
1 Introduction: Trojan horses, pirate bays and anti-counterfeiting

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The concept of illicit trade usually elicits the notion of counterfeits and pirated products—fake Louis Vuitton bags or obtaining pirated movies from cyberlockers. While the problem in high-end fashion apparel and movie piracy is well known, other areas of illicit trade, such as illegitimate pharmaceuticals, have been emerging markets for counterfeiters who seek windfall profits from this type of fake product. The illicit traders continue to reap substantial profits and face limited criminal penalties—why not sell counterfeit or pirated goods? Years ago, I met Ron Guido, (former) Vice-President of global brand protection and supply chain integrity at Johnson & Johnson, at an anti-counterfeiting conference for mainly private-sector stakeholders. Ron Guido provided a stimulating narrative of his “Confessions of a Counterfeiter,” to basically provide a candid summary of the prevailing opportunities for illicit traders in pharmaceuticals—quite simply, straightforward reasons why counterfeiters were flourishing in pharmaceuticals. In his view, these hypothetical seven confessions continued to stimulate counterfeit trade in pharmaceuticals: 1) *My market space is the facility of global commerce* (such as, the emergence of free-trade agreements and factories serving the world creates opportunities for illicit traders); 2) *My targets are multinational brands in high demand* (why build your own brand—much easier to provide fakes); 3) *As a rule, never be seen with the goods* (such as fostering secret manufacturing sites and using gray-market diversion as a cloak for illicit supply chains); 4) *My technology investments are largely in packaging* (illicit traders invest their monies in packaging to replicate; the traders are not too worried about anti-counterfeiting technologies that require high-tech scanners); 5) *My favorite supply chain category is reverse logistics* (that is, illicit traders capitalize on returned merchandise that may be mismanaged by legitimate supply chain managers); 6) *I am inspired by the lack of pharma supply chain visibility* (that is, the “chain” is really a network where transparency of the transactions is opaque); and 7) *Laissez-faire provides a supportive business environment for counterfeiters* (that is, there is a natural bias of local authorities to favor their own economic development—counterfeiters do provide employment; and consumers are apathetic towards fakes).

After 30 years of working in the field of illicit trade, I wholly support the underlying messages imbedded in these confessions. Many enforcement agencies are still trying to develop better ways to circumvent the criminal opportunities of illicit traders, numerous stakeholders continue to highlight the high reward at low risk that these nefarious traders reap on a daily basis, and academics and other agencies are continuing to validate ways to effectively engage consumers to decrease their demand for illicit goods through anti-counterfeiting campaigns. The list goes on. But, there is momentum building across a variety of stakeholders to jointly address the problem of counterfeiting/piracy and illicit trade.

As editor of the *Handbook of Research on Counterfeiting and Illicit Trade*, my primary

2 *Handbook of research on counterfeiting and illicit trade*

goal was to invite contributors from a variety of disciplines: academics, customs authorities, enforcement agencies, legal experts, government policymakers, and private-sector firms were all solicited to share their perspectives on illicit trade. Thus, this unique *Handbook* provides multiple perspectives on the growth of illicit trade, primarily exploring counterfeits and Internet piracy. It includes expert opinion on a wide range of topics including the evaluation of key global enforcement issues, government and private-sector agency initiatives to stifle illicit trade, and the evolution of piracy on the Internet. The authors also assess the efficacy of anti-counterfeiting strategies such as targeted consumer campaigns, working with intermediaries in the supply chain, authentication technology, and online brand protection. The viewpoints shared in this *Handbook* are thought-provoking and will assist a variety of stakeholders to eradicate further growth in illicit trade. A long-term solution resides in all of us—we cannot solely rely on enforcement agencies to safeguard the intellectual property of our products and services. For example, a “typical day” at the U.S. Customs and Border Protection includes the *daily* 1) processing of more than 72,000 truck, rail, and sea containers; 2) screening of more than 1 million international passengers; 3) confiscating of more than 5 tons of narcotics; and 4) apprehending of more than 1,000 persons for suspected crimes. Obviously, using just a few of these metrics illustrates the monumental task facing enforcement agencies in terms of the volumes of trade represented in just one country market. The *Handbook* was designed to educate a larger audience of consumers, managers, and policymakers to be more savvy about this dark side of trade; to create and support more stratagems to eradicate this trade—if we fail to inform a broader constituency about this problem, the looming shadow of illicit trade will persist in both physical and virtual global marketplaces.

The design of the *Handbook* was to be inclusive and so it comprises 18 chapters that represent contributors from a variety of disciplines and several countries. The *Handbook* is divided into five parts. For the first part of the book, experts address the lure of the criminal opportunity involved with illicit trade, the principal enforcement issues foreseen by agencies, and the overarching problem of trade-based money laundering used to fund this type of illicit activity. The second part presents a succinct discussion of the initiatives of governments to thwart illicit trade. In this part, leading professionals give an overview of country-specific initiatives in the U.S., Mexico, and China. The third part of the book centers on the testimony of industry experts to portray the plague of illicit trade in pharmaceuticals, luxury goods, and tobacco. The analyses in these chapters provide in-depth case studies and industry-specific recommendations for anti-counterfeiting remedies. The fourth part of the *Handbook* addresses the growing problem of the Internet fostering several types of illicit trade activities ranging from cyberlockers that host pirated digital content to darknets that are virtual marketplaces that sell narcotics and weapons. For this part, experts highlight the difficulties of curbing piracy on the Internet and share their perspectives on issues ranging from the impact of social media on intellectual property rights to safeguarding online brand protection. An in-depth exposé of digital piracy in the music industry is provided as another case study. Finally, an overview of the criminal use of botnets, malware, and “malvertising” schemes underscores another dimension of illicit trade on the Internet. In the fifth part of the book, contributors from academia and the private sector provide their forthright views on the efficacy of a variety of anti-counterfeiting methods. In the next sections, brief summaries of each chapter are provided for the five parts of the book.

PART I ALARMING TRENDS IN ILLICIT TRADE AND KEY GLOBAL ENFORCEMENT ISSUES

In Chapter 2, “Illicit trade in counterfeit products: an examination of the opportunity–risk connection,” Brandon A. Sullivan, Jeremy M. Wilson, and Rodney Kinghorn from the Center for Anti-Counterfeiting and Product Protection (A-CAPP) at Michigan State University address the criminal opportunity of illicit trade. These experts assert that product counterfeiting represents a growing global risk that poses many negative consequences for consumers, businesses, governments, national security, the economy, and society. Their research suggests that the first step in formulating effective strategies to combat such crime is to understand what shapes the nature of the criminal opportunity. This chapter starts with a general overview of the scope of the illicit trade in counterfeit goods, including connections to transnational organized criminal enterprises and terrorist organizations. The contributors then discuss the consequences of product counterfeiting, followed by the factors shaping opportunities for this crime, including global consumerism, cultural awareness, profit potential, technological advances, low-risk crime, supply chain complexity, and lack of awareness. The authors conclude with a review of the need for further research to better understand the risk of and opportunity for product counterfeiting.

In Chapter 3, “Key global enforcement issues on illicit trade in goods,” Stefano Betti, of the International Chamber of Commerce (and formerly at INTERPOL), addresses principal challenges and constraints that the law enforcement community faces when addressing illicit trade as a distinctive phenomenon. For example, the author discusses the paradigm of organized crime today and current perceptions of illicit trade among practitioners. Notably, this expert’s discussion centers on advocating a change in cultural attitudes as a pre-requisite for effective law enforcement action. In addition, this contributor provides a detailed overview of the five major paths that could be followed to create useful deterrents against illicit trade. Those paths include the following: legislative reform, notably to ensure that appropriate penalties are applied; the use of organized crime legislation in illicit-trade-related investigations; systematic resort to criminal justice treaties as global legal tools to facilitate the international exchange of evidence, in particular the UN Convention against Organized Crime; asset confiscation; and using more resources in intelligence-driven investigations and preventive criminal proceedings for the purpose of disrupting illicit trade operations “in the making.” Each path is considered as an integral part of a coordinated policy and law-enforcement-based strategy.

In Chapter 4, “Reaching beyond banks: how to target trade-based money laundering and terrorist financing outside the financial sector,” Ross S. Delston and Stephen C. Walls, two leading attorneys and expert witnesses in this field, provide an insightful and thought-provoking discussion of this type of illicit financing activity. The contributors discuss anti-money laundering and combating the financing of terrorism (AML/CFT) measures that have succeeded in restricting the two traditional avenues of money laundering, namely, the abuse of financial intermediaries and the physical movement of money across borders. Thus, the authors focus on international criminal and terrorist organizations that have turned to trade-based money laundering (TBML) to conceal and legitimize their funds, as this is a channel that remains relatively untouched by international AML/CFT efforts. The contributors reveal how this abuse of the global trade network has

received increasing recognition from the Financial Action Task Force, the international standard-setter, as the next front in AML/CFT. Because TBML methods may be used not only to launder money, but also to finance international terrorism, facilitate weapons proliferation, and conceal and transport weapons of mass destruction (WMDs), this chapter proposes a far-reaching solution—that those in the international supply chain be required by law to adopt AML/CFT safeguards to protect their businesses, including filing suspicious activity reports, identifying their customers, and designating an AML/CFT compliance officer.

PART II COUNTRY INITIATIVES DESIGNED TO STEM ILLICIT TRADE

For Chapter 5, “Initiatives to stem illicit trade in the United States,” Peggy E. Chaudhry of the Villanova School of Business provides a straightforward roadmap for a person to navigate the data that is available on counterfeit trade from the U.S. Department of Homeland Security, U.S. Customs and Border Protection, along with a brief synopsis of the principal agencies that safeguard legitimate trade. The primary focus of this chapter is to illustrate the incidence of counterfeit trade by way of seizure data from the U.S. Department of Homeland Security (Customs and Border Protection); highlight the leading agencies designed to protect the intellectual property environment, such as Immigration and Customs Enforcement (ICE); and discuss a few agencies that rely on the joint efforts of several of the U.S. government-led organizations (such as “StopFakes”) and the private sector.

In Chapter 6, Gloria Maria Dominguez Rodriguez of the Servicio de Administración Tributaria (Tax Administration Service) in Mexico presents her expertise in illicit trade in “Initiatives to stem illicit trade in Mexico.” Throughout this chapter, the author shares her experience of Mexico through the Tax Administration Service on tackling illicit trade. This chapter is divided into four sections: first, the author briefly looks into the history of the Tax Administration Service and the issue of contraband at the border between Mexico and the U.S. The contributor further explains how the General Administration for Foreign Trade Audit was created, and how it is structured and encompasses legal attributions. The contributor analyzes the background of the situation, its origin, development, the main interests of the actors involved, and specific target areas, to later provide substantive criticism of or applause to the programs and projects proposed by the Tax Administration Service. The contributor also demonstrates how state power can curb illicit trade by implementing specific enforcement strategies, developing risk models, conducting effective investigations, and performing the necessary intelligence to detect patterns of illicit trade. The author illustrates how initiatives based on international cooperation and joint work between the Tax Administration Service and other federal agencies have achieved great results in combating illicit trade. Finally, the contributor summarizes the Mexican perspective and its priorities regarding illicit trade and expands upon areas of opportunity, such as policy recommendations, that are currently being considered by the Mexican government.

In Chapter 7, Davide Follador, a lawyer and Intellectual Property Policy Expert based in Beijing, China, provides his insight and expertise regarding principal “Initiatives to

stem illicit trade in China's e-commerce." This chapter focuses on aspects of intellectual property protection in China's e-commerce market, providing insights on major issues and explaining how Chinese regulators are addressing these problems. In the first part, the contributor describes the main features of the legislative and regulatory framework, just as Chinese legislators have recently sanctioned a comprehensive reform of the e-commerce law. In the second part, a selection of policy documents is presented and the results of national enforcement campaigns described, with a special focus on key issues in the criminal prosecution of commercial-scale intellectual property infringements. In the last part, the author looks at recent initiatives by the public and private sector to work out long-term solutions through self-regulation and non-contentious approaches.

PART III IMPACT OF ILLICIT TRADE ON SELECT INDUSTRY SECTORS

For Chapter 8, "The challenge of curtailing the escalation of counterfeit pharmaceuticals," Peggy E. Chaudhry of the Villanova School of Business presents her continued work in this sector by summarizing and updating some of her key publications in the field. The main discussion developed in this chapter centers around the size and growth of illegitimate pharmaceuticals; the porous supply chain in both physical and virtual markets, which allows illicit traders to penetrate (or circumvent) the licit trade of pharmaceuticals; a succinct clarification of both formal organized crime groups and informal illicit traders fueling the supply; the evolution of agencies designed to govern and enforce this type of criminal activity; and an array of anti-counterfeiting tactics designed to curb this major problem.

In Chapter 9, Ludovica Cesareo and Patti Williams of the Wharton School at the University of Pennsylvania and Alberto Pastore of Sapienza University in Rome present their in-depth knowledge of the illicit trade in "Counterfeiting luxury goods." The contributors provide a succinct discussion of reasons why luxury and fashion goods are often the preferred targets of counterfeiters. The authors expand on the premise that luxury products are the most illegally reproduced worldwide for a multitude of reasons, linked to both demand and supply. On the demand side, counterfeiters exploit the heritage of meanings associated with the original goods, enticing status-seeking consumers who cannot afford the authentic goods into buying false versions in order to project the same prestige, high brand image, and social status as the authentic goods. On the supply side, counterfeiters are very interested in reproducing luxury goods since they are part of a very lucrative market with significant margins yet require relatively simple, mass-production technologies. Thus, counterfeiting may imply large profits with small investments and limited risks, given that the probability of being caught is rather small, and even if caught, the conviction rates are low and penalty rates often light. The contributors assert that complying with international policy and enforcing the intellectual property rights of global, luxury companies is certainly not a priority. The consequences of these instances are dramatic for legitimate brands, as "loxyury" products, meaning counterfeit luxury goods, not only reduce revenues and profits, but also tarnish the brand's image, equity, and reputation, which are the essence of what a luxury brand really is.

In Chapter 10, Peggy E. Chaudhry of the Villanova School of Business and Alan

S. Zimmerman of the City University of New York expand upon their broad-based expertise to specifically examine “Illicit trade in the tobacco sector.” The authors focus primarily on key elements of this illicit trade that include: 1) the scale of the global illicit tobacco trade and its nature (notably, the distinction that can be drawn between source and destination markets); 2) the various types of illicit tobacco products; and 3) the nature and characteristics of the illicit tobacco trade. The contributors provide a detailed discussion of the recognized sources and destinations of illicit tobacco trade; the criminal gangs behind illicit tobacco trade; the use of packaging as a deterrent to counterfeiters; the role of tax stamps; and the use of Internet sites for distribution. The contributors present the principal factors contributing to illicit trade in tobacco; specifically: 1) consumer affordability of tobacco products; 2) the profit incentives available to illicit traders; 3) the fact that criminal penalties are low and disproportionate to profit incentives; 4) consumer complicity; 5) the significance of the location of certain countries; and 6) tobacco as the “ideal smuggled product.”

PART IV THE GROWING PROBLEM ON THE INTERNET

Michael Tanji, a leading cybersecurity and intelligence professional, provides a candid view in Chapter 11 through an “Overview of the magnitude of piracy on the internet.” From the start of the commercial Internet, and in the virtual environments that preceded it, computer and network technology have been used to circumvent copyright and facilitate piracy and illicit trade. Today, the pervasive presence of computing devices and the near ubiquity of Internet connectivity has made the problem worse in both scope and scale. The Internet is an ideal medium for such activity because it allows individuals to communicate globally and with a degree on anonymity and privacy sufficient to thwart all but the most intensive and expansive law enforcement efforts. The author asserts that, depending on the type of crime you want to commit, becoming an online criminal is a simple “point-and-click” task, and extremely cost-effective. This contributor describes how serious dealers in illegal content and contraband alike make finding and procuring their products just as simple and easy as legitimate manufacturers and retailers, making it difficult for some consumers to understand that they are participating in a crime. The author further asserts that it costs very little to produce a web site that looks and feels completely legitimate and provides straightforward examples, such as website developers in India who can cost as little as \$10 per hour. More candidly, Tanji asserts in this chapter that “all a criminal has to do is cut-and-paste product descriptions into a template, upload pictures of their merchandise (or copy them from the manufacturer’s site), and they are in business.” Overall, this chapter illustrates a very stimulating and up-front narrative of the piracy problem on the Internet.

In Chapter 12, Dennis Collopy leverages his professional insight stemming from a four-decade career in the music industry to give an outstanding overview of counterfeits and piracy to augment his chapter’s focus on “Social media’s impact on intellectual property rights.” The U.K.’s Intellectual Property Office (IPO) commissioned research in 2015, by a team led by the University of Hertfordshire, on the impact of social media on intellectual property rights, specifically to assess the ways in which social media platforms might facilitate intellectual property right infringement in relation to physical goods (“counter-

feits”). The range of trade bodies and sectors involved in the research was shaped by those whose goods were most widely impacted by the availability of illicit goods through social media. Employing the required methodology for assessing the extent of social media’s effect on intellectual property rights in physical goods meant there were two key aims: first, to compare data and insights from industry, government, and consumers to produce a representation of recent levels of counterfeiting within the U.K. and, second, to assess the extent to which this kind of illicit behavior is moving online and is being facilitated by online social media platforms. The more specific objectives of the study involved assessments of the scale, impact, and characteristics of infringements, as well as opportunities for intellectual property rights.

Hasshi Sudler, CEO of Internet Think Tank, Inc., presents his professional view of “Dynamic shifts in music piracy: a review of the music industry and underlying technology innovations” in Chapter 13. The music industry has been subjected to the effects of piracy for the past several decades. This author asserts that historical piracy trends can be attributed to the convergence of three technology paradigms: digital media, the Internet, and growth in digital broadband. The perfect storm of these technologies has made music reproducible without quality loss, transferable over a global network, and convenient for file sharing. This technology convergence, however, has also made possible a recent evolution in music delivery through digital streaming services. The introduction of digital music streaming has encouraged music enthusiasts who once pirated music to now consume music over legitimate channels, making for measurable declines in music piracy and growth in industry revenue. This contributor outlines recent and projected changes in the music industry and how they are transforming music piracy, consumer behavior, and the music supply chain.

Akino Chikada and Anil Gupta of MarkMonitor®, one of the global leaders in providing enterprise brand protection, delivers an outstanding synopsis of private-sector remedies in Chapter 14—“Online brand protection.” The Internet’s tremendous reach and economies of scale have revolutionized the way brands engage with customers and drive revenue. These experts develop their discussion on the fact that companies in almost every industry have embraced the Internet and e-commerce to grow their businesses and their brands; but so have fraudsters, counterfeiters, cybercriminals, and other brand abusers. These contributors give a detailed account of the digital world that offers a sizable opportunity for fraudulent entities to hijack reputable brands for their own financial gain—and their tactics are becoming more and more sophisticated. An overview of brands that face a wide range of threats and the damaging impact on their reputation and customer trust is given—specifically counterfeiting and brand-associated phishing to content piracy and pay-per-click advertising scams are detailed in this chapter. The authors conclude that fraudsters continue to leverage new and emerging channels, including social media outlets and mobile platforms, and are becoming adept at disguising their activity in hard-to-track areas of the Internet.

Peggy E. Chaudhry of the Villanova School of Business presents her recently published work in *Business Horizons* in Chapter 15, “The looming shadow of illicit trade on the internet: botnets, malware and malvertising.” The author provides a narrative of the deep web that hosts darknet marketplaces in order to sell a variety of wares, such as narcotics and weapons, and is testimony to the growth of illicit trade on the Internet. The challenge of websites that host digital content piracy is exacerbated through linkages

to a variety of malware schemes that have created a lucrative crimeware economy. The contributor describes digital thieves who lure unsuspecting consumers with their “digital bait” to derive profits from a variety of malware schemes, such as ransomware and malvertising. The hijacking of computers to gain access to their digital content so that it can then be ransomed back to consumers or organizations is considered to be one of the leading threats of Internet crime. The author explains malvertising schemes that are currently plaguing the interactive advertising business—criminals are reaping profits by posting legitimate advertisements at content theft sites or using an army of botnets to fake advertising traffic. The contributor summarizes this chapter with a discussion of a variety of stratagems that have evolved to curb this illicit trade by way of fostering multi-lateral enforcement tactics, updating legislation to circumvent this type of crime on the Internet, training digital savvy citizens, and creating private-sector remedies.

PART V MANAGERIAL AND CONSUMER PERCEPTIONS OF THE EFFECTIVENESS OF ANTI-COUNTERFEITING TACTICS

Many experts agree that diffusing consumer demand for knowingly obtaining counterfeit or pirated goods is part of the solution to eradicating illicit trade. Various anti-counterfeiting campaigns have recently been launched, such as INTERPOL’s “Turn Back Crime” campaign, but few studies shed light on whether these campaigns are effectively changing consumer behavior. In Chapter 16, “Analysis of anti-counterfeiting tactics to diffuse consumer demand,” leading academic experts in counterfeit trade, Barbara Stöttinger and Elfriede Penz of the Vienna University of Economics and Business, and Ludovica Cesareo of the Wharton School at the University of Pennsylvania, aim to shed light on the role of consumers and what can be done to make them stay away from these illegal business practices and win them over (again) to originals. Specifically, the authors bring together the counterfeiting and the piracy academic literature and highlight similarities rather than differences between the two product categories in consumer behavior, provide an outline of how these consumer insights are already reflected in consumer-directed anti-counterfeiting measures (CAMs), discuss how effective these activities are to circumvent demand for this illicit trade, and provide their expertise in determining solid recommendations to effectively fight against counterfeits and digital piracy.

Deli Yang of Trinity University in San Antonio, Texas and Mahmut (Maho) Sonmez of the University of Texas at San Antonio are two of the most prominent academic professionals on the topic of anti-counterfeiting strategies and thus deliver a solid overview in Chapter 17 on “Effectiveness against counterfeiting: four decades of strategic inquiry.” In this chapter, the authors identify and categorize relevant themes on the strategies and their effectiveness against counterfeiting. This effort differs from most prior work because the authors’ examination goes beyond strategies, but centers on strategic effectiveness. The contributors first assert that there is a need to examine this field since strategies can only generate positive outcomes when they are effective. Second, the contributors focus their attention on relevant empirical boundaries for conducting research in strategic effectiveness against counterfeiting. The authors’ systematic critique allows a broad comprehension of relevant empirical boundaries that have been examined (for example, time frame,

nations, industries and companies examined). Third, this chapter represents a systematic examination that is focused on methodological critique and examines the literature for consistency and contradictions, and adequacy and voids, and provides directions for future research and insights for practitioners.

The International Chamber of Commerce's Business Action to Stop Counterfeiting and Piracy (BASCAP) has been at the forefront of providing timely and thought-provoking recommendations on anti-counterfeiting/piracy for decades. This agency represents one of the principal and most relevant providers of research, reports, and advocacy studies in the field. In Chapter 18, "The critical role of intermediaries in stopping counterfeiting and piracy," William Dobson of BASCAP takes a detailed look at one aspect of the illicit trade problem: how intermediaries in the global supply chain are being used, knowingly or unknowingly, by counterfeiters and their criminal networks to produce and distribute counterfeit goods and pirated materials. This leading expert discusses the roles and responsibilities of intermediaries to stop the infiltration of these illicit goods, and presents examples of current best practices and recommendations for what can be done to stop it.

Previous studies have focused on managerial or consumer perspectives of anti-counterfeiting tactics, specifically the efficacy of "product cues" to aid in the authentication of legitimate versus illegitimate products. For example, previous studies have examined the cues of price (such as, a lower price), point of purchase (such as, goods sold in notorious counterfeit markets), packaging and labeling (such as, a hologram), and the like to determine what actually alerts the consumer, enforcement officials, and other stakeholders to the legitimacy of the product at various stages of the supply chain. In this regard, Ian Lancaster, an Associate of Reconnaissance International, is highly regarded as one of the leading professionals on strategies and technologies to combat counterfeits. In Chapter 19, "Detecting counterfeits in the supply chain: how to use authentication methods," the author describes the concept of product authentication as a system which comprises the authentication device, tools to examine the device, and examiners who are trained and equipped to carry out the examination of the device. The author's work in this chapter shows that the purpose of authentication systems is to detect counterfeit goods in the supply chain and thus prevent them from reaching consumers, not to prevent the production of counterfeits. Overt, covert, and networked authentication features are described, and it is concluded that the most effective feature combines overt and covert elements. The function of track and trace as an anti-counterfeiting method is discussed, the author concluding that it offers control of supply chains but does not provide authentication, and that it can only operate in the legitimate supply chain, not in the illicit supply chain which is the route used by many counterfeiters. The function of smartphones in authentication is examined, and the conclusion reached that they have a role to play in the hands of specialist examiners but are unlikely to lead to the involvement of the public in examining goods to determine whether they are genuine or fake. Finally, the chapter discusses the return on investment for authentication systems.

