

BLOCKCHAIN OF DIAMONDS

**RISKS AND REGULATION OF THE DIAMOND INDUSTRY
AND HOW BLOCKCHAIN TECHNOLOGY CAN IMPROVE
TRANSPARENCY**

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Introduction

Where do diamonds come from? Before a diamond is set and sold, it travels through a series of forms, and simultaneously, across the world. Diamonds are mined and initially traded as rough diamonds, then cut and polished to be traded as loose polished diamonds, sold to jewelry manufacturers where they become mounted polished diamonds, enter jewelry retailers, and are ultimately bought by consumers. Diamonds may be mined in Africa, cut and polished in India, traded in Belgium, and sold to consumers in the United States.

As diamonds change hands, change countries, and literally change form, there are innumerable opportunities for illicit action, making the traceability and provenance of individual stones supremely important. The nature of diamonds and the diamond industry makes it ripe for financial crimes such as money laundering, terrorist financing, theft, smuggling, fraud, and tax evasion. The diamond industry has historically operated with little visibility, posing a risk to banks and other institutions. However, recent technological advancements are making it possible to shed light on a traditionally murky industry. Blockchain, the technology behind Bitcoin and other cryptocurrencies, can be used to track objects, and is now being applied to the diamond pipeline, as a step towards transparency.

Blood Diamonds and First Tracing Efforts

Despite the popularity of diamonds in western culture, the diamond trade has a sordid history, financing and spurring a myriad of atrocities such as civil war, insurgencies, looting wars, mutilation, rape, and terrorist activity. The sale and exchange of diamonds for weapons by rebel groups and war criminals funded conflicts in a number of African countries for several decades. Diamonds mined in conflict areas, such as areas in the midst of civil war, or sold to finance a conflict such as an insurgency, have been labeled “blood” or “conflict” diamonds.



The link between the diamond trade and third-world conflicts was first brought to light in 2000 by a UN investigation which led to a Security Council response, as well as the initiation of the Kimberley Process Certification Scheme. The Kimberley Process requires member countries to certify shipments of rough diamonds as “conflict-free” in an attempt to prevent conflict diamonds from entering the world diamond market. A three-step verification method is used, where mining countries must provide declarations regarding the origin of stones.^[1] Over 80 of the world’s diamond-producing countries comply with the Kimberley Process.^[12] However, the process has fallen under vast criticism for system flaws such as the certificate process

applying to batches of rough diamonds rather than individual stones, and failing to address issues around worker exploitation and other human rights violations.^{[1][14]}

The Kimberley process is voluntary; it is not an international legally enforceable agreement, and its purpose is mainly to stop the trade in blood diamonds,^[14] rather than deal with money laundering or terrorist financing activities. Thus, although the Kimberley Process has been effective in reducing the percentage of blood diamonds in the world diamond market, it is a far cry from complete transparency as to the traceability and provenance of all diamonds.

Money Laundering, Terrorist Financing, and Other Crimes

Improved regulation and awareness of money laundering typologies has forced criminals to find new methods and venues for laundering funds. As a result, criminals have begun to target Designated Non-Financial Businesses and Professions (DNFBPs), such as precious metals and precious stones industries, and the trade in rough diamonds, polished diamonds, and diamond jewelry has been particularly affected.^[7]

Diamonds are susceptible to money laundering and other crimes due to a number of factors. First, diamonds are a liquid asset; they can be utilized similarly to currency and can be used as a means of payment or readily converted to cash. There are instances of drug trafficking through directly trading diamonds for drugs.^[7] Diamonds are also difficult to track and can provide a level of transactional anonymity. Along with other precious stones, diamonds have a high value-to-mass ratio. Their small size allows for effortless smuggling across borders. Diamonds retain their value for a long period of time and aren't devalued by inflation. They also cannot be burned, do not expire, and accrue value over time (there is no hurry to get rid of them).^[3] The diamond trade also deals with high-dollar amounts, which provides the potential for laundering huge sums. The diamond trade typically involves multiple international transactions, which allows for an effective layering process, while simultaneously complicating investigations and law enforcement actions. As the trade is transnational, it is susceptible to a number of Trade Based Money Laundering (TBML) techniques, particularly over/under valuation. In addition, anti-money laundering/counter terrorism financing (AML/CFT) professionals and law enforcement are not well-aware of the intricacies of the diamond industry, evidenced by the extremely limited number of reports filed by precious stones dealers to Financial Intelligence Unites (FIUs).^[7]

It was discovered that Osama bin Laden's Al Qaeda network purchased diamonds at low cost from Revolutionary United Front (RUF) rebel groups in Sierra Leone prior to September 11, 2001 and sold them for large profits in Europe, netting estimated millions of dollars. In July 2001, Al Qaeda diamond dealers began buying far more diamonds than usual and at higher prices. As diamonds were nearly untraceable and could be easily hidden, Al Qaeda likely invested in diamonds as a way of protecting its funds in anticipation of its accounts being frozen after the September 11th terrorist attacks.^[6]

Fraud is also prevalent in the diamond industry. Insurance fraud related to diamonds results in billions lost each year with instances of a single stone being claimed with multiple insurers.^[1] Synthetic and treated diamonds also pose a fraud risk. Synthetic diamonds are laboratory-created diamonds nearly identical to naturally occurring diamonds, but with slight atomic differences. Natural diamonds, which are unsuitable for commercial jewelry due to certain defects, can be enhanced by laboratory processes to achieve better color or clarity. There is no international nomenclature used for differentiating synthetic or treated diamonds from naturally occurring diamonds, thus synthetics may be fraudulently substituted for real diamonds. In addition, legislation in countries around the world rarely differentiates between synthetic/treated diamonds and naturally occurring diamonds. Referring to these three types of stones only as "diamonds" or "precious stones" is concerning, as it leaves room for interpretation that laws and regulations may not specifically apply to synthetic stones.^[7]

What Regulations Exist for Dealers in Precious Metals, Stones, or Jewels?

The USA Patriot Act and the US Bank Secrecy Act require dealers in precious metals, stones, or jewels to establish an AML program. Dealers are also required to perform Office of Foreign Assets Control (OFAC) sanctions screenings. Dealers' AML compliance is also examined periodically by the IRS in what is known as a Title 31 Exam. The dealer must provide evidence in support of its AML program, such as AML program documents, personnel training records,



documentation pertaining to recordkeeping, etc. IRS examiners are particularly interested in cash transactions, since cash transactions exceeding \$10,000 require filling out Form 8300. Failure by dealers to maintain adequate AML programs may result in sanctions by government regulators, and the failure to file Form 8300 may result in fines, penalties, or even criminal prosecutions.^[9]

The Financial Action Task Force (FATF) has released guidance for dealers in precious metals and stones, which emphasizes utilizing a risk-based approach,^[8] and has issued three FATF recommendations (22, 23, and 28) which are applicable to diamond dealers. The recommendations are as follows:

- Recommendation 22: Customer due diligence and recordkeeping requirements apply to dealers in precious stones when they engage in any cash transaction with a customer equal to or above the applicable designated threshold (USD/EUR 15,000).
- Recommendation 23: Measures to be taken with respect to countries that do not sufficiently comply with FATF recommendations (outlined in recommendations 18 to 21) apply to dealers in precious stones when they engage in any cash transaction with a customer equal to or above the applicable designated threshold (USD/EUR 15,000).
- Recommendation 28: Dealers in precious stones are subject to effective systems for monitoring and ensuring compliance with AML/CFT requirements, which should be performed on a risk-sensitive basis by a supervisor or by an appropriate self-regulatory body.

It has been noted that Recommendations 22 and 23 apply to cash transactions only, while other transaction types that diamond dealers may engage in are not specifically addressed. Also, the FATF's definition of currency or bearer negotiable instruments does not currently include diamonds. As a result, member countries are not required to have measures in place to detect cross-border transportation of diamonds.^[7]

Everledger and Blockchain

Technology allows for diamonds to be marked with an identifier, making it possible to follow the diamond trail and identify who is involved in their sale or purchase. This type of marking has the potential to mitigate the risk of money laundering and terrorist financing, stop insurance fraud, and identify synthetic and conflict diamonds. However, the majority of diamonds are currently unmarked.^[7]



Everledger is a company founded in May 2015 which uses blockchain technology to build a shared digital global ledger that can track diamonds.^[18] The technology provides a decentralized registry for diamonds which can be accessed and added to at any point along the diamond pipeline.^[16] The goal of the system is to assist in the reduction of risk and fraud for banks, insurers, and open marketplaces^[19] by verifying the provenance, authenticity and record of custody of diamonds.^[1] Information is verified by a consensus rather than written down by a single person,^[18] and records are unalterable and permanently stored, making the system superior to paper systems, like the Kimberley

Process, where paper certificates and receipts can be easily lost or tampered with.^[13] Everledger even incorporates Kimberley Process documents into its system so that existing systems for tracing provenance can be leveraged.^[5]^[11] Everledger also tracks both rough and polished diamonds.^[5]

Everledger creates a fingerprint for each diamond and a digital twin on the blockchain.^[15] Certification houses for diamonds already exist where laboratories utilize spectroscopy to identify color grading, but

there is no central database for the information obtained. That information can now be aggregated in blockchain to provide a shared record and an audit trail. Each diamond is given a traceable fingerprint using 40 metadata points in addition to the Four C's (cut, color, clarity, and carat weight).^[11] Diamonds over 0.16 carats have a serial number inscribed on their girdle. The serial number can be inscribed by laser on the crown or girdle of the stone and tracked using the blockchain.^{[2][15]} Although a criminal could reshape a stone to alter its fingerprint, this action is costly and significantly reduces the stone's value. Certified diamonds with the laser inscription have about a 30% higher market value than uncertified stones.^[2]

The Everledger platform is partially public, with sensitive data, such as police reports, kept private.^[2] There is also a second component to Everledger which involves smart contracts. Smart contracts are computer protocols that can execute the terms of a contract. The blockchain serves as a ledger to track smart contracts and also verifies business relationships and agreements between diamond industry entities like insurance companies, diamond wholesalers, and diamond retailers, allowing them to transact across the blockchain. The blockchain tracks and enforces contracts such as change of ownership, financing, and insurance policies. Smart contracts can potentially enforce governance standards, making them extremely valuable for de-risking.^[17]

Around 1.8 million diamonds have already been catalogued into the Everledger blockchain.^[4] The technology has enabled diamond suppliers, border agents, and other entities to replace a paper certification process with a blockchain distributed public ledger. Computer scanning tools are used to access the Everledger digital vault and determine the provenance of any diamond.^[15]

Steps Financial Institutions can take to Mitigate Risk

Although tracking systems like Everledger bring significant transparency to the industry, there are still various steps that financial institutions (FIs) should take to mitigate risk among their diamond dealer customers. Risk mitigation begins with risk tolerance, and institutions have begun to shy away from financing diamond industry customers, especially those engaged in the middle portion of the diamond pipeline. In 2016, London-headquartered bank, Standard Chartered, announced it would no longer finance diamond traders and polishers after an evaluation of the risks versus returns associated with the sector. Many banks are tightening lending restrictions due to loan defaults among these customers, combined with the significant fines the institution could face if money laundering was detected.^[10]

FIs must ensure that any dealer-clients are meeting their regulatory requirements. To this end, institutions require those clients to provide evidence of their compliance with AML and OFAC regulations in order to open and maintain accounts, in addition to collecting anticipated types and volumes of activity. For new and existing diamond industry customers, FIs should have a strong KYC program in place to collect and verify identifying information for the business and beneficial owners. Some red flags to beware of as part of the customer due diligence (CDD) process include a diamond dealer who is unfamiliar with trade practices or who maintains a high level of secrecy, multiple changes in company name or



contact person, the use of a bank account to transfer funds between diamond dealers in the name of a charity, a single bank account being utilized by more than one business entity, and falsified or forged Kimberley Process certificates or invoices.^[7]

In addition, diamond industry customers and dealers in precious metals, stones, and jewels should receive a heightened risk score as part of an institution's customer risk rating (CRR) methodology and subsequent enhanced due diligence (EDD) procedures. The information and anticipated transaction types and volumes provided to the bank by the diamond dealer should be updated and subject to ongoing monitoring as part of the institution's EDD program and should be compared against current transactional activity. Additional red flags include the customer trading in large volumes with countries that are not part of the traditional diamond pipeline, or countries where there are no diamond mines located.^[7]

FIs should observe whether the customer engages in international transactions related to rare or unique diamonds, or sells loose diamonds from a retail store. FIs should be cautious of forms of payment which are unusual for the diamond trade, such as traveler's checks, and should be aware of any diamond dealers' accounts with multiple credits that have no evidence of diamond sales. Deposits or transfers from foreign companies immediately followed by transfer of those funds to another jurisdiction should receive further investigation. An increase in activity coinciding with a decrease in the activity of the overall industry, or a purchase or import volume which is large in comparison to the customer's estimated sales, should also trigger additional investigation. Early repayment of a diamond dealer's loan is also cause for concern.^[7]

Overall, diamond industry accounts should receive heightened scrutiny to ensure that they are not being used to facilitate money laundering, whether that be in the form of TBML, purchasing diamonds with illicit funds, layering, black market sales, or a host of other issues. AML training tailored to TBML techniques and the diamond pipeline can help to elucidate whether convoluted activity in an account is acceptable business or potentially suspicious activity.

The diamond industry is extremely complex, and often opaque, with limited awareness of its intricacies among law enforcement and AML/CFT professionals. It is known to present risks for banks and DNFBPs due to the susceptibility to money laundering and other crimes presented by diamonds and international trade, and the challenges of understanding a specific gem's provenance are manifold. There is still a pressing need for increased understanding of the industry among FIs and law enforcement, as well as a need for improved detection and reporting among FIs and DNFBPs. However, diamond marking and tracking systems such as Everledger are providing a promising step toward increased transparency, and with a solid AML program in place, FIs can put themselves in a strong position to combat diamond industry risks.

At AML RightSource, our Financial Crimes Advisory professionals can help you build an AML program designed to mitigate the unique risks associated with the diamond industry and show you how to incorporate enhanced measures for identifying money laundering through the diamond pipeline. Please visit <http://amlrightsource.com/financial-crimes-advisory-services/> for more information.

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