

CRYSTAL BLOCKCHAIN'S

Crypto Asset & Blockchain Industry Report





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"Using Crystal Blockchain analytics tool in our daily operations at Grant Thornton Blockchain Cyprus has made the process of conducting KYC/AML risk assessments for VASPs faster, easier, and more reliable.

Thanks to this tool, we can easily identify high-risk transactions, investigate them thoroughly, and properly adhere to regulatory requirements for our clients.

All the while, the level of continuous support and communication with the Crystal Blockchain team remains outstanding!"

George Agathangelou

Business Development Director - Grant Thornton Blockchain Cyprus

https://www.grantthornton.com/

Asset management and advisory services



Note from the CEO



"2022 has seen some of the most seismic events not only in the crypto asset and blockchain space but also economically and socially. In this report, the team at Crystal Blockchain provides you with an overview of the digital asset industry in 2022, how it fits into the broader global landscape, and where we see the industry going in 2023 and beyond."

Marina Khaustova

CFO

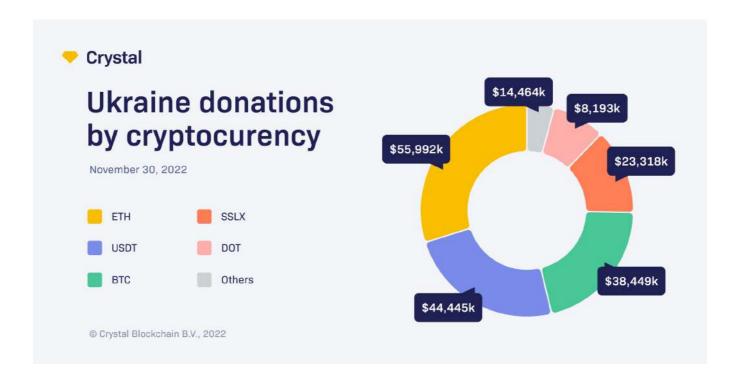
The effects of the war in Ukraine on economic policy and sanctions

The devastating attack on Ukraine in February 2022 took the world by surprise, with serious ramifications for everyone involved, including key members of the Crystal Blockchain team. The resulting economic sanctions against Russia have affected every sector, including the crypto asset industry, forcing organizations across the world to re-examine their exposure to Russia.

Legislation passed in Europe in October 2022 banned all crypto asset wallets, accounts, and custody services from Russia, forcing some major exchanges which have operations in Europe to restrict services to Russian individuals and companies.

However, the conflict also gave rise to several initiatives which leverage blockchain. Most notably, the Ukrainian government began accepting cryptocurrency donations to encourage donor inclusivity. Our latest analysis depicted below shows in USD the amounts raised so far in different cryptocurrencies, including ETH, USDT, BTC, SSLX, DOT, and other currencies. (Read more about the total amount of crypto donations raised for Ukraine in the next section.)





Sadly, this has not been without challenges as criminals saw opportunities to defraud well-meaning donors, diverting funds through fake ads and phishing emails pointing to scam websites. Read more about the work Crystal has done to uncover fraud related to donations.

FTX and Luna scandals added ice to this year's crypto winter

The sensational fall from grace of FTX - previously one of the world's largest cryptocurrency exchanges - is currently dominating every headline. In three short years, FTX rose meteorically to a valuation of \$32 billion by January 2022. But all came tumbling down in a dramatic and abrupt end with endless leaks of mismanagement and a bankruptcy filing in November 2022.

Earlier, the Terra Luna Crisis also left the crypto industry in a period of disarray when the collapse of TerraUSD, a so-called stablecoin, lost its 1:1 dollar peg. These collapses, combined with a steady stream of crypto businesses liquidating as they came up against the harsh realities of this year's crypto winter have shaken the digital asset and blockchain community.

Crypto funds for ML moving more & more to higher-risk exchanges

Crystal's team of expert investigative analysts follow the data in the blockchain and crypto industry year-round to uncover insights.



This year they found that exchange services that constitute the highest risk of money laundering received less funds from low-risk and moderate-risk service providers, reflective of greater demands by consumers and counterparties.

We expect this trend to continue as protocols such as the Travel Rule gain traction across the market.

The investigative analytics team has also noted that funds obtained through fraud are increasingly likely to be sent to a very high-risk exchange provider, rather than a low-risk one. Criminals will continue to take advantage of poor practices of such services to launder their funds, posing a challenge for regulators, LE, and exchanges on how to counter this threat. In the next section, our Director of Blockchain Intelligence covers these insights in more detail.

Still, big aims globally to lead the charge in building global cryptocurrency hubs

Following the UK's appointment of Rishi Sunak as its latest prime minister in October 2022, the Economic Secretary, Andrew Griffith, has reiterated the country's commitment to becoming a key center for the crypto industry, saying: "The collapse of FTX isn't a reason to change course."

It's not only the UK, in fact, but Singapore and Hong Kong have very recently reiterated their desire to become global cryptocurrency hubs. Ravi Memon, managing director of the Monetary Authority of Singapore (MAS) opened the Singapore Fintech Festival 2022 by saying:

"If a crypto hub is about experimenting with programmable money, applying digital assets for use cases or tokenizing financial assets to increase efficiency and reduce risk in financial transactions, yes, we want to be a crypto hub."

Similarly, Julia Leung, deputy CEO and executive director at Hong Kong's Securities and Futures Commission (SFC) said that given recognition of the growing investor demand for virtual assets, particularly among private banks and hedge fund customers, it was important for regulators to provide clarity to banks, brokers and fund managers. Leung also noted the pressing need for regulation in the DeFi sector, a topic our Head of Compliance delves into in this report, along with other 2022 regulatory trends and likely crypto regulatory focuses for 2023.



The UAE is also vying for position when it comes to its crypto hub status, as airline Emirates - headquartered in Dubai - announced it is planning to not only accept bitcoin payments, it also plans to launch an NFT collection and the company hopes to eventually use next-gen blockchain technology for its airline tracking records.

Moving mainstream with payments, Web, and NFTs

As the popularity of NFTs has grown, and they have been cemented particularly as a form of income, with a November 2022 global market cap of \$12+ billion, it's at the point that US state Wisconsin has now putting in place a tax base for those making NFT sales.

Other interesting developments saw Google reach an agreement with Coinbase to allow a subset of Google customers to pay for cloud services with digital currencies early next year.

Nike also recently announced its new Web3 platform .swoosh - a virtual space, where community members can peruse and purchase virtual collectibles, including shoes and jerseys which "members will soon be able to wear in digital games and immersive experiences."

Crypto and blockchain market trends & developments

New opportunities also bring new risk. The year's developments question much about the future of cryptocurrencies in relation to risk management, due diligence, and the role of regulation, and of course, how firstly the market will respond, and secondly how criminal typologies will evolve.

Without a doubt, regulations are top of the agenda for cryptocurrencies to flourish safely. And, as we cover in later sections of this report, at Crystal, our team continues to champion a transparent blockchain industry by delivering trusted data and analytics to not only facilitate innovation, but also to stifle financial crime and to enable the safe adoption of cryptocurrencies.

When Crystal officially launched in Europe in early 2019 as a blockchain analytics company, our customer base was primarily crypto-native organizations that wanted to protect themselves against current and future risk.



In three short years, we've seen that market expand with a shift in thinking, as more traditional financial institutions and other sectors explore and embrace the myriad opportunities that blockchain and crypto offer. This year, in particular, we see a big drive toward banks and financial institutions looking at their crypto compliance. JP Morgan's branded crypto wallet has just finally been patent approved after two years of an application process. Major banking institutions HSBC, Mastercard, and Wells Fargo, are also still exploring the possibilities of a US digital currency. Banks and FIs want to be on the right side of technology going forward, so they are adding crypto leads or departments to their scope, 'just in case.'

Over the past 12 months, the Crystal team has driven expansion into the US market, adding new verticals from the banking segment, seeing a 50% ARR growth globally as the number of clients has increased by more than 60%. Crystal is entering 2023 with over 200 clients, including global banks, financial institutions, enforcement agencies, and integration partners who support and help deliver Crystal's solutions to local requirements and risk landscapes.

To support this mission, we continue to not only develop our world-class product and services for blockchain analytics and investigations, but we are also ramping up our training and compliance consultation services, to offer businesses expert education and tools. In the final sections of this report, we go into detail about our crypto compliance solutions and services.

Looking back on the past year, I remain immensely proud of what our crypto compliance analytics company and our people here at Crystal have achieved - as a team and individually. It is clear that our focus, our investment in innovation, and our ongoing support of our people are what enabled us to persevere in our dedication to helping our customers and our community.

Yours in analytics,

Marina Khaustova
CEO of Crystal Blockchain



Ukraine continues to be a hub for crypto & blockchain in 2022

With our core product and marketing team based out of Kyiv, Crystal Blockchain continues to support Ukraine as an innovative digital asset and blockchain hub as we head into 2023. The continued resilience of the Ukrainian people as they persevere despite adversities is astounding and the success that the region is having internationally despite the war is incredible.

Crypto donations raised in support of Ukraine

Our customer, Alexey Bobok, CEO & co-founder of Ukraine-based Weld Money, and also co-founder of Unchain, a cryptocurrencies donations fund to aid war victims, told us how crypto became integral to supporting the Ukrainian people.

"Unchain launched an Unchain Help Card, a regular cryptocurrency-based debit card to aid to war victims after the start of the war. Approximately 7,000 cards were issued, helping more than 13,000 children for a total of more than \$2 million. At the same time, despite the war, Russian bombings, and missiles, Weld Money launched the Weld card, the first and the only crypto card in Ukraine. Furthermore, Ukraine ranked as the third country in the world for the level of crypto adoption. Considering all these, I can be sure the crypto business will constantly grow here, especially after our big victory."







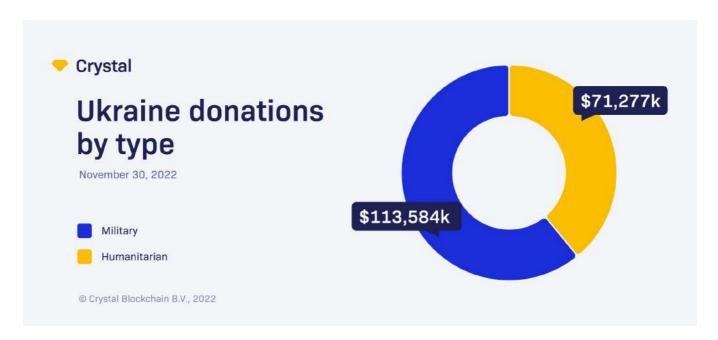
Oleksii Bobok

CEO & Co-founder of Weld Money
Co-founder & Managing Partner
at Unchain Fund

Throughout this year, Crystal Blockchain has continued to update our list of sanctioned crypto addresses and to clarify which donation links are verified so that funds are reaching the people in Ukraine. Sanctions and donations checking isn't just a job for us, this one directly affects our team so we have personal and professional motivations. Via a combined effort of skills and talents within our own team, we can keep a close eye on potentially risky crypto addresses.

Read the latest report from Crystal's analysts on the total donations raised via crypto for Ukraine. As of November 30, 2022, we reported it to be \$184+ million and counting.





If you would like to donate to the Ukraine cause via cryptocurrency, you can find verified donation links at our: www.crystalblockchain.com/donations



Blockchain & Crypto Asset Intelligence Overview 2022



Key Findings

- KYT is working, slowly but surely
 - The effectiveness of transaction screening and KYC is bearing fruit, with low-risk crypto asset exchanges, payment service providers, and gambling services having significantly less exposure to funds from illicit services, sanctions, and fraud. This is illustrated by a reduction of 22% on last year's value of funds moving from illicit marketplaces to low-risk exchanges, and 14% down on funds moving from low-risk exchanges to illicit services
- Bad actors are finding new spaces to transact
 Peer-to-peer exchanges, particularly those that do not require any user information or KYC, are increasingly important for the transfer of illicit funds. This extends to cross-chain bridge protocols, which have been used in several high-profile criminal acts. We observed

an increase in the value of funds moving between illicit sourcesIn 2022 there was a 15% increase in funds sent to the darknet from other illicit sources, combined with a 40% increase in funds in illicit sources received from the same type

- Financial risk opportunities reducing
 - As licensing becomes more widespread, a lot of the illicit financing risks will be reduced as providers are obliged to confront criminal groups using their services. Operators of services that are unlicensed or do not have controls to prevent abuse are almost certainly to become ostracized from the market.
- Huge reduction in the value of funds from scams sent to low-risk exchanges
 The value of funds from scams sent to low-risk exchanges in 2022 dropped by 24% reduction compared to 2021



- Ease of 'laundering' is a key motivation for choosing means of payment

 The motivation that is behind the 'payment means' selected by criminal groups demanding ransom is largely determined by how easy it is to set up and how effective it will be laundering. Crystal's Payment Pyramid to model transactions can help compliance teams understand a group's strategy and potentially circumvent risk or vulnerabilities.
- Offline storage remains poular
 More funds are sent to offline storage as merchants wait for the right moment to convert funds
- Cross-chain bridges gained popularity
 The use of cross-chain bridges, particularly Ren, gained popularity to convert the proceeds of ransom attacks into stablecoin
- Compromised smart contracts funnel stolen funds
 Stolen funds are more often received from compromised smart contracts. This is a deviation away from direct attacks against centralized exchanges and is reflective of greater consumer expectations of security in centralized services.
- Ren accounted for nearly 50% of all funds sent from sanctioned entity types
 There is a general trend towards high-risk peer-to-peer services interacting with
 sanctioned entity types, specifically the Ren Bridge service. Ren accounted for nearly 50%
 of all funds sent from sanctioned entity types, reiterating the greater use of several
 blockchains by criminal groups as part of their layering strategy.



Data Intelligence

Crypto Asset Exchanges

2022 was something of a watershed for Virtual Asset Service Providers (VASPs) with an increasing number of VASPs seeking specific crypto asset licenses; most likely on the back of a broader demand from financial partners controlling access to settlement in fiat currency.

The rise of exchanges bearing licenses and, perhaps more significantly, adopting processes to prevent abuse by criminals has led to more exchanges categorized as low-risk entities on our platform.

Most transactions correspondingly tended to be between lower-risk exchanges, most likely reflecting a growing demand for security and reliability. Conversely, the volume of funds sent from higher risk exchange fell, with less being sent overall.

As of November 2022, we observed the top 10 jurisdictions for crypto asset licenses as the US, British Virgin Islands, Seychelles, Hong Kong, South Korea, Curacao, Thailand, India, Australia, and the Cayman Islands.

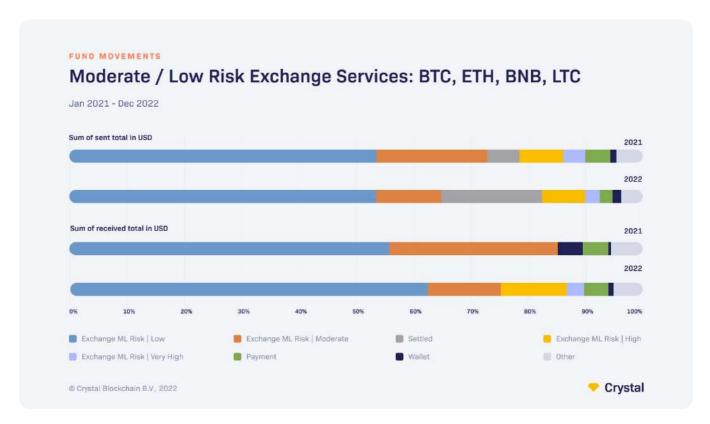
The general trend for crypto asset businesses is to remain offshore, though greater regulation and scrutiny by clients means that many businesses are seeking licenses in the United States.





Regulation Changes Impact on Crypto Asset Service Providers

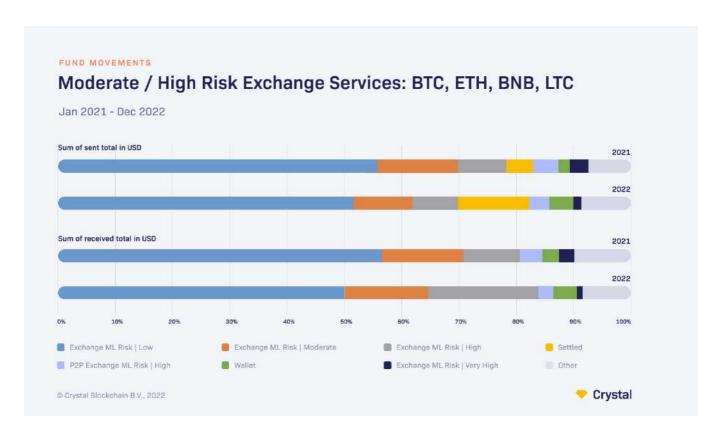
Which category of VASP had the largest amount of transactions between January 2021 and December 2022 - was it low-risk providers, moderate to high-risk, or very high-risk providers?



We can see that overall, crypto funds are increasingly exchanged between lower-risk VASPs likely due to increased regulation, registration, and client expectations.

Funds are also being sent more often to offline wallets, possibly to mitigate against the risks of any information security incident, but it may also reflect that current confidence in centralized exchanges has dipped.





Funds sent and received by high-risk exchanges are generally flowing to low-risk exchanges.





We note that exchange services that constitute the highest risk of money laundering are receiving less funds from low-risk and moderate-risk service providers, reflective of greater demands by consumers and counterparties.

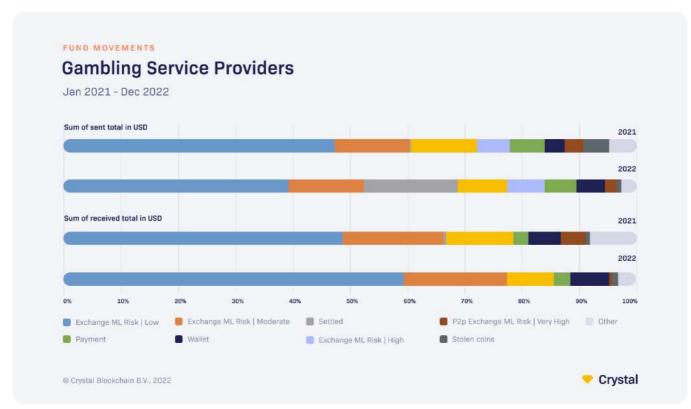
We expect this trend to continue as protocols such as the Travel Rule gain traction across globally. (You can learn more about the Travel Rule and read about our comprehensive Travel Rule solutions with our partners at NotabenelD and Shyft Network toward the end of this report.)

It is also worth noting that cryptocurrency funds obtained through fraud are increasingly likely to be sent to a very high-risk exchange provider.

Criminals will continue to take advantage of the poor practices of these services in order to launder their funds, posing a challenge for regulators, law enforcement, and exchanges on how to counter this threat.

Gambling

2022 saw a general trend toward an increase in deposits and withdrawals to online gambling activity, most likely driven by the growth in Play-to-Earn gaming platforms. Notably, a large portion of funds was sent to now-sanctioned addresses; this was a result of the Lazarus group hack of the online gaming platform, Axie Infinity.

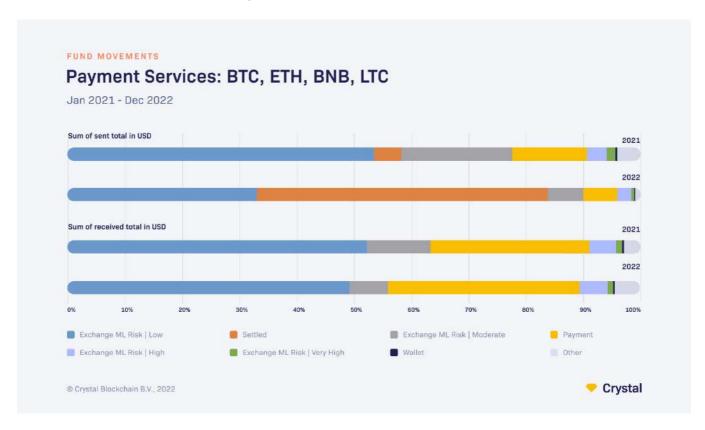




There was a growth in funds sent to sanctioned entities due to the targeting of Axie Infinity by the North Korean Hacking Group, Lazarus, and the sending of stolen funds to Tornado Cash.

Payment Processing

Similar to other sectors, the overall trend within payment processors showed a reduction in funds sent and received from higher-risk entities.



We can see from the data that funds are more often sent to offline storage as merchants likely wait for the right moment to convert funds.

Crime

Crystal Blockchain's 'Illicit Payment Pyramid'

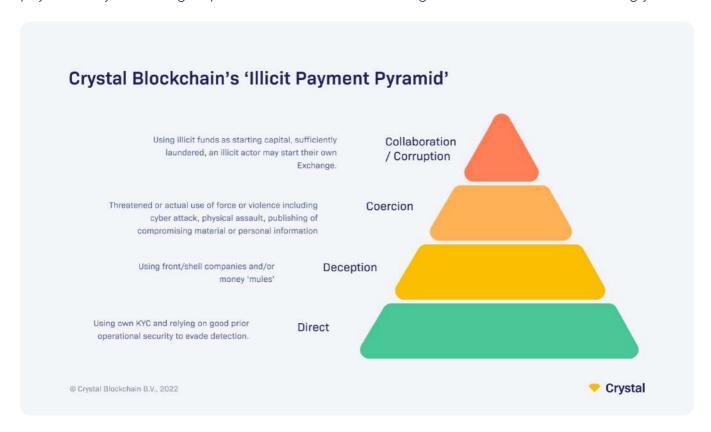
Our analysis and data show that the currency demanded for a ransom and then used to exchange for narcotics or fund terrorism is determined by several factors by the criminal group. Principally, the currency selected is for its ability to be converted easily and efficiently. In essence, the means of payment from criminal activities are a tactic, thus hard to change.



Over the past 12 months, we developed a general framework called the Payment Pyramid to understand the criminal's options for converting illicit funds into goods and services.

The top of the pyramid reflects the most efficient, and most difficult forms of laundering schemes, with the base reflecting the easiest but least efficient at scale.

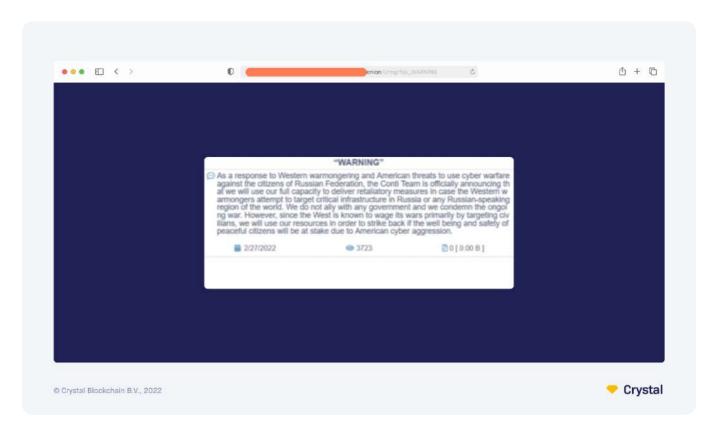
To better understand how criminal groups operate, the Payment Pyramid is a good model for compliance and investigators to determine why a certain route was selected when examining payments by criminal groups and to calibrate risk management frameworks accordingly.



Ransomware

Though it remains profitable for the criminal groups involved, we gained unique insight into the organization of one of the most prolific ransom gangs known as 'Conti' in March 2022, following a substantial leak of their internal conversations by a member of the group opposed to its stance on the war in Ukraine.





Crystal's Data and Intelligence team reacted quickly to the events, not only harvesting the crypto asset addresses that Conti used so our clients could take action, but also developing our understanding of how ransom groups function.

Reading callous comments mocking their targets, we discovered payments associated with the group's victims, which included hospitals, care homes for the elderly, and large businesses.

Original chat log

2020-09-25T10	target@q3mcco35auw	professor@q3mcco35a	watermarkcommunities.com - вот такой еще подняли права, начали качать инфо, но выяснили что это чет типа домов престарелых наверное не будем их?
:17:56.991435	cstmt.onion	uwcstmt.onion	
			"watermarkcommunities.com - here's one more, we started downloading info, but have found out that it's a kind of nursing homeperhaps not attack them?
2020-09-25T10	target@q3mcco35auw	professor@q3mcco35a	Будем
:17:57.693600	cstmt.onion	uwcstmt.onion	"We will"
2020-09-25T10	target@q3mcco35auw	professor@q3mcco35a	Нахуй
:18:00.115763	cstmt.onion	uwcstmt.onion	"f**k them"
2020-09-25T10	target@q3mcco35auw	professor@q3mcco35a	они деньги сдирают
:18:03.133681	cstmt.onion	uwcstmt.onion	"They're charging money"



2020-09-25T10	professor@q3mcco35a	target@q3mcco35auw	окей)
:18:08.054233	uwcstmt.onion	cstmt.onion	"okay"
2020-09-25T10	target@q3mcco35auw	professor@q3mcco35a	со стариков
:18:08.510824	cstmt.onion	uwcstmt.onion	"They charge the elderly"
2020-09-25T10	target@q3mcco35auw	professor@q3mcco35a	платите бабки
:18:13.614177	cstmt.onion	uwcstmt.onion	"Pay the money"
2020-09-25T10	target@q3mcco35auw	professor@q3mcco35a	или на улицу
:18:14.844225	cstmt.onion	uwcstmt.onion	"Or get out of here"

Our research shows that most payments for ransomware remain initiated in bitcoin, though there have been reports of some groups seeking payment in privacy coins such as Monero or ZCash. Though this is not widespread at present, most likely due to the low market cap and lack of exchange options.

An observation we have made following our investigation of Conti is the use of cross-chain bridges, particularly Ren, to convert the proceeds of ransom attacks into stablecoins such as USDT and DAI on the Ethereum blockchain, with more recently a tendency to move to the Tron blockchain.

We strongly advocate for businesses affected by ransomware to disclose payment addresses to law enforcement agencies so that payments may be followed.

Case in point, our estimated value of ransom payments recorded in 2022 totaled a mere \$16 million USD, compared to nearly \$74 million USD in 2021.

What these insights mean for our customers and partners

As demonstrated by the Conti methodology, these groups are using payment as a tactic.

Whilst there is no legislation to prohibit paying ransom, organizations, and victims of ransomware attacks are doing so, often because payment seems the fastest route to recover the damage and resume normal business operations. In the information security industry, though not in government circles, paying extortion is generally accepted, as the business model of the attacker is to fulfill their end of the bargain. It remains an ethical debate.

The rise in 'Cyber Insurance' may lead to new routes for fraud too, as businesses face unfavorable economic conditions.



It is also incumbent on the victim (and VASPs) to consider that any payments made to extortionists might go to a sanctioned entity or individual, exposing them to greater risk of penalties.

As regulations change, VASPs, and those being extorted are at far greater risk of exposure for facilitating these payments; though payment could be circumvented using unhosted wallets, the Travel Rule requires identification of the beneficiary and sending organization to be transmitted between VASPs.

Scams

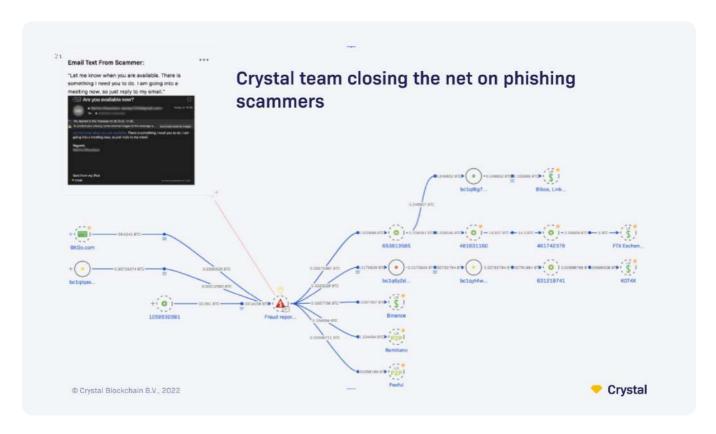


As seen in the graph above, the volume of funds sent to low-risk exchanges from scams fell by 24% in 2022 compared to 2021, though users were more likely to send funds to scammers directly.

CEO Fraud aka 'Dumbest Ever Scammer':

As with many other businesses, Crystal Blockchain was also targeted by criminal organizations impersonating our own senior personnel and requesting payment. Noticing immediately that the email was suspicious, the Crystal team decided to engage with the criminal to learn more about their payment network.





In the graph above we can see that the scammer avoided obfuscation techniques and sent funds to well-known exchanges without noticeable doubts even though the scammer tried to steal funds from the AML company.

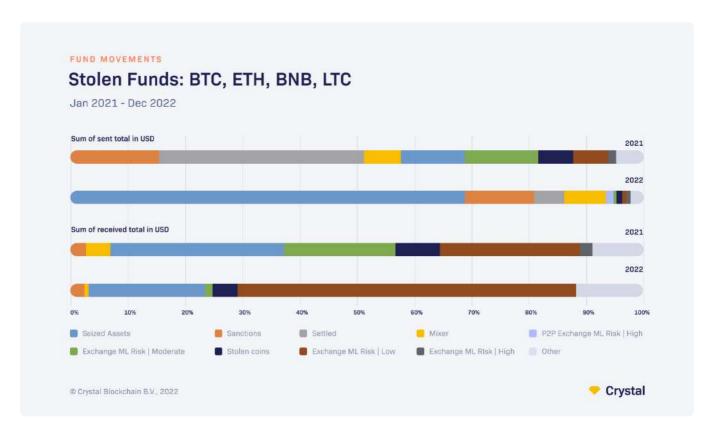
It is worth mentioning that this particular scammer was successful with his primitive fraud scheme - on the day of writing the total received amount of BTC on his wallet exceeded 3.22 BTC, which only proves the need for education in this sphere, not only for society in general but for businesses as well.

Hacks and Illicit Service Activity

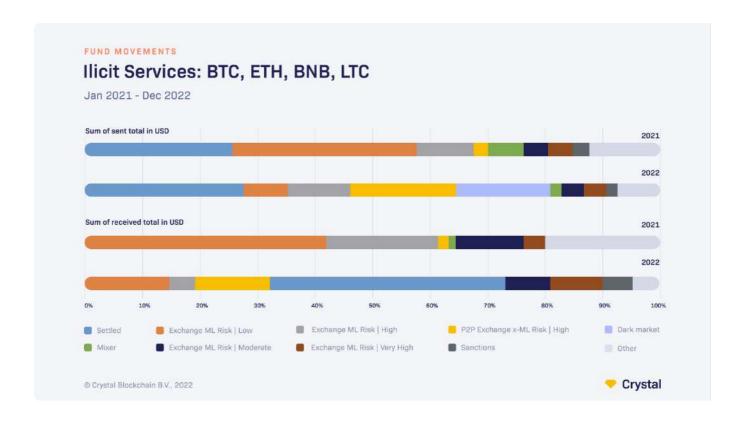
2022 saw a marked increase in technical attacks against on-chain protocols, resulting in large volumes of funds being stolen. In many cases, funds were sent to the now-sanctioned Tornado Cash mixing service or bridged across chains using protocols such as Ren.

It was also noted that illicit services are increasingly reliant on high-risk, peer-to-peer services for transactions.





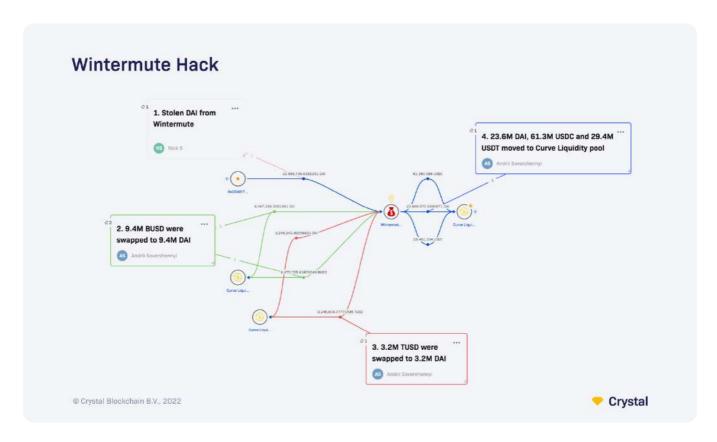
Stolen funds are more often received from compromised smart contracts, a deviation away from direct attacks against centralized exchanges. This is reflective of greater consumer expectations of security in centralized services.





In line with previous trends, funds sent to illicit services tend to remain for transacting between other services in the same sector as the options to convert funds at centralized exchange services are increasingly difficult. Instead, these services are more reliant on the use of high-risk, unlicensed exchange services with no KYC requirements.

Wintermute Hack

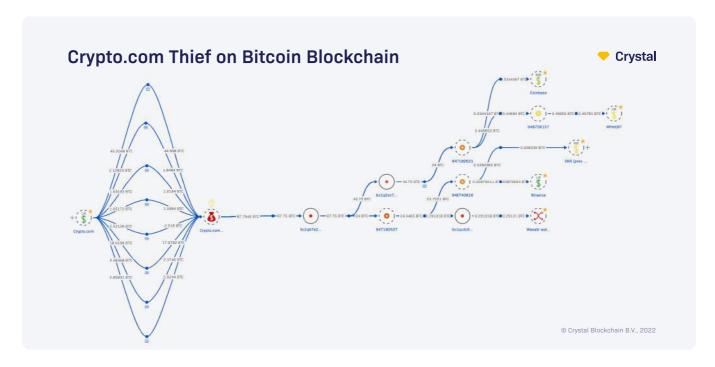


In September 2022, Wintermute was hacked for \$160M USD worth of DAI, USDC, USDT and BTC, most likely using an exploit in a tool used to make a 'vanity' address called Profanity.

This case exemplified the changes we saw in attackers' tactics following the sanctioning of Tornado Cash; as the ability to use a mixing service was no longer an option, the criminals rapidly swapped funds using Curve.

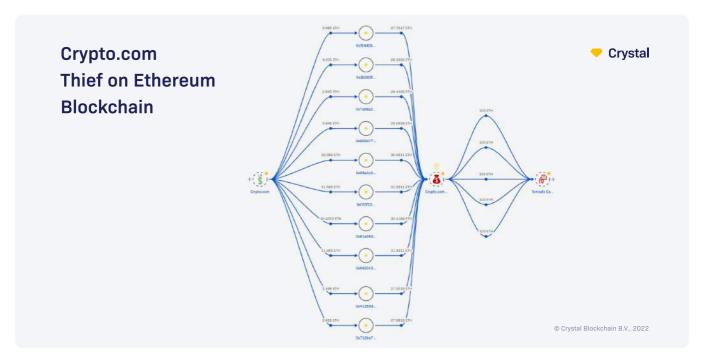


Crypto.com Thief on Bitcoin Blockchain



On this particular visualization, we can see the distribution of stolen from Crypto.com BTC funds to small unidentified clusters, which further moved coins to well-known exchanges.

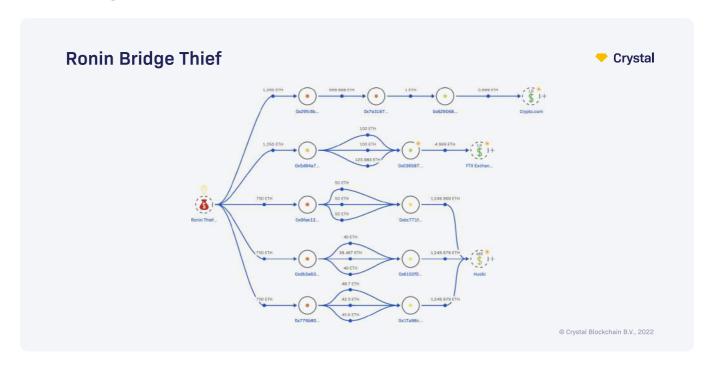
Crypto.com Thief on Ethereum Blockchain



Stolen funds from Crypto.com on Ethereum blockchain were sent directly to Tornado cash mixing service.

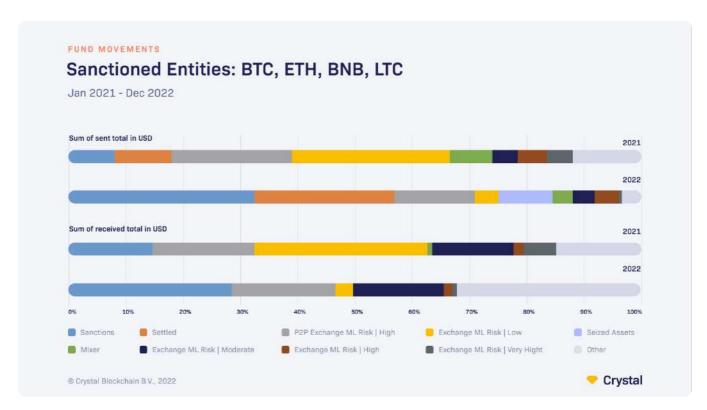


Ronin Bridge Thief



After the hack, a relatively small volume of stolen funds from the Ronin contract moved to world-known exchanges. However, all further funds moved to the Tornado Cash mixing service.

Sanctions

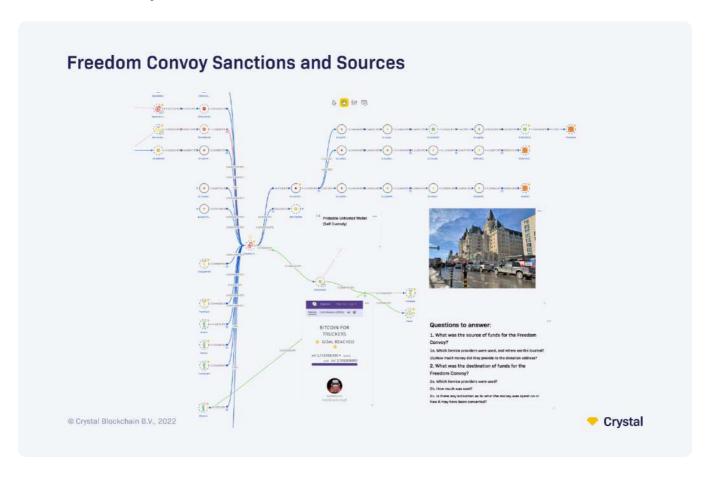




In the preceding graph we observed that, in 2022, sanctioning activity - the sanctioning of entities related to crypto assets - increased significantly following the announcement by the US Department of Treasury that Tornado Cash, a popular mixing service on the Ethereum blockchain, would be sanctioned.

As with other sectors, we observed a general trend towards high-risk peer-to-peer services as the origin and destination of funds for sanctioned entity types.

Freedom Convoy Sanctions and Sources



The 'Freedom Convoy' was a series of blockades held in Canada to protest against mandatory COVID-19 vaccinations between late January and February 2022.

Donations were sent across a variety of platforms including GoFundMe. However, the donations were quickly frozen by the operators of those sites; the protest organizers also solicited donations in crypto assets, raising funds to support their activity. This led to the sanctioning of several bitcoin wallets by the Canadian Government.



We noted a variety of funding sources for the convoy in the early stages, including deposits from centralized exchanges and gambling websites; once the sanctions were announced, however, funding was quickly cut off as service providers acted.

Our analyses have found that typologies continue to evolve, and criminals move at pace. Using blockchain analytics gives businesses a superior advantage in understanding criminal behaviors but without regulation that is implemented consistently across the globe, the reputation of cryptocurrency remains at risk. Find out what regulatory developments have impacted cryptocurrencies in the next chapter.



Crypto & Blockchain Regulatory Overview 2022



Global crypto regulatory landscape

While crypto assets have been around for more than a decade, it's only in very recent years have they been moved from being a niche product to more mainstream adoption by the public - consumers, investors, financial institutions and hedge funds alike.

Having the right regulation in place to promote innovation will foster trust and create a safe space for technology and innovation. The crypto world is fast evolving and applying existing regulatory frameworks to crypto assets or developing new ones can be challenging.

As a result, the regulation of the crypto space is becoming increasingly important to stakeholders including issuers, exchanges, and investors. It has never been more crucial to monitor regulatory changes around the world and understand how they impact our customers and partners.

Key legislation dates for global crypto regulation 2022

UK FCA crypto promo legislation



On January 18, 2022, in the UK, Her Majesty's Treasury published a response to its consultation on the marketing of crypto assets, setting out the UK government's plan to introduce the promotion of crypto assets within the scope of financial promotions legislation.

The UK government aims to bring crypto assets under financial promotion legislation to protect consumers from misleading advertisements whilst ensuring consumers have the right information before making any investment decisions.

The current legislation considers it a criminal offense to promote a financial product or service that has not been approved by the Financial Conduct Authority (FCA) or the Prudential Regulation Authority.



FATF standards for virtual assets



On June 30, 2022, the Financial Action Task Force (FATF) published its updated report on implementing the FATF Standards on Virtual Assets (VAs) and Virtual Asset Service providers (VASPs). FATF has continuously highlighted within their guidance the risks associated with unhosted wallets.

In FATF consultations, several jurisdictions indicated they are addressing this issue by requiring VASPs to use blockchain analytic services to mitigate sanction evasions, money laundering, and terrorist financing risks.

A lot of key legislation came through in September 2022:

FSRA of Abu Dhabi issued guidance for virtual asset service providers



The Financial Services Regulatory Authority (FSRA) of the Abu Dhabi Global Market (ADGM) free economic zone issued Guiding Principles for the FSRA's Approach to Virtual Asset Regulation and Supervision to outline its expectations for the asset class and service providers in the sector.

The FSRA also aims to facilitate greater regulatory collaboration and cohesion between the FSRA and other authorities in the UAE and globally. It is the first regulator globally to regulate platforms that enable the trading of Virtual Assets as Multilateral Trading Facilities.

IMF published a crypto 'safe space' regulatory report



The International Monetary Fund published "The right rules could provide a safe space for innovation" to urge regulators across the globe to develop a more comprehensive, consistent, and complete global regulatory policy for digital assets, maintaining that a global regulatory framework brings order to the markets, helping instill consumer confidence, lay out the limits of what is permissible, and provide a safe space for useful innovation to continue.



OECD published a framework for crypto-asset reporting in response to the G20 mandate

On October 10, 2022, the Organization for Economic Co-operation and Development (OECD) published the final guidance for the Crypto-Asset Reporting Framework (CARF) in response to a mandate from the G20 in April 2021 to develop a framework to exchange tax-relevant information on crypto assets automatically.

UK House of Commons voted pro bill to recognize 'crypto as a financial instrument'



On October 25, 2022, the House of Commons in the UK voted in favor of the Financial Services and Markets Bill to recognize crypto assets as regulated financial instruments.

The proposal will bring crypto alongside payment stablecoins under the same regulatory provision as other financial assets contained in the Financial Services and Markets Act 2022. The measure, if executed, will provide regulatory oversight for crypto promotions and impact unauthorized crypto firms.

Highlights of the main crypto regulation developments this year

Landmark Markets in Crypto-Assets regulation signed off by European parliament



On October 10, 2022, the European Parliament signed off the Markets in Crypto-Assets regulation (MiCA) in October 2022 – a landmark legislation that aims to regulate the digital asset space within the EU.



BRIEFING EU Legislation in Progress



Markets in crypto-assets (MiCA)

The MiCA proposal, first introduced to the European Commission in September 2020, aims to set a clear regulatory framework and establish a first-time licensing regime for crypto asset service providers among the 27 European Union member states. It also seeksaims to bring the asset class firmly under the supervision of the European Securities and Markets Authority (ESMA) and the European Banking Authority (EBA).

EU Parliament agreed on provisional Transfer of Funds Regulation for crypto



In June 2022, the European Union (EU) Parliament reached a provisional agreement on the Transfer of Funds Regulation (TFR) to ensure crypto transfers can be traced and that transactions considered suspicious are blocked, potentially paving the way for tougher enforcement by the EU.

For so-called "unhosted wallets", the agreement foresees that if a customer receives or sends more than EUR 1,000 from such a wallet the relevant crypto asset service providers (CASPs) will be required to verify if the wallet is effectively owned or controlled by the involved customer.

CASPs will also need to assess the illicit finance risks for all transactions with unhosted wallets and apply appropriate risk-based due diligence measures. The importance of using blockchain analytics was highlighted in order to facilitate CASPs to identify and manage these risks to meet their regulatory requirements.



White House released a framework for the development of digital assets



On September 16, 2022, in response to President Biden's executive order, the White House released a Framework for Responsible Development of Digital Assets outlining recommendations from nine federal agencies' research on the cryptocurrency industry over the past six months.

FACT SHEET: White House Releases
First-Ever Comprehensive Framework
for Responsible Development of
Digital Assets

▶ BRIEFING ROOM ▶ STATEMENTS AND RELEASES

The framework outlines the risks of crypto assets, citing price volatility and crypto scams. It encourages regulators like the Securities and Exchange Commission (SEC) and Commodity Futures Trading Commission CFTC) to "aggressively pursue investigations and enforcement actions against unlawful practices in the digital assets space."

It also permits regulators to continue coordinating efforts to enforce the law in the sector and exchange information on consumer complaints.



Regulatory and compliance trends for the coming year

NFTs have begun to come under the radar of regulatory bodies

The non-fungible token (NFT) regulatory landscape is an oasis of fresh opportunities. However, legislators are aware of the increasing risks that come with these opportunities, including issues around intellectual property, consumer welfare, and money laundering.

On February 4, 2022, the US Department of the Treasury released a study on money laundering and the financing of terrorism in the high-value art market and dedicated a specific chapter to the inherent risks in the emerging digital art market.

The US Treasury recommended the industry consider several regulatory and non-regulatory options:

- Encouraging the creation of private sector information-sharing programs to bring transparency among art market participants.
- Updating guidance and training for law enforcement, customs enforcement, and asset recovery agencies.
- Using FinCEN recordkeeping authorities to support information collection and enhanced due diligence.
- Bringing art market participants under the AML/CFT legal framework and obligating them to create and maintain AML/CFT programs.

Any business which intends to explore NFTs should be aware of the increasing pressure on jurisdictions to regulate their actions.

DeFi has made its mark and as such is open to upcoming legislation

Decentralized Finance (DeFi) is an emerging digital financial infrastructure that theoretically eliminates the need for a central bank or government agency to approve financial transactions and is deeply connected with the evolution of blockchain technologies.

On June 30, 2022, FATF updated its report on implementing the FATF Standards on Virtual Assets (VAs) and Virtual Asset Service providers (VASPs), highlighting the Travel Rule, market developments, and emerging risks from DeFi.



The increasing use of stablecoins in DeFi protocols is commensurate with the growth in the DeFi market, as they are used to facilitate trading or as collateral for DeFi protocols, and the increase in cross-chain bridges is likely to impact the materiality of relevant DeFi platforms.

The FATF and its Virtual Assets Contact Group will continue to monitor market trends for developments including how FATF standards apply to DeFi.

On August 29, 2022, the United States Federal Bureau of Investigation (FBI) warned investors that cybercriminals are increasingly exploiting security weaknesses in DeFi platforms to steal cryptocurrency.

The FBI listed a series of recommendations for both DeFi platforms and consumers to protect against future attacks or exploitations and are encouraging investors who suspect cyber criminals to have stolen their DeFi investments to make a report at the Internet Crime Complaint Center or their local FBI field office.

The FBI urged DeFi platforms to use real-time analytics and test code to identify vulnerabilities and protect against hacks.

Proof of reserve requirements for crypto businesses

Following the collapse of one of the global crypto exchanges; FTX, as the result of insufficient capital requirements and liquidity risk, crypto exchanges have started publishing subsequent statements about the transparency of their assets in reserve.

It is also expected that proof of reserves became one of the main highlights of upcoming regulations in 2023.

Proof of reserves (PoR) is a transparent auditing practice for cryptocurrency companies that provides an unbiased report of the companies' assets in reserve. PoR is a way to verify that a platform holds enough assets to match its users' deposits. This eliminates the risk of a liquidity crisis and provides customers with confidence that their funds can be withdrawn at any time.

As a response to the recent collapse in the market and the duty of consumer protection, it is expected that regulators will set industry standards in order to protect consumers.



How is the wider market responding to current crypto and blockchain market trends?

Below is an insight from Annerton's Alireza Siadat - a lawyer who specializes in crypto regulation - into the 2022 digital asset industry & market participant sentiment right now.

"The recent incidents around Tornado Cash, Celsius, and FTX show that the crypto market lacks understanding, knowledge, and transparency. Being active as a regulatory expert within this industry since 2014, I can see that, more than ever before, consumers, regulators, investors, and potential cooperation partners of crypto asset service providers are very irritated by these negative developments.

I believe that a global harmonized regulatory environment will help to create more transparency in the crypto market and bring back trust to market participants. Alongside regulatory measures, we also need tools and processes to analyze and screen the crypto market. Looking at the Markets in Crypto Assets Regulation, the Travel Rule initiatives, and market participants using more and more crypto analytic tools, I strongly believe that the coming year will show improvements to the understanding, knowledge, and transparency in the cryptocurrency market."

ANNERTON

Alireza Siadat MJI Lawyer & Partner at Annerton



Key Crypto Compliance & Transparency Partners & Memberships

Travel Rule KYT Partner

Building a robust strategy for global third-party distribution, including partnerships and alliances, which allows clients to access Crystal data and technology in a way that suits their requirements, is a core part of Crystal's growth strategy.

By securing partnerships and third-party alliances worldwide, Crystal can leverage the expertise of regional networks to deliver its solutions with greater customization to the requirements of local regulations, implementation needs, risk landscapes, and cultural nuances.

Crystal's end-to-end Travel Rule solution, supported by our partners at Shyft Network and NotabenelD, enables our customers and partners to ensure they are Travel Rule compliant. As new regulations covering unhosted wallets are instated, businesses operating within the cryptocurrency industry must make adequate preparations.





Compliance Industry Memberships

To fight financial crime more effectively, it is vital to bring awareness to criminal activities that use cryptocurrencies to fund their activities or launder their illicit gains through crypto exchanges.

The US Government Accountability Office (GAO) reported that cryptocurrencies are increasingly used in human and drug trafficking, reporting that virtual currencies are being used more often on platforms that could facilitate sex trafficking with 15 of the 27 online commercial sex marketplaces examined by the GAO accepting virtual currencies.



One of our partners, the Anti-Human Trafficking Intelligence Initiative (ATII) is at the forefront of initiatives to combat human trafficking by working with financial institutions to facilitate intelligence integration and encouraging strategic data collaboration.

As we reported earlier, scams involving cryptocurrencies have risen dramatically in the past years and more than ever, consumers need to fully understand the risks and typologies that abound to protect themselves.

Another of our partners, the Global Anti-Scam Alliance (GASA) seeks to protect consumers worldwide from scams by raising awareness, enabling hands-on tools for consumers and law enforcement, facilitating knowledge sharing, organizing research, supporting the development of (legal) best practices, and offering training and education.

To further underline our commitment to making blockchain a safer place for the adoption of cryptocurrency, we are members of several coalition industry groups that support the same values including the International Association for Trusted Blockchain Applications and CryptoUK.

Crystal is proud to be a member of:



















Crystal's Data-Driven Product: The Key Component of Our Success



Since early 2020 it has become clear there is a shift in thinking, and the need for solutions like Crystal's has increased within wider markets than crypto-native alone. It now includes more traditional financial institutions that are exploring and developing products to leverage crypto-related opportunities and manage any risk related to terrorism and money laundering.

We recognised that to service this need, our clients require access to best-in-class blockchain data and tools to analyze and act upon to be able to understand the potential risks involved and to comply with AML/CTF regulations.

Leading risk management blockchain analytics tool

Underpinning our technology and driving the analytics engine is Crystal's proprietary data which provides unparalleled analytical and investigative powers to our clients, covering the highest risk geographic regions including Eastern Europe, Central Asia, and the Middle East, as well as all global jurisdictions.

Our data is built by a native Ukrainian, Russian, Hindi, and Arabic-speaking team, and we maintain strong relationships with law enforcement agencies across Eastern Europe, Central Asia, and the Middle East, enabling us to identify high-risk or illicit businesses long in advance of our competitors, including examples of sanctions evasion involving onshore US businesses.



AML & CFT crypto compliance solution



Our advanced blockchain monitoring and analytics tool, Crystal Expert, helps modern financial institutions and crypto services to streamline and manage their regulatory obligations, to detect fraudulent and other criminal activities on the blockchain, and to monitor the risk of crypto entities and portfolios in real-time.

"Crystal Blockchain's compliance analytics solution means that Wallex Custody can keep its individual and business customers' funds secure and mitigate AML threat by regular monitoring of sources of funds or connections that may be potentially risky."



Simone Mazzuca
CEO at Wallex

By combining digital forensics with traditional investigative techniques, Crystal Expert also offers invaluable data and investigative tools to enforcement agencies and governments to monitor wallets, follow the money, trace and track transactions, and to assist in legal cases.

We continually innovate and improve our technology, giving our core product Crystal Expert more functionality and features which enables our clients to carry out full risk assessment, profiling, investigations, monitoring and case management for transactions on the blockchain efficiently and effectively.



"At Cryptoprocessing by CoinsPaid, we use Crystal analytics platform for transactional risk management and compliance. We understand the importance of having quality AML due diligence procedures in place, and our collaboration with our partners at Crystal is a key part of that."



Max Krupyshev CEO at Coinspaid

2023 & VASPCheck Solution for Banks & Fls.

In 2022, we began work on the VASPCheck tool for banks and FIs which is now running in Beta mode. This key solution for tradfi will be ready for commercial and general use in early 2023.



Case Investigations, Audit Reports, Advisory, & Training Services



The growing need for crypto investigations, reporting, auditing, & due diligence services

As our intelligence report indicates; fraud, money laundering, and ransomware crimes using cryptocurrencies are rising steadily. This development has made it imperative for businesses to seek help from blockchain investigative experts to understand the flow of crypto transactions and how they connect to high-risk entities.

Moreso, as financial crimes become more complex, the need for a fully comprehensive view, including off-chain and on-chain data, has become important.

Our team has developed its products and services to meet these requirements, and our investigations team in particular provides our clients with bespoke reports to aid private and public investigations involving cryptocurrencies.

As we head into 2023, the Crystal investigations team continues to reinforce and build partnerships with law enforcement, government agencies, and private sector companies, providing data that is critical to identifying criminal behavior. Additionally, in response to demand, our team has developed specialized training courses for these agencies to help users understand how to leverage blockchain data to follow the funds and identify evidence to support legal cases.

"Having worked with Crystal using their blockchain analysis platform, we can say that the collaboration has been flawless so far. In part, due to the use of their software, we have been able to largely eliminate our backlog of files relating to the abuse of cryptocurrencies.



Gunter Meynen
Computer Crime Unit of the Federal Police,
Antwerp, Belgium



Investigations services team

Our investigations team continues to broaden the range of investigation reports that we offer to meet the requirements of law enforcement and investigators, businesses, and individuals. These range from 'source of fund' reports, and criminal reports as well as more detailed reports on fund and VASP analysis and darknet activity.

"Crystal produced a blockchain analytics report for me as part of an investigation into stolen cryptocurrency. The report enabled me to progress the investigation into a legal case. When other companies were not interested in a small, individual investigation like mine, Crystal was glad to help. Their friendly staff was helpful and professional, and I highly recommend their services."

Investigative Report Customer

Compliance/Regulatory Advisory and Research & Education

To complement our investigative services, we consult with cryptocurrency businesses and exchanges looking for advice on expansion, compliance, regulations, and risk management.

For 2023 we have launched the Crystal School of Crypto Compliance & Investigations to provide market-leading training from Crystal's in-house experts to suit learning requirements at all levels from beginners to advanced.

Visit our website at www.crystalblockchain.com/training-and-certs for more details.



About Crystal

Crystal is the all-in-one blockchain analytics tool for AML compliance, providing blockchain analytics and crypto transaction monitoring for thousands of cryptocurrencies in real-time.

Contact Crystal Blockchain for your crypto compliance and analytics needs

www.crystalblockchain.com

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