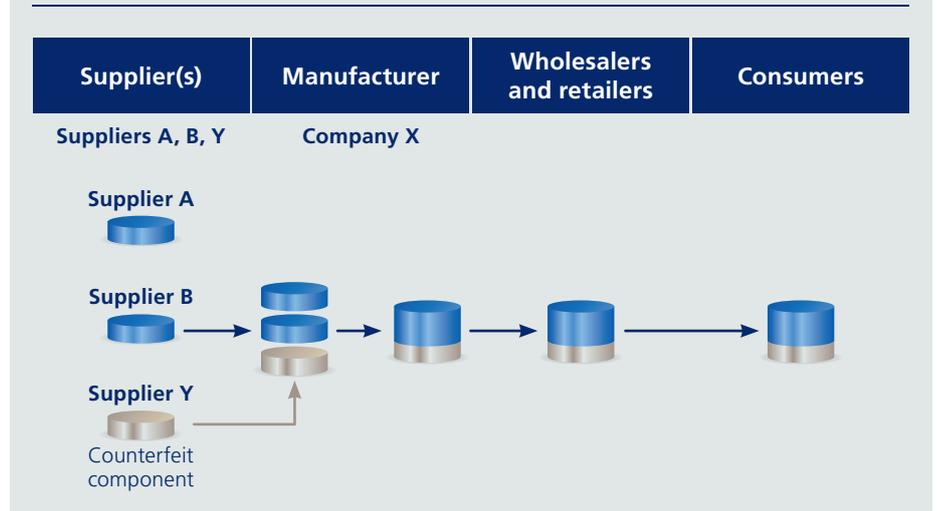
Counterfeits also infiltrate supply chains as intermediate products, e.g. as parts of automobiles or aircraft.”

### Infiltration of company supply chains and its consequences

But counterfeits not only infiltrate official distribution channels of manufacturers. They also infiltrate their supply chains as intermediate products, e.g. as parts of automobiles or aircraft, as illustrated in

Figure 4. Often this is only discovered after an investigation, for example after a product failure in the market. This supply chain infiltration scenario has resulted in several large-scale recalls, including in the automotive industry.

Figure 4: Supplier Y introduces a counterfeit component into the supply chain of company X, which produces a finished good and sells it to consumers



Several factors have contributed to the infiltration of fakes into corporate supply and distribution chains. Outsourcing of manufacturing overseas has led to complex global value chains with a large number of suppliers and sub-contractors in many different countries. The informational and

resource requirements needed to ensure end-to-end traceability of supply chains, e.g. through regular inspections, are high. Global supply chains have thus become more vulnerable to the infiltration of counterfeits and are even harder to manage as a result.

## An extensive recall of sports cars due to a counterfeit plastic material

In early 2014, a British luxury sports car-maker recalled more than 17,000 cars in Europe and the U.S. because the accelerator pedal arm could potentially have broken. As it turned out, the pedal arm was made of a counterfeit trademark plastic material provided by a sub-supplier in China. At the time of the recall, 22 failed parts had been reported to the carmaker due to this issue, but luckily no accidents or injuries occurred.

(Source: Reuters)

Under liability insurance contracts, coverage for counterfeit products is usually not explicitly excluded. Coverage is provided in case the manufacturer produces the final product by using the counterfeit component unknowingly. If liability is claimed by a consumer who suffered damage, then distributors and retailers can take recourse with the manufacturer of the final product, who in return can take recourse with the supplier of the counterfeit component. Of course, coverage is subject to several exclusions and limitations, such as intentional acts, gross negligence, etc. In addition, pure financial losses, such as reputational damages, have to be borne by the manufacturer of the final product.

### Risks to manufacturers, wholesalers and retailers

Businesses are typically concerned with loss of revenue and reputation as well as loss of consumer trust in affected brands. However, as highlighted above in the infiltration of their distribution and supply chains, companies must also be aware of the complex liability risks that counterfeits can pose.

If fake products are introduced into established distribution chains, this could expose wholesalers and distributors to

liability risks for bodily injuries and property damage. Patients treated with counterfeit medicines, for example, could sue physicians, hospitals and all companies involved in the distribution chain. Wholesalers and retailers may suffer financial losses due to business interruption, e.g., during an ongoing investigation or a product recall, until normal production has resumed.

But even if the genuineness of their products is not affected, manufacturers may still face a risk if counterfeits of their products appear on the market. As consumers and distributors cannot easily distinguish between the genuine product and the fake, regulators may require all products – genuine as well as fake – to be recalled. This is typically the case for products that may raise substantial health and safety concerns, such as medicines. As it may be difficult for the manufacturer to reclaim the costs involved with such a recall and lawsuits related to bodily injuries and property damage, it risks bearing these massive costs alone.

If counterfeit components are infiltrated into the supply chain of a manufacturer and inadvertently built into the final product, then the manufacturer, the wholesalers and the retailers could be held liable for them.

# Section 5

Case studies: How counterfeiting affects different industry sectors

**In this section we summarize detailed insights from a number of industry experts. While some of these insights are sector-specific, one should be aware that any company in any industry sector can be confronted with counterfeiting issues, today or in the future. The anti-counterfeiting strategies and activities presented here are intended to further the exchange of knowledge and sharing of best practice.**

## Watch industry

According to Yves Bugmann, Head of the Legal Division at the Federation of the Swiss Watch Industry (FH), the economic loss due to counterfeit Swiss watches is estimated to be CHF 0.8-1.0 billion per year, in other words, around 4 percent of annual sales. At first sight, some fake watches are almost indistinguishable from the originals, even for experts. It is often only the internal movement of watches that reveals they are fakes. The improving quality of the outer aspects of fake watches and their low price invites many consumers to buy them. Yves Bugmann underlines that more awareness needs to be created among consumers that counterfeits are doing harm to the economy and society. The problem is not just that counterfeit watches are threatening the reputation of established brand names and the 'Swiss made' geographical indication. They are also used as a financing source for criminal organizations. "We have seen proofs that fake watches are being used for money laundering", he added.

Regarding the growing importance of digital channels, Bugmann highlighted that "A large number of counterfeit watches are sold over the internet, not only through illicit online shops, but also via online marketplaces such as Taobao." As a result, it has become more difficult for customs authorities to seize counterfeit watches: "When shipped to their destinations, those fake watches are packaged individually or in small quantities, sometimes even hidden inside toys or used electronic devices such as computer parts. They are difficult to detect in these disguises. The times when thousands of counterfeit watches could be seized in one single container are gone."

The FH has created a dedicated unit that screens for illicit websites related to sales of fake Swiss watches. Once such a website is detected, its closure is enforced, sometimes together with public authorities. According to Bugmann, this industry-wide coordination not only helps the best-known brands, but also small and medium-sized watch manufacturers that lack the resources to maintain their own corporate anti-counterfeiting initiatives.

## Healthcare

The risks posed by counterfeit medical products are particularly alarming. For example, counterfeit cough syrup and other medicines containing diethylene glycol, an industrial solvent, instead of glycerine, have caused eight mass poisonings in various countries, including one incident in 2006 in Panama where more than 100 people died, many of them children.<sup>22</sup> Counterfeit medicine can, of course, harm or even kill patients; but it also undermines trust in health professionals and health systems.<sup>23</sup> Furthermore, the serious health repercussions of fake medicines particularly affect the poor in emerging economies, who pay for medicines out of their own pocket. For the World Health Organization, the most disturbing aspect of this problem in developing countries is the wide availability of counterfeit medicines that treat life-threatening conditions such as malaria, tuberculosis and HIV/AIDS.<sup>24</sup> And fake antibiotics that are simply a diluted version of the original product pose a serious threat to public health, as their application fosters the emergence of antibiotic-resistant bacteria.

<sup>22</sup> From China to Panama, a Trail of poisoned Medicine, New York Times, May 6, 2007, see the website: <http://www.nytimes.com/2007/05/06/world/americas/06poison.html?pagewanted=all>

<sup>23</sup> See, e.g., the handbook of the International Medical Products Anti-Counterfeiting Taskforce (IMPACT), [http://www.who.int/entity/impact/handbook\\_impact.pdf](http://www.who.int/entity/impact/handbook_impact.pdf)

<sup>24</sup> Counterfeit medical products, Report by the Secretariat, sixty-second world health assembly, 30 April 2009, WHO, [http://apps.who.int/iris/bitstream/10665/2193/1/A62\\_13-en.pdf?ua=1](http://apps.who.int/iris/bitstream/10665/2193/1/A62_13-en.pdf?ua=1)

## INTERPOL's global initiative against fake medicine

A notable example of a public-private partnership against counterfeiting is the Pharmaceutical Industry Initiative,<sup>25</sup> a global initiative launched in March 2013 to combat fake medicines. In this initiative, 29 of the world's largest pharmaceutical companies have joined forces with INTERPOL, local police, customs, health regulatory authorities and scientists in a three-year, EUR 4.5 million program. The goals of the initiative include raising public awareness of the dangers of faked medicines, especially those sold online; supporting countries with crime detection; helping to follow-up investigations and targeted enforcement actions; disrupting and dismantling organized crime networks; and providing training and capacity-building support. Aline Plançon, the Head of INTERPOL's Medical Products Counterfeiting and Pharmaceutical Crime unit, comments: "With the participation and cooperation of 113 out of the 190 member countries belonging to INTERPOL, this year's Operation Pangea VII (13-20 May 2014) became the largest ever global operation targeting fake medicines, and facilitated the shutdown of thousands of illicit online pharmacies." To ensure continuing success against fake medicines, she added: "A continued future coordination between law enforcement, health agencies, customs and the private sector is crucial in the fight against pharmaceutical crime. Also, the future harmonization of legislation between countries will further assist the fight against pharmaceutical crime, as there will be a greater general deterrence for the organized criminal networks who are primarily responsible for the trade in fake pharmaceuticals and counterfeit medical products."

Counterfeit medical products are a fast-growing global business. According to the UN Office on Drugs and Crime, the bulk of faked medicines is produced in India and China, but major manufacturers have also been dismantled in other countries, e.g. Russia. Having coordinated more than a dozen Pharmaceutical Crime Enforcement Operations<sup>26</sup> at world level since 2008, INTERPOL has reported that counterfeit medicines now affect every point of the medicine supply chain, and their global distribution networks are very sophisticated, often structured to resemble the organizational makeup of a genuine enterprise.<sup>27</sup>

While the exact magnitude of the problem is unknown, the World Health Organization (WHO) has estimated<sup>28</sup> the fraction of counterfeit medicine sales in the year 2005 to be less than 1 percent in developed countries, and in developing countries to be over 10 percent. For 2005, these numbers translate<sup>29</sup> into at most a USD 5 billion market for counterfeit medicines in developed countries, and at least a USD 10 billion market in developing countries. For many developing countries in Africa, parts of

Asia, and parts of Latin America, the WHO considered 10-30 percent to be a reasonable estimate for the sales share of counterfeit medicine in 2005, and above 20 percent for many former Soviet republics. Medicines purchased over the internet from sites that do not provide a physical address are counterfeit in over 50 percent of cases, according to the WHO. According to Aline Plançon of INTERPOL, recent enforcement operations suggest that these statistics are still valid. In some areas of Asia, Africa and Latin America, counterfeit medical products form as much as one-third of the market, today.

As legitimate global pharmaceutical sales have grown by around 57 percent from 2005 until 2012 and as blockbuster drugs have become targets for counterfeiters, it is reasonable to assume that the market for counterfeit medicine has grown substantially over that period. In fact, in a Directive from 2011, the European Parliament and the Council of the EU has highlighted an alarming increase in medicinal products within the EU, whose identity, history or source were not genuine, reaching patients through illegal means and also via the legal supply chain.<sup>30</sup>

<sup>25</sup> See the website: <http://www.interpol.int/en/Crime-areas/Pharmaceutical-crime/Pharmaceutical-Industry-Initiative-to-Combat-Crime>

<sup>26</sup> These were Operations Pangea I-VII (tackling online sales of counterfeit and illicit medicines, leading to the closure of >50'000 websites and the seizure of medicine valued >90 mio. USD), Storm I-II (targeting counterfeit medicine in Southeast Asia), Mamba I-III (targeting Eastern Africa), Cobra (targeting Western Africa), and Giboia (targeting Southern Africa); see <http://www.interpol.int/en/Crime-areas/Pharmaceutical-crime/Operations/>

<sup>27</sup> See the Report: Pharmaceutical Crime and Organized Criminal Groups, Public Version, INTERPOL, 2014, <http://www.interpol.int/en/Media/Files/Crime-areas/Pharmaceutical-crime/Pharmaceutical-Crime-and-Organized-Criminal-Groups>

<sup>28</sup> <http://www.who.int/medicines/services/counterfeit/impact/TheNewEstimatesCounterfeit.pdf>

<sup>29</sup> The 2005 top line of the global pharmaceutical market was USD 611.0 billion, and developed countries had an 83 percent market share. For 2012, the top line was USD 962.1 billion. (Source: IMS Health)

<sup>30</sup> Directive 2011/62/EU, see [http://ec.europa.eu/health/files/eudralex/vol-1/dir\\_2011\\_62/dir\\_2011\\_62\\_en.pdf](http://ec.europa.eu/health/files/eudralex/vol-1/dir_2011_62/dir_2011_62_en.pdf)



Transportation of wrongly-labeled chemical products may pose a significant risk to logistics companies, and also to emergency services in case of an accident.”

Mireille Saliba, an expert on counterfeit medicine who expressed her personal views and experience, notes that in certain therapeutic areas, consumer demand exceeds supply, creating an attractive business opportunity for counterfeiters. The fast development and growth of the generic industry has also made it easier to develop counterfeit drugs on an industrial scale. In addition to the growing online business, a key driver for the market has been the broadening and liberalization of the world economy with the opening of borders to trade and importation, as well as the creation of free trade zones, which encourage counterfeiters to re-package and re-label their goods.

Due to high levels of corruption in many countries, especially where pharmaceutical markets are underdeveloped, counterfeiters can avoid the attention of local authorities. In such markets, regulatory control of drugs is often also inadequate, ineffective or weak. However, if patients are harmed by counterfeit drugs, the pharmaceutical industry is quickly blamed and often held accountable for drug recalls, although it can be extremely difficult to track who may have been affected by a specific counterfeiting issue.

On the side of enforcement, resources and budget at national and international levels are still inadequate, according to Mireille Saliba. Even though progress has been made in certain regions thanks to special initiatives, there is not enough cooperation between the pharmaceutical industry, wholesalers, retailers, national drug regulatory authorities, the police and customs. In some countries, penal sanctions against counterfeiters are inadequate, because counterfeiting is not a serious crime under local laws, even though it is known that people may die due to fake drugs. Lenient penalties for such offences encourage drug counterfeiters, especially when there are harsher penalties for counterfeiting non-medicinal products. The pharmaceutical industry would like politicians in many countries to make action against counterfeiting a higher priority.

Mireille Saliba thinks that more needs to be done to enforce existing laws and regulations, as well as to foster stronger interdisciplinary cooperation and collaboration. “The general public should be encouraged to become engaged in the fight against drug counterfeiting,” she said. “More educational and awareness campaigns directed at the general public should be established and the public should be instructed and guided to buy medicines from legitimate sources, explaining the impact on public health. One approach could also be to empower the general public to take part in drug regulation and to hold regulators accountable.” Saliba says it is crucial to improve the sharing of timely information and best practices, and to harmonize measures across regions and markets. If public pressure on the topic grows, the political will to enforce sanctions will increase in response.

## Agrochemicals

Demand for agrochemicals is growing, especially in emerging economies, due to population growth and the industrialization of agriculture. This has created a business opportunity for counterfeiters. Fake fertilizers, pesticides and other agrochemicals vary in their sophistication: Some are just plain water with a pungent chemical added; others are sophisticated copies of blockbuster products; and, more dangerously, some contain banned chemicals that can be procured cheaply.

Transportation of wrongly-labeled chemical products such as these may pose a significant risk to logistics companies, and also to emergency services in case of an accident. Decanting and applying them can be dangerous to health for farmers and any people or animals in the vicinity. Worryingly, some banned chemicals such as certain insecticides are known to persist in ecosystems and cause damage throughout the food chain, threatening the overall sustainability of agriculture. Finally, the reputation of crop exporters – or even entire countries of origin – stands at risk should the public become aware that farmers are using banned chemicals in the form of counterfeit agrochemicals.

According to Thierry Yvon, Head of Product Security at Syngenta, a major problem is the low level of maturity and ineffectiveness of some regulations relating to agrochemicals, not only in developing but also in developed economies. Deterrent measures are sometimes inadequate in emerging economies because agrochemical counterfeiting is a relatively new type of crime for which some are not prepared. Many still believe that counterfeiting is only a problem that affects luxury goods. High levels of corruption can be a major obstacle in many countries: As a result, enforcement is weak and little information is available.

As in other industry sectors, counterfeiters of agrochemical products are active globally. "They make clever use of regulation loopholes. For example, from a counterfeit case detected in Ukraine the producer may sit in China and the formulator in Turkey", said Thierry Yvon. "Also illegal parallel imports are a big problem, for example in the EU." The main challenge for the industry is that counterfeiting is a problem with a global scale, and there is no local solution for a global problem. It requires significant efforts to develop a global solution. As a first step, the awareness of local authorities and farmers is crucial. It is important that the agrochemical companies explain the issue well and in a way that suits the local situation.

Syngenta conducts such activities through an internal program and also engages with local and international associations, such as CropLife. "Syngenta takes its part that helps to convince authorities that there is indeed a counterfeiting risk with agrochemicals that needs to be addressed," said Thierry Yvon. "We are actively supporting authorities in their efforts to disrupt as much as possible the organized crime of counterfeits. This includes closing the source and also closing access to the market.

The effort is starting to pay out: Over the last three years, we have had some successes in local court decisions. Earlier, chances used to be small to win a counterfeiting case in court."

## Automotive

Counterfeit automobile parts are notorious in the auto parts and repair industry. Fakes include design features such as hubcaps, high-volume products such as oil filters, spark plugs and brake pads, and also critical safety components such as fuel pumps, batteries, steering units and airbags. For example, it is estimated that in Mexico about 15 percent of spare car parts are fakes, most of them imported from Asian countries, which is made easier by insufficient customs controls.<sup>31</sup> But counterfeiting also increasingly affects the supply chain of manufacturers, as the example of the British luxury sports car maker mentioned above has illustrated. These two situations have different implications for liability. When customers explicitly request a repair with 'knock-off' spare parts because they are looking for a significant discount, they are usually accountable themselves for any damage that may occur.

In contrast, the infiltration of regular supply chains with fake components exposes car manufacturers to product liability suits. A few years ago, an automotive expert estimated that fake car parts cost the U.S. auto industry approximately USD 12 billion a year.<sup>32</sup> A frequently-quoted statistic is an estimate by Frost & Sullivan that counterfeit car parts generated sales of USD 45 billion worldwide in 2011, up 270 percent in three years. Suppliers are increasingly using security features such as radio frequency identification tags, and they form organizations such as the Quality Brands Protection Committee<sup>33</sup> of the Global Anti-Counterfeiting Network.

<sup>31</sup> Ruedan en el País autopartes pirata, am, see <http://www.am.com.mx/leon/negocios/ruedan-en-el-pais-autopartes-pirata-22142.html>

<sup>32</sup> Counterfeit Auto Parts Expose Manufacturers to Liability, Product Liability Monitor – Weil (2010)

<sup>33</sup> See the Committee's website, <http://www.gacg.org/Member/Details/12>

# Section 6

What can be done about counterfeiting?  
Our recommendations

**Counterfeiters make opportunistic decisions about the products and markets they target. They thrive where potential gains are high, risks are relatively low and regulation has loopholes. The high levels of corruption in many countries are another crucial enabler. Those who defend us against counterfeit products must know which sound business practices, due diligence procedures and enforcement actions are most effective in the fight against fake products. They must look to disrupt the networks that produce and distribute fakes; and most importantly, they must seek to prevent counterfeits from infiltrating corporate value-creation chains.**

## Regulators

- **Anti-counterfeit regulation should be introduced more extensively at a global level and consistently applied across jurisdictions**

Regulation is the basis of all enforcement action against counterfeiting. However, there is no globally uniform framework of applicable laws and regulations. In areas where regulation is particularly lax, there are vast business opportunities for counterfeiters. One tragic example is the 2012 counterfeit medicine crisis in Pakistan, in which more than 100 heart patients died because of fake drugs distributed at a local hospital.<sup>34</sup> Only afterwards was a meaningful national regulation for the pharmaceutical industry created.

- **Legislative authorities, as well as corporate risk managers, must be aware of legal loopholes which counterfeiters can exploit in their countries and work towards closing them**

There are legal protocols and treaties in place to protect against counterfeiting, such as the World Trade Organization's TRIPS Agreement, which is to date the most comprehensive multilateral agreement on intellectual property (IP).<sup>35</sup> The International Chamber of Commerce (ICC), in turn, has established Business Action to Stop Counterfeiting and Piracy (BASCAP).<sup>36</sup>

## Governments

Governments play a central role in the public response to counterfeiting. They set the legal basis for the fight against counterfeiters and are well placed to sponsor awareness campaigns directed at the public sector, consumers, and companies.

- **Government-backed campaigns should be used to increase awareness of the growing risks posed by counterfeit products**  
For example, STOPfakes.gov is the online one-stop shop for U.S. government tools and resources on IP rights.<sup>37</sup> For the EU, the European Observatory on infringements of IP rights provides guidelines on the protection of IP in several countries.<sup>38</sup>
- **Governments should protect and enforce intellectual property rights more effectively, while respecting fundamental rights to free speech and privacy**

In July 2014, the European Commission presented new enforcement policy tools, in particular an action plan<sup>39</sup> to better protect and enforce IP rights against commercial-scale infringements. Most importantly, governments must provide sufficient funding for police and customs to ensure effective action against counterfeiters. All of this study's interview respondents have pointed out that many countries need to improve the legal basis for action

<sup>34</sup> Deadly fake medicines, New York Times, November 20 1012, see <http://www.nytimes.com/2012/11/21/opinion/deadly-fake-medicines.html>

<sup>35</sup> See: [http://www.wto.org/english/tratop\\_e/trips\\_e/intel2\\_e.htm](http://www.wto.org/english/tratop_e/trips_e/intel2_e.htm)

<sup>36</sup> See: <http://www.iccwbo.org/advocacy-codes-and-rules/bascap/welcome-to-bascap/>

<sup>37</sup> See the website <http://www.stopfakes.gov>

<sup>38</sup> See: <https://oami.europa.eu/ohimportal/en/web/observatory/home>

<sup>39</sup> See: [http://ec.europa.eu/internal\\_market/iprenforcement/action-plan/index\\_en.htm](http://ec.europa.eu/internal_market/iprenforcement/action-plan/index_en.htm)



A robust IP protection culture should be established across the company.”

against counterfeiters, to ensure that regulatory loopholes are closed and eliminate illegal parallel imports of fake products. Once this has been done, the enforcement of anti-counterfeiting and IP protection laws can be stepped up. While doing so, governments must ensure that fundamental rights are respected, such as the protection and the privacy of personal data and freedom of speech. In the U.S., for example, after widespread protests from the internet community in 2012, the proposed Stop Online Piracy Act (SOPA) and the Protect IP Act (PIPA) were shelved because of the strong concerns that these laws would harm freedom of speech on the internet.

- **Governments need to collaborate to address the counterfeiting problem on a global scale**

As counterfeiting is a global phenomenon, intergovernmental cooperation is an important part of a government strategy against counterfeiting. This helps to improve the protection and enforcement of IP rights in local as well as global markets.<sup>40</sup> The Anti-Counterfeiting Trade Agreement (ACTA), which was signed by the U.S., the European Union and several states, is an example of a multinational treaty that enforces IP rights.

- **The public and the private sectors need to cooperate more extensively to build an effective partnership against counterfeits**

Public-private partnerships can significantly enhance the enforcement of IP rights and the cooperation between manufacturers, wholesalers, retailers and customs to implement advanced counterfeit detection programs at the border.

## Companies

Companies need to manage a broad range of risks posed by counterfeits. These include product liability, bodily injury and damage to property, as well as costs for legal and public relations defense or product recalls.

Counterfeiters who infiltrate a company's value chain have one big advantage on their side: They can take their time to identify and exploit a weak spot. The victims, in contrast, must make sure that all potential loopholes in their risk management activities are closed at all times. Furthermore, the changing nature of counterfeit risk, as discussed above, demands a new, more thorough approach, taking in suppliers, distributors, and the public sector.

- **Companies should strongly protect their intellectual property rights**

Protection against counterfeiters starts with registering a trademark or an industrial design, not only in the countries where the product is being sold, but also where it is being manufactured. For example, the ICC-WIPO handbook produced by the International Chamber of Commerce and the World Intellectual Property Organization provides basic guidelines for businesses regarding the setting up of IP services.<sup>41</sup> A robust IP protection culture should be established right across the company, including the research and development, legal, purchasing and procurement, supply chain and sales functions.

- **A comprehensive anti-counterfeiting strategy should be a board-level issue**

It is vital that the top management and the board are aware of the need to protect IP and support an appropriate level of risk management activities for brand protection, reaching into several company units and beyond.

<sup>40</sup> See the EU's recently revised Strategy for the Enforcement of Intellectual Property Rights in Third Countries and other content on the website: <http://ec.europa.eu/trade/policy/accessing-markets/intellectual-property/>

<sup>41</sup> See: Making intellectual property work for business, ICC and WIPO (2011)



Consistent end-to-end supply chain tracking and risk management has become crucial in fighting counterfeits.”

A holistic, strategic anti-counterfeiting policy with tactically sound priorities, built around the core business at international and domestic levels, can be a good starting point. Companies in highly regulated industries should be aware that a product recall, if required by the authorities, e.g., due to a safety issue, can become prohibitively expensive, potentially leading to bankruptcy for all but the largest enterprises.

- **Companies should assign internal responsibility for brand protection**  
Michael Ellis of INTERPOL has observed that many companies have created the position of a brand protection manager. This person is tasked with raising awareness internally and externally across industries, to address specific counterfeit problems, and to coordinate investigations between the company and law enforcement agencies. These brand protection managers have sound investigative knowledge, often derived from a former position in law enforcement agencies. Together with corporate risk managers and other stakeholders, they need to continuously assess exposure to counterfeiting risk. This includes identifying the products and processes that are most vulnerable to counterfeiters, in terms of likely financial losses and reputational damage. They should reconsider the company's authentication and counterfeit detection programs periodically, adapting them to counterfeiters' growing levels of sophistication and organization.
- **Supply chains should be tracked from end to end by risk managers**  
Consistent end-to-end supply chain tracking and risk management has become crucial in fighting counterfeits,

especially in industries with highly complex supply chains. Particular attention should be paid to components with potential health and safety implications. Regular inspections of in-house and external suppliers should be conducted, and information on tier 2 and 3 suppliers should be collected. The security of the supply chain regarding logistics, routes, ports of importation and the location of in-house and external suppliers must be ensured.

- **Programs for market surveillance and consumer outreach should be conducted**  
A program to eliminate fakes should include structured surveillance of physical and online markets. Sales patterns should be monitored to discover why, for example, a product has suddenly lost its position as a market leader. Such programs should also include interviews with customer-facing sales staff and those who track the flow of products, as well as detection of sales activities related to counterfeit products.

A customer complaints helpline can support these efforts. Fabienne Le Tadic, Global Business Development Director for Brand and Product Protection at the security solutions company SICPA, said: “There is a strong trend to involve the consumers themselves, for example through crowdsourcing, first to reassure them, secondly to make it easier to raise alerts if counterfeit products are found, and to benefit from these platforms to engage and create trusted relationship.” Mireille Saliba recommended that the pharmaceutical industry should also reach out via social media and blogs on the issue of fake medicine to younger people who are concerned about their health.

Online sales of counterfeit products are increasingly common. Michael Ellis of INTERPOL commented that there are many complications around investigating cyber crime, for example due to the interaction of national jurisdictions, international protocols, data protection laws, etc. He believes that more should be done in this domain, for example regarding the cooperation of internet service providers and well-known online sales platforms.

Market surveillance should include the tracking of all counterfeiting cases, across industries, in order to assess whether companies are affected in any way by those events. For example, if a supplier has sold counterfeit trademark material to some other company, it might turn out that your company has done business with the same supplier and you may be similarly affected.

- **The application of overt and/or covert anti-counterfeiting technology should be considered**  
Security features help companies to identify their genuine products among fakes. However, there is no absolute security, as some high-quality counterfeits even include copies of security features. Similarly, manufacturers or wholesalers cannot rely on certificates of authenticity as they can be faked, too. As more value creation chains are infiltrated, many companies will have to decide whether they should include overt or covert security features. Given the number of gaps throughout many supply chains and the increasing capability of counterfeiters, Fabienne

Le Tadic from SICPA says that a robust and sustainable security solution requires a multi-layer approach, combining both material security and digital security. An implemented security solution should also be designed to be flexible and scalable. Constant investments are required to keep a security solution up-to-date. Good solutions today should be able to provide solid product identification platforms; they should be compatible with internal tracing systems, if there are any; and they should ensure regulatory compliance. For categories of products where a high level of supply chain visibility and integrity is necessary, for example to handle urgent recall cases, these solutions can be strengthened with a multi-site track-and-trace platform.

It is important to note that security features also have their challenges. "As with the fight against terrorism, there is a careful balance to be struck between 'need to know' and 'dare to share' on one hand, and solutions can only be robust if they are evolutive in time and can be retrofitted to avoid the cost of a re-implementation," says Le Tadic. While the benefits of security features are strong, companies also need to balance the returns against the added costs and the complications which the solution can create in the downstream production chain. And 'over-communication' with consumers may have an adverse effect: An overt security feature, e.g. on a certain consumer product, might lead consumers to infer that the brand has a counterfeiting problem and as a result they might buy from another producer.



Risk engineers and safety experts from insurance companies can support companies with a wide range of services aimed at helping them to identify, assess and improve their complex risk exposures.”

- **Companies should collaborate closely and build personal contacts with national and local authorities**

Enforcement measures against counterfeit products need to be taken not only in the producer and the destination markets, but also at distribution hubs and points of import and export, through coordination with local authorities. Yves Bugmann from the Federation of the Swiss Watch Industry highlighted the central importance of establishing personal contact with national authorities, explaining to them in detail the harm which counterfeit products cause, and conducting training activities for police and customs. Those activities can be coordinated efficiently through industry-wide associations. It is also important to collaborate with regulators, e.g., in order to encourage them to close existing legal loopholes.

- **Industry-wide associations and international alliances can coordinate action against counterfeiters**

Many small and medium-sized companies do not have the resources to fund a fully-fledged internal anti-counterfeiting program. Here, industry-wide associations can play a central role in the coordination of online and physical enforcement activities with the authorities and in conducting public awareness campaigns. Examples include the Federation of the Swiss Watch Industry, the European Crop Protection Agency and CropLife. Organizations with a wider remit can also help. Examples

include INTERPOL’s Intellectual Property Crimes Action Group,<sup>42</sup> the Business Alliance to Stop Counterfeiting and Piracy,<sup>43</sup> the REACT Anti-Counterfeiting Network with the IPR Business Partnership,<sup>44</sup> the OECD Task Force on Charting Illicit Trade, the Anti-Counterfeiting Subcommittee of the International Trademarks Association (INTA), the European Brands Association (AIM),<sup>45</sup> or Stop Piracy in Switzerland.<sup>46</sup>

- **Companies should assess their insurance coverage and clarify to what extent the risks posed by counterfeits are covered**

Insurance is an important part of corporate risk management, providing coverage against certain risks up to a given level. However, as discussed in Section 4, coverage in counterfeiting cases is subject to exclusions and limitations. Producers, wholesalers and retailers should systematically assess their risk exposures and insurance coverage under existing programs. Taking into account the relevant local laws and regulations, they should clarify to what extent the risks from counterfeits are covered. Furthermore, risk engineers and safety experts from insurance companies can support companies with a wide range of services aimed at helping them to identify, assess and improve their complex risk exposures, for instance regarding business interruption, contingent business interruption and supply chain risk, in order to reduce their losses and the overall cost of risk.

<sup>42</sup> See <http://www.interpol.int/Crime-areas/Trafficking-in-illicit-goods-and-counterfeiting/Trafficking-in-illicit-goods-and-counterfeiting>

<sup>43</sup> See <http://www.bascap.com/>

<sup>44</sup> See <http://www.react.org/ipr-business-partnership>

<sup>45</sup> See <http://www.aim.be/>

<sup>46</sup> See <http://www.stop-piracy.ch>

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