Virtual Currencies and the Challenges to Compliance

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**MODERATOR**

**Mark Goldstein**
Special Counsel
Katten Muchin Rosenman LLP

Mark Goldstein, special counsel in Katten’s New York office, focuses his practice on advising investment Advisers, mutual funds, and private investment funds. Goldstein has more than 25 years of experience advising clients on compliance and regulatory requirements, corporate matters, and the federal securities laws. He has extensive experience advising on the formation, distribution, structuring and ongoing operational aspects of a wide array of investment products, including mutual funds, private investment funds, offshore funds, and separately managed accounts, as well as extensive experience counseling investment advisers regarding SEC examinations and transactional matters. Prior to joining the firm, Goldstein was general counsel of an asset management firm. He has been in-house at asset management firms and broker dealers, and he was chief compliance officer for several investment advisers and investment companies. He also worked for the U.S. Securities and Exchange Commission’s Division of Enforcement in New York. Goldstein received his J.D. from Hofstra University and his B.A. from Washington University in St. Louis.

**SPEAKERS**

**Anthony Dell**
Compliance Strategist

Anthony Dell is an executive-level compliance strategist with a vision of the future, balancing decades of corporate, ethics, legal, operations, and regulatory compliance experience with a passion for technology and an eye for industry disruption. Dell is a C-Suite executive with exceptional communication skills and proven business acumen. He frequently speaks publicly on expert design+build for risk-intelligent, cost-effective, scalable programs that protect and enhance enterprise value with demonstrable ROI. Dell takes an engineer’s approach infused with high EQ and an artist’s hand for innovation and technology in strategy, policy, risk, compliance, audit, and legal functions that flex through rapid change. Dell is also the founder of Compliance By Design LLC, which brings design thinking and a futurist’s vision to compliance and management strategies to enterprises of all sizes in all industries.

**Meryl Lutsky**
Former Chief, Money Laundering Investigations Unit
New York State Office of the Attorney General

Meryl Lutsky served as a prosecuting attorney for more than 20 years, the last 12 of which she spent leading the Statewide Crime Proceeds Strike Force and Money Laundering Unit for the New York State Attorney General’s Office. In this role, she created multi-agency and multi-disciplinary task forces consisting of local, state, and federal attorneys, investigators, auditors and analysts, and partnered with state and federal banking regulators to identify, investigate, prosecute, and remediate complex money laundering crimes and violations of banking and tax laws, including those related to cyber hacking, identity theft, human trafficking, public corruption, among others.

**Chris Thompson**
Global FS Security Cyber Risk and Resilience Lead
Accenture

Chris Thompson joined Accenture in 1992 and now leads Accenture’s FS Security and Resilience practice globally. Thompson has nearly 25 years of experience in large-scale risk and technology programs, working with some of the world’s leading retail, commercial, and investment banks. He has deep expertise in cyber risk, operational risk, financial crime, security, financial architectures, performance management, banking operations, and trading.
Central bank cryptocurrencies

New cryptocurrencies are emerging almost daily, and many interested parties are wondering whether central banks should issue their own versions. But what might central bank cryptocurrencies (CBCCs) look like and would they be useful? This feature provides a taxonomy of money that identifies two types of CBCC – retail and wholesale – and differentiates them from other forms of central bank money such as cash and reserves. It discusses the different characteristics of CBCCs and compares them with existing payment options.


In less than a decade, bitcoin has gone from being an obscure curiosity to a household name. Its value has risen – with ups and downs – from a few cents per coin to over $4,000. In the meantime, hundreds of other cryptocurrencies – equalling bitcoin in market value – have emerged (Graph 1, left-hand panel). While it seems unlikely that bitcoin or its sisters will displace sovereign currencies, they have demonstrated the viability of the underlying blockchain or distributed ledger technology (DLT). Venture capitalists and financial institutions are investing heavily in DLT projects that seek to provide new financial services as well as deliver old ones more efficiently. Bloggers, central bankers and academics are predicting transformative or disruptive implications for payments, banks and the financial system at large.2

Lately, central banks have entered the fray, with several announcing that they are exploring or experimenting with DLT, and the prospect of central bank crypto- or digital currencies is attracting considerable attention. But making sense of all this is difficult. There is confusion over what these new currencies are, and discussions often occur without a common understanding of what is actually being proposed. This feature seeks to provide some clarity by answering a deceptively simple question: what are central bank cryptocurrencies (CBCCs)?

To that end, we present a taxonomy of money that is based on four key properties: issuer (central bank or other); form (electronic or physical); accessibility (universal or limited); and transfer mechanism (centralised or decentralised). The...
taxonomy defines a CBCC as an electronic form of central bank money that can be exchanged in a decentralised manner known as peer-to-peer, meaning that transactions occur directly between the payer and the payee without the need for a central intermediary. This distinguishes CBCCs from other existing forms of electronic central bank money, such as reserves, which are exchanged in a centralised fashion across accounts at the central bank. Moreover, the taxonomy distinguishes between two possible forms of CBCC: a widely available, consumer-facing payment instrument targeted at retail transactions; and a restricted-access, digital settlement token for wholesale payment applications.

But what might the two types of CBCC offer that alternative forms of central bank money cannot? For the consumer-facing kind, we argue that the peer-to-peer element of the new technology has the potential to provide anonymity features that are similar to those of cash but in digital form. If anonymity is not seen as important, then most of the alleged benefits of retail CBCCs can be achieved by giving the public access to accounts at the central bank, something that has been technically feasible for a long time but which central banks have mostly stayed away from.

On the wholesale side, the assessment of CBCCs is quite different. Wholesale payments today do not offer cash-like anonymity. In particular, transactions that occur in wholesale systems are visible to the central operator. Hence, the case for wholesale CBCCs depends on their ability to improve efficiency and reduce settlement costs. 

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1 Ninety-day moving averages. 2 Ratio of standard deviation to mean. 3 Monthly averages. For bitcoin, estimated transaction value in USD; for M-pesa™, transaction value in KES converted into USD. 

Sources: Central Bank of Kenya; CoinDance; CoinDesk; www.blockchain.info; authors’ calculations.

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3 The purest form of peer-to-peer transaction is a cash exchange. On a computer network, the peer-to-peer concept means that transactions can be processed without the need for a central server.

4 It is common to divide payments into retail and wholesale segments. Retail payments are relatively low-value transactions, in the form of eg cheques, credit transfers, direct debits and card payments. By contrast, wholesale payments are large-value and high-priority transactions, such as interbank transfers. The distinction might become less relevant in a world with CBCCs. In that case, our usage would reflect the types of payment primarily targeted by CBCCs.
costs. Here, the answer depends on a number of technical issues that still need to be resolved. Some central banks have experimented with wholesale CBCCs, but none has announced yet that it is ready to adopt this technology.

The first section presents the taxonomy underlying our definition. The following two sections discuss the features of the two basic CBCC types, retail and wholesale, drawing on historical examples and projects that are currently under way. A concluding section reflects on some of the issues that central banks need to consider in this area going forward.

A new form of central bank money

Our starting point for defining CBCCs is a report on cryptocurrencies published in 2015 by the Committee on Payments and Market Infrastructures (CPMI (2015)). This report sought to provide a definition of the new class of currencies represented by bitcoin and altcoins (alternatives to bitcoin) that had emerged using the same technology. The report identifies three key characteristics of cryptocurrencies: they are electronic; are not the liability of anyone; and feature peer-to-peer exchange.6

Cryptocurrencies utilise DLT (Box A) to allow remote peer-to-peer transfer of electronic value in the absence of trust between contracting parties. Usually, electronic representations of money, such as bank deposits, are exchanged via centralised infrastructures, where a trusted intermediary clears and settles transactions. Previously, peer-to-peer exchange was restricted to physical forms of money.

Some – but not all – of these features are also common to other forms of money (Graph 2, left-hand panel). Cash is peer-to-peer, but it is not electronic, and it is a central bank liability. Commercial bank deposits are a liability of the bank that issues them. Nowadays, they are in electronic form and are exchanged in a centralised manner either across the books of a given bank or between different banks via the central bank. Most commodity monies, such as gold coins, may also be transferred in a peer-to-peer fashion but are neither the liability of anyone nor electronic.7

It may seem natural to define CBCCs by adapting the CPMI’s definition to say that they are electronic central bank liabilities that can be used in peer-to-peer exchanges. But this ignores an important feature of other forms of central bank money, namely accessibility. Currently, one form of central bank money – cash – is of course accessible to everyone, while central bank settlement accounts are typically available only to a limited set of entities, mainly banks (CPSS (2003, p 3)). In this spirit, Bjerg (2017) includes universally accessible (ie easy to obtain and use) in addition to electronic and central bank-issued in defining the new concept of central bank digital currency (Graph 2, right-hand panel).

5 The report’s title is Digital currencies, but it notes that such schemes are frequently also referred to as “cryptocurrencies”, reflecting the use of cryptography in their issuance and their validation of transactions.

6 Cryptocurrencies have no intrinsic value and are only held in the belief that they might be exchanged for goods or services at a later point in time.

7 In the Middle Ages, payments at times required the services of a money changer to assay and value the coins being used.
What is distributed ledger technology?\(^\text{1}\)

Distributed ledger technology (DLT) refers to the protocols and supporting infrastructure that allow computers in different locations to propose and validate transactions and update records in a synchronised way across a network. The idea of a distributed ledger – a common record of activity that is shared across computers in different locations – is not new. Such ledgers are used by organisations (e.g., supermarket chains) that have branches or offices across a given country or across countries. However, in a traditional distributed database, a system administrator typically performs the key functions that are necessary to maintain consistency across the multiple copies of the ledger. The simplest way to do this is for the system administrator to maintain a master copy of the ledger which is periodically updated and shared with all network participants.

By contrast, the new systems based on DLT, most notably Bitcoin and Ethereum, are designed to function without a trusted authority. Bitcoin maintains a distributed database in a decentralised way by using a consensus-based validation procedure and cryptographic signatures. In such systems, transactions are conducted in a peer-to-peer fashion and broadcast to the entire set of participants who work to validate them in batches known as "blocks". Since the ledger of activity is organised into separate but connected blocks, this type of DLT is often referred to as "blockchain technology".

The blockchain version of DLT has successfully powered Bitcoin for several years. However, the system is not without drawbacks: it is costly to operate (preventing double-spending without the use of a trusted authority requires transaction validators (miners) to employ large amounts of computing power to complete "proof-of-work" computations); there is only probabilistic finality of settlement; and all transactions are public. These features are not suitable for many financial market applications. Current wholesale DLT payment applications have therefore abandoned the standard blockchain technology in favour of protocols that modify the consensus process in order to allow enhanced confidentiality and scalability. Examples of protocols currently being tested by central banks include Corda and Hyperledger Fabric. Corda replaces blockchain with a "notary" architecture. The notary design utilises a trusted authority and allows consensus to be reached on an individual transaction basis, rather than in blocks, with limited information-sharing.

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\(^\text{2}\) The amount of energy currently being used by Bitcoin miners is equal to the energy consumption of Lebanon and Cuba (see http://digiconomist.net/bitcoin-energy-consumption). For a detailed description of proof-of-work, see https://en.bitcoin.it/wiki/Proof_of_work.
We combine the properties discussed in CPMI (2015) and Bjerg (2017) to establish a new taxonomy of money. Our properties are: issuer (central bank or other); form (electronic or physical); accessibility (universal or limited); and transfer mechanism (centralised or decentralised, i.e. peer-to-peer). This taxonomy reflects what appears to be emerging in practice and distinguishes between two potential types of CBCC, both of which are electronic: central bank-issued and peer-to-peer. One is accessible to the general public (retail CBCC) and the other is available only to financial institutions (wholesale CBCC). Again, a Venn diagram is useful for illustration. The four-ellipse version in Graph 3, which we call the money flower, shows how the two potential types of CBCC fit into the overall monetary landscape.

In principle, there are four different kinds of electronic central bank money: two kinds of CBCCs (the shaded area) and two kinds of central bank deposits. The most familiar forms of central bank deposits are those held by commercial banks – often referred to as settlement accounts or reserves. The other form is, at least in theory, deposits held by the general public. Tobin (1987) refers to this form as deposited currency accounts (DCAs). So far, central banks have generally chosen not to provide DCAs.

Universally accessible forms of money that are not issued by the central bank include (privately created) cryptocurrency, commodity money, commercial bank

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8 A four-circle Venn diagram covers only 14 of the $2^4 = 16$ possible combinations. Hence, in the case of four sets, Venn (1881) suggested using ellipses in order to show all cases.

9 In a 1987 speech, Nobel laureate James Tobin argued that, in order to avoid relying too heavily on deposit insurance to protect the payment system, central banks should “make available to the public a medium with the convenience of deposits and the safety of currency, essentially currency on deposit, transferable in any amount by check or other order” (Tobin (1987, p 6); see also Tobin (1985)). That is, people should be able to store value without being subject to the risk of bank failure.
deposits and mobile money. Cryptocurrency borders CBCC given that only one of its properties differs. The other three currency forms are more removed because they are, in addition, either physical or “not peer-to-peer”. A number of other forms of money are not universally accessible. Local (physical) currencies, ie currencies that can be spent in a particular geographical location at participating organisations, populate the right-hand petal of the flower. The upper left-hand petal contains virtual currencies, which are “electronic money issued and usually controlled by its developers, and used and accepted among the members of a specific virtual community” (ECB (2012)). There is also the possibility of a private sector wholesale version of cryptocurrency. It would be transferred in a peer-to-peer fashion by means of a distributed ledger, but only between certain financial institutions.

Box B uses this taxonomy to classify different examples of money from the past, present and future according to where they would fit in the money flower. The remainder of this feature discusses the two types of CBCC in further detail and highlights some of the many issues central banks will need to consider if they ever chose to adopt them. We start with the retail variant and then turn to the wholesale one.

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10 Mobile money is an electronic wallet service that allows users to store, send and receive money using their mobile phones. The value stored in the wallets may be liabilities of the service provider or claims on money held in trust at a commercial bank.
The money flower with selected examples

Graph B fills out the money flower with examples of money from the past, present and possibly the future. Starting at the centre, we have Fedcoin, as an example of a retail CBCC. The concept, which was proposed by Koning (2014) and has not been endorsed by the Federal Reserve, is for the central bank to create its own cryptocurrency. The currency could be converted both ways at par with the US dollar and conversion would be managed by the Federal Reserve Banks. Instead of having a predetermined supply rule, as is the case with Bitcoin, the supply of Fedcoin would, much like cash, increase or decrease depending on the desire of consumers to hold it. Fedcoin would become a third component of the monetary base, alongside cash and reserves. Unlike Bitcoin, Fedcoin would not represent a competing, private “outside money” but would instead be an alternative form of sovereign currency (Garratt and Wallace (2016)).

CADcoin is an example of a wholesale CBCC. It is the original name for digital assets representing central bank money used in the Bank of Canada’s proof of concept for a DLT-based wholesale payment system. CADcoin has been used in simulations performed by the Bank of Canada in cooperation with Payments Canada, R3 (a fintech firm), and several Canadian banks but has not been put into practice.

In Sweden, the demand for cash has dropped considerably over the past decade (Skingsley (2016)). Already, many stores do not accept cash and some bank branches no longer disburse or collect cash. In response, the Riksbank has embarked on a project to determine the viability of an eKrona for retail payments. No decision has yet been taken in terms of technology (Sveriges Riksbank (2017)). Hence, the eKrona is located on the border between deposited currency accounts and retail CBCCs.
**Dinero electrónico** is a mobile payment service in Ecuador where the central bank provides the underlying accounts to the public. Citizens can open an account by downloading an app, registering their national identity number and answering security questions. People deposit or withdraw money by going to designated transaction centres. As such, it is a (rare) example of a deposited currency account scheme. As Ecuador uses the US dollar as its official currency, accounts are denominated in that currency.

**Bitcoin** is an example of a non-central bank digital currency. It was invented by an unknown programmer who used the pseudonym Satoshi Nakamoto and was released as open-source software in 2009 along with a white paper describing the technical aspects of its design (see Box A for further details).

**PokéCoin** is a currency used for in-game purchases in the Pokémon Go game and an example of a virtual currency.

**Utility Settlement Coin (USC)** is an attempt by the private sector to provide a wholesale cryptocurrency. It is a concept proposed by a collection of large private banks and a fintech firm for a series of digital tokens representing money from multiple countries that can be exchanged on a distributed ledger platform (UBS (2016)). The value of each country’s USC on the distributed ledger would be backed by an equivalent value of domestic currency held in a segregated (reserve) account at the central bank.

The **Bank of Amsterdam** (the Amsterdamse Wisselbank) was established in 1609 by the City of Amsterdam to facilitate trade. It is often seen as a precursor to central banks. A problem at the time was that currency, ie coins, was being eroded, clipped or otherwise degraded. The bank took deposits of both foreign and local coinage at their real intrinsic value after charging a small coinage and management fee. These deposits were known as bank money. The Wisselbank introduced a book-entry system that enabled customers to settle payments with other account holders. The Dutch central bank was established in 1814 and the Bank of Amsterdam was closed in 1820 (Smith (1776), Quinn and Roberds (2014)).

The **1934 series gold certificate** was a $100,000 paper note issued by the US Treasury and used only for official transactions between Federal Reserve Banks. This was the highest US dollar-denominated note ever issued and did not circulate among the general public. It is an example of non-electronic, restricted-use, government-backed, peer-to-peer money.

Examples of privately issued local currencies include the **Bristol Pound** and **BerkShares**, located in the right-hand petal. Stores in Bristol, United Kingdom, give a discount to people using Bristol Pounds, whereas BerkShares are purchased at 95 cents on the dollar and are accepted at retail stores in the Berkshires region of Massachusetts at face value.

**Precious metal coins** are examples of commodity money. They can be used as an input in production or for consumption and also as a medium of exchange. This is in contrast to fiat money, which has no intrinsic use. Although commodity money is largely a thing of the past, it was the predominant medium of exchange for more than two millennia.

**E-gold** account holders used commercial bank money to purchase a share of the holding company’s stock of gold and used mobile phone text messages to transfer quantities of gold to other customers. Payments between e-gold customers were “on-us” transactions that simply involved updating customer accounts. E-gold ultimately failed. But before it shut down in 2009, it had accumulated over 5 million account holders. Many current private mobile payment platforms, such as **Venmo** (a digital wallet with social media features popular with US college students) and **M-pesa™** (a popular mobile money platform in Kenya and other East African countries), employ a similar “on-us” model. Users transfer either bank deposits or cash to the operator, who gives them mobile credits. These credits can be transferred between platform participants using their mobile devices or redeemed from the operator for cash or deposits. The daily number of M-pesa transactions dwarfs those conducted using Bitcoin. However, in terms of value, worldwide Bitcoin transfers have recently overtaken those conducted on the M-pesa platform (Graph 1, right-hand panel).

Straightforward arguments derived from Friedman (1959) and Klein (1974) suggest that if the Federal Reserve were to maintain one-to-one convertibility with Fedcoin, it would also need to control the supply of Fedcoins. The company ran into trouble with the authorities over anti-money laundering violations and for operating a money transmitter business without the necessary state licence; see http://legalupdate.e-gold.com/2008/07/plea-agreement-as-to-douglas-l-jackson-20080721.html. E-gold account statistics can be found at http://scbbs.net/craig/stats.html.
Retail central bank cryptocurrencies

Retail CBCCs do not exist anywhere. However, the concept of a retail CBCC has been widely discussed by bloggers, central bankers and academics. Perhaps the most frequently discussed proposal is Fedcoin (Koning (2014, 2016), Motamedi (2014)). As discussed in Box B, the idea is for the Federal Reserve to create a cryptocurrency that is similar to bitcoin. However, unlike with bitcoin, only the Federal Reserve would be able to create Fedcoins and there would be one-for-one convertibility with cash and reserves. Fedcoins would only be created (destroyed) if an equivalent amount of cash or reserves were destroyed (created) at the same time. Like cash, Fedcoin would be decentralised in transaction and centralised in supply. Sveriges Riksbank, with its eKrona project, appears to have gone furthest in thinking about the potential issuance of a retail CBCC (Box C).

A retail CBCC along the lines of Fedcoin would eliminate the high price volatility that is common to cryptocurrencies (Graph 1, centre panel). Moreover, as Koning (2014) notes, Fedcoin has the potential to relieve the zero lower bound constraint on monetary policy. As with other electronic forms of central bank money, it is technically possible to pay interest on a DLT-based CBCC. If a retail CBCC were to completely replace cash, it would no longer be possible for depositors to avoid negative interest rates and still hold central bank money.

Any decision to implement a retail CBCC would have to balance potential benefits against potential risks. Bank runs might occur more quickly if the public were able to easily convert commercial bank money into risk-free central bank liabilities (Tolle (2016)). There could also be risks to the business models of commercial banks. Banks might be disintermediated, and hence less able to perform essential economic functions, such as monitoring borrowers, if consumers decided to forgo commercial bank deposits in favour of retail CBCCs. These benefits and costs are, however, not unique to retail CBCCs. They are the same for DCAs. What, then, is the key difference between retail CBCCs and DCAs? The answer lies with the peer-to-peer aspect of CBCCs and, more specifically, with anonymity.

Anonymity

Bitcoin was designed to be a “peer-to-peer version of electronic cash” (Nakamoto (2009, p 1), and this allows transactions to be anonymous. All bitcoin transactions are publicly recorded using the payer’s and the payee’s public addresses. However, very much like e-mail addresses, bitcoin public addresses do not need to reveal the true identity of users. This means that a person sending bitcoin to a public address

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11 The Federal Reserve has not endorsed or officially commented on the proposal.
12 See Yermack (2015), Bolt and van Oordt (2016) and Garratt and Wallace (2016) for discussions relating to digital currencies and price volatility.
13 Luther and Olson (2015) argue that bitcoin is a practical application of what is termed “memory” in the monetary economics literature. Kocherlakota (1998) shows that both money and memory are devices capable of facilitating exchange. Memory can, however, implement more allocations than money, so that money can be viewed as a form of memory but not the other way around.
14 See Nakamoto (2009, Section 10).
need not reveal his/her true identity to the recipient (counterparty anonymity) or to other members of the Bitcoin community (one form of third-party anonymity).\textsuperscript{15}

Kahn et al (2005) and McAndrews (2017) emphasise legitimate reasons for counterparty anonymity in transactions. Payees and payers may want to reduce the risk of identity theft, the possibility that the counterparty might follow them home and rob them, or more innocuous annoyances like directed advertising and solicitations (spamming). Similarly, a lack of third-party anonymity may be regarded as revealing too much information about a person’s private activities. In his proposal

\textsuperscript{15} Third-party anonymity means that a person’s true identity is not revealed to anyone not directly involved in a transaction. In more general applications, this would include a system operator.
for \textit{Digicash}, David Chaum (1983) makes this argument by pointing out that “knowledge by a third party of the payee, amount, and time of payment for every transaction made by an individual can reveal a great deal about the individual’s whereabouts, associations and lifestyle”.\footnote{Digicash was launched in the 1990s as a means of transferring bank deposits from one customer to another without revealing the payer’s identity to his/her bank (ie it provided third-party anonymity). It did this by using cryptographic techniques to create a pool of untraceable Digicash from customer deposits. Digicash is interesting in that it provided third-party anonymity without requiring autonomy from commercial banks. Commercial banks still held and transferred the deposits held by customers using the Digicash scheme.}

Counterparty anonymity seems less controversial than third-party anonymity. Many observers have argued that third-party anonymity in payments should not be allowed because it facilitates criminal activity, such as tax evasion, terrorist financing or money laundering. Rogoff (2016) argues that $100 bills should be removed from circulation for the same reasons.

It is unclear how much consumers actually value anonymity of either sort in order to protect their privacy. Athey et al (2017) look at how much effort people make to protect their privacy in relation to digital currencies. In an experimental setting, they find that subjects, in general, do not devote the small amount of time needed to read through the e-wallet description that is necessary to meet their own stated preferences for privacy. Similar findings emerged from a survey of economics students at the University of California, Santa Barbara, on usage of Venmo (a digital wallet with social media features). Of the 669 respondents, 80\% were users. Of these users, 44\% allowed their Venmo transactions to be public (visible to everyone on the internet) and another 21\% allowed all of their Facebook friends to see their transactions. Finally, while Digicash is regarded as a precursor to bitcoin, there may not have been sufficiently high demand for the third-party anonymity it provided as it was never widely adopted. It filed for bankruptcy in 1998.\footnote{One potential reason for its lack of success is that it did not provide autonomy from a central authority. Nick Szabo’s proposal for “bit gold” offers an autonomous version of e-gold that uses proof-of-work chains. Bit gold represents a big step in the evolution of digital cash towards bitcoin (https://unenumerated.blogspot.ch/2005/12/bit-gold.html).}

The technology behind CBCCs could allow central banks to provide a digital cash substitute with anonymity properties similar to those of cash. In its role as issuer, the central bank would need to decide whether or not to require customer information (the true identity behind the public address). This would determine the extent to which the retail CBCC would provide third-party anonymity.

While it may look odd for a central bank to issue a cryptocurrency that provides anonymity, this is precisely what it does with physical currency, ie cash. Perhaps a key difference is that, with a retail CBCC, the provision of anonymity becomes a conscious decision. It is worth recalling that the anonymity properties of cash are likely to have emerged out of convenience or historical happenstance rather than intent.
Wholesale central bank cryptocurrencies

While CBCCs for retail payments remain at the conceptual stage, some central banks have completed proofs of concept for DLT-based applications. One of the reasons for the interest in DLT is that many central bank-operated wholesale payment systems are at the end of their technological life cycles. The systems are programmed in obsolete languages or use database designs that are no longer fit for purpose and are costly to maintain.

Projects Jasper and Ubin

Project Jasper at the Bank of Canada (Chapman et al. (2017)) and Project Ubin at the Monetary Authority of Singapore (MAS (2017)) simulate real-time gross settlement (RTGS) systems on a DLT platform. In an RTGS system, payments are processed individually, immediately and with finality throughout the day (CPSS (1997)).

Unlike the retail payment applications discussed above, wholesale systems have restricted access, i.e. they are permissioned rather than permission-less. Usually, access is restricted to financial institutions. Moreover, the costly proof-of-work validation (Box A) needed to prevent double-spending in retail schemes is replaced by less energy-consuming alternatives, such as a trusted notary (e.g. the central bank).

A key challenge in any CBCC application is how to transfer central bank money to the distributed ledger. Both Jasper and Ubin chose a digital depository receipt (DDR) approach. A DDR is a claim on central bank reserves held in a segregated account against which the central bank issues digital tokens on the distributed ledger. In Jasper, the digital tokens – initially known as CADcoins – are created at the beginning of the day and redeemed at the end. In Ubin, banks acquire or redeem digital tokens at any point during the day and can keep them on the distributed ledger overnight. Hence, transfers on the DLT platform of the Singaporean proof of concept are not restricted to the opening hours of MAS.

Project Jasper also implements a liquidity-saving mechanism (LSM) on the DLT platform. While RTGS systems minimise settlement risk, they can be demanding in terms of liquidity. Consequently, many RTGS systems around the world are augmented by mechanisms that periodically seek to offset payments against each other in a queue and settle only the net amounts (Bech and Soramäki (2001)). Distributed ledgers are decentralised, so implementation of a centralised queue requires a clever work-around (Project Jasper (2017)).

The two projects show that central bank money can be transferred on a distributed ledger in real time, in realistic volumes and with an LSM. Nevertheless, none of the current initiatives to update or replace existing wholesale payment systems are considering the adoption of DLT. Both the Bank of England (2017) and Bank of Canada (Ho (2017)) conclude that DLT is not yet mature enough for current

18 Central banks have not limited themselves to wholesale payment applications of DLT. The Hong Kong Monetary Authority (HKMA) has developed proofs of concept for trade finance and mortgage loan applications in collaboration with industry participants (HKMA (2016)). The Bank of France has developed a DLT version of its Single European Payments Area (SEPA) Creditor Identifier database (Bank of France (2016)).

19 The CPMI-IOSCO Principles for Financial Markets Infrastructures hold that settlement should occur in central bank money whenever practical and available.

20 See Garratt (2016).
adoption. Yet most central banks that are considering modernising their core payment infrastructure stress the need to make new systems inter-operable with future DLT platforms.

Securities settlement

Looking beyond the immediate horizon, many industry participants see significant potential for DLT to increase efficiency and reduce reconciliation costs in securities clearing and settlement.21 One potential benefit of DLT-based structures is immediate clearing and settlement of securities, in contrast to the multiple-day lags that currently exist when exchanging cash for securities (and vice versa).22 Progress in this direction was recently achieved by a joint venture between the Deutsche Bundesbank and Deutsche Börse, which developed a functional prototype of a DLT-based securities settlement platform that achieves delivery-versus-payment settlement of digital coins and securities (Deutsche Bundesbank (2016)).

Conclusion

As it stands, cash is the only means by which the public can hold central bank money. If someone wishes to digitise that holding, he/she has to convert the central bank liability into a commercial bank liability by depositing the cash in a bank. A CBCC would allow consumers to hold central bank liabilities in digital form.23 But this would also be possible if the public were allowed to have central bank accounts, an idea that has been around for a long time.24 We argue that the main benefit that a consumer-facing retail CBCC would offer, over the provision of public access to (centralised) central bank accounts, is that the former would have the potential to provide the anonymity of cash. In particular, peer-to-peer transfers allow anonymity vis-à-vis any third party. If third-party anonymity is not of sufficient importance to the public, then many of the alleged benefits of retail CBCCs can be achieved by giving broad access to accounts at the central bank.

Whether or not a central bank should provide a digital alternative to cash is most pressing in countries, such as Sweden, where cash usage is rapidly declining. But all central banks may eventually have to decide whether issuing retail or wholesale CBCCs makes sense in their own context. In making this decision, central banks will have to consider not only consumer preferences for privacy and possible efficiency gains – in terms of payments, clearing and settlement – but also the risks it may entail for the financial system and the wider economy, as well as any implications for monetary policy (Bordo and Levin (2017)). Some of the risks are currently hard to assess. For instance, at present very little can be said about the cyber-resilience of CBCCs, something not touched upon in this short feature.

21 Mainelle and Milne (2016) estimate that synchronised share databases can reduce back office costs by up to 50%. A study led by Santander InnoVentures (2015) estimates that $15–20 billion could be saved annually in the broader banking industry.

22 Through the use of smart contracts, the technology also allows for the settlement time/date of a transaction to be specified by the relevant parties.

23 One simple reason why a consumer might want to do this is to avoid the credit risk associated with commercial bank liabilities.

24 Who should and should not have access to central bank money is a recurring policy issue. See CPSS (2003), CGFS (2015) and Bank of England (2017) for more detailed discussions.
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Bitcoin Sees Wall Street Warm to Trading Virtual Currency

Traders at the New York Stock Exchange last week. The exchange’s parent company is said to be working on an online platform to trade Bitcoin. Credit Justin Lane/EPA, via Shutterstock

By Nathaniel Popper

- May 7, 2018

SAN FRANCISCO — Some of the biggest names on Wall Street are warming up to Bitcoin, a virtual currency that for nearly a decade has been consigned to the unregulated fringes of the financial world.

The parent company of the New York Stock Exchange has been working on an online trading platform that would allow large investors to buy and hold Bitcoin, according to emails and documents viewed by The New York Times and four people briefed on the effort who asked to remain anonymous because the plans were still confidential.

The news of the virtual exchange, which has not been reported before, came after Goldman Sachs went public with its intention to open a Bitcoin trading unit — most likely the first of its kind at a Wall Street bank.
The moves by Goldman and Intercontinental Exchange, or ICE, the parent company of the New York Stock Exchange, mark a dramatic shift toward the mainstream for a digital token that has been known primarily for its underworld associations and status as a high-risk, speculative investment.

The new interest among Wall Street power brokers also represents a surprising new chapter in the renegade history of Bitcoin.

From Bitcoin to Litecoin to Ethereum, we explain how cryptocurrency transactions work.

Published On March 30, 2018

The virtual currency was created after the 2008 global financial crisis by a still-anonymous programmer who used the name Satoshi Nakamoto. The idea was to replace the existing banking structure with an online alternative that couldn’t be controlled by a handful of powerful organizations.

But instead of being replaced, the old banks are beginning to assert their own role in the unorthodox financial world of virtual currency, sometimes called cryptocurrencies.

While Bitcoin was originally intended to be used by consumers for all sorts of transactions — without any financial institutions getting involved — it has mostly become a virtual investment, stored in digital wallets and traded on mostly unregulated exchanges around the world. People buy Bitcoin in the hope that its value will go up, similar to the way they purchase gold or silver.

Details of the platform that Intercontinental Exchange is working on have not been finalized and the project could still fall apart, given the hesitancy among big Wall Street institutions to be closely associated with the Wild West of virtual currencies. A spokesman said that the company had no comment.

Many corporations and governments have expressed interest in the technology that Bitcoin introduced, particularly a form of database known as the block chain.

Some large financial exchanges, including the Chicago Mercantile Exchange, have already created financial products linked to the price of Bitcoin, known as futures. But the new operation at ICE would provide more direct access to Bitcoin by putting the actual tokens in the customer’s account at the end of the trade.

ICE has had conversations with other financial institutions about setting up a new operation through which banks can buy a contract, known as a swap, that will end with the customer owning Bitcoin the next day — with the backing and security of the exchange, according to the people familiar with the project.

The swap contract is more complicated than an immediate trade of dollars for Bitcoin, even if the end result is still ownership of a certain amount of Bitcoin. But a swap contract allows the trading to come under the regulation of the Commodity Futures Trading
Commission and to operate clearly under existing laws — something today’s Bitcoin exchanges have struggled to do.

The chief executive of Nasdaq, Adena Friedman, recently said her company could also create a virtual-currency exchange if regulatory issues are ironed out. While several hedge funds have been buying and selling Bitcoin, most large institutional investors, such as mutual funds and pensions, have avoided it largely as a result of similar regulatory concerns.

Currently, the average price of one Bitcoin is about $6,755, according to Blockchain.info, a news and data site.

Bitcoin still faces plenty of skepticism in the mainstream financial world. Over the weekend, Warren E. Buffett of Berkshire Hathaway, who has long been critical of virtual currencies, said Bitcoin was “probably rat poison squared” in an interview with CNBC. The Microsoft co-founder Bill Gates added his own skepticism, saying he’d “short” Bitcoin if he could.

And the new efforts to trade Bitcoin don’t help answer basic questions about what makes the virtual currency useful in the real world. Most attempts to use Bitcoin for everyday commerce haven’t gained traction, and investors have treated it as a speculative commodity like gold or silver.

Some Bitcoin enthusiasts have said that its increasing integration into the existing financial system has pulled it away from its founding ideals. Paul Chou, a former trader at Goldman Sachs who set up Ledger X, a regulated Bitcoin exchange that would compete with Intercontinental Exchange, said his company has made a point of focusing on large Bitcoin holders, rather than financial institutions.

“The reason we got into crypto was not to partner with a bank, but to replace them,” Mr. Chou said, using the shorthand for cryptocurrencies. “We deal with crypto holders directly in a way that really takes advantage of Bitcoin’s strengths, while avoiding brokers, banks and other institutions that take multiple cuts of the transaction.”

Goldman will initially only be trading futures contracts linked to Bitcoin’s price. But Goldman executives said they were looking at moving in the direction of buying and selling actual Bitcoins.

Intercontinental Exchange’s effort, if it pans out, could make Bitcoin available to a much wider and more influential customer base, including other financial firms.

Several big corporate names, including the giant technology investor Soft Bank, which has stakes in Sprint and Uber, have been in discussions about being involved with the exchange in some way, the people familiar with the project said. But a spokesman for Soft Bank said this week that it was no longer involved.

Ledger X, the exchange founded by Mr. Chou, is the only exchange that now offers the kind of swaps that ICE has discussed. Ledger X has experienced increasing trading volume
in recent months, but ICE would start with an edge because essentially every large financial institution is already hooked into it.

The interest in Bitcoin trading illustrates how the reputation of the virtual currency has, after a rocky start, improved.

Regulators are currently looking at whether many virtual currencies, including the second most widely used digital token, Ether, have been issued and traded in violation of securities regulations. Institutional investors believe that because of the way Bitcoin was created and structured — without any one company or organization behind it — it would be on safer ground with regulators.

ICE was considering launching a swap contract linked to Ether, but backed away from that because of regulatory uncertainty, the people briefed on the effort said.

Mr. Chou, at Ledger X, said he made a similar decision and has delayed creating any products linked to Ether.

With Bitcoin, on the other hand, Mr. Chou said that road seems to be clear for big institutions to get involved.

“The industry is seeing unprecedented institutional interest for the first time in Bitcoin’s history,” he said. “I’ve been amazed that the strongest believers in cryptocurrency often start out the most skeptical. It’s a healthy skepticism. But at some point the perception shifts, and for many institutions — I think we’re finally there.”
VIRTUAL CURRENCIES AND THE CHALLENGES TO COMPLIANCE

FORDHAM / ACCENTURE COMPLIANCE SERIES

JUNE 2018
AGENDA

• Moderator and Panelist Introductions
• Key Regulatory Timeline
• Key Regulatory Initiatives Worldwide
• What questions do you have for our panelists?
MODERATOR AND PANELIST INTRODUCTIONS

Mark Goldstein
Katten Muchin Rosenman LLP
Special Counsel

Mark Goldstein, special counsel in Katten’s New York office, focuses his practice on advising investment advisers, mutual funds and private investment funds. Mark has more than 25 years of experience advising clients on compliance and regulatory requirements, corporate matters, and the federal securities laws. He has extensive experience advising on the formation, distribution, structuring and on-going operational aspects of a wide array of investment products, including mutual funds, private investment funds, offshore funds, and separately managed accounts, as well as extensive experience counseling investment advisers regarding SEC examinations and transactional matters.

Chris Thompson
Accenture
Managing Director,
Global Financial Services Security
and Resilience Lead

Chris Thompson joined Accenture in 1992 and now leads Accenture’s FS Security and Resilience practice globally.

Chris has nearly 25 years of experience in large-scale risk and technology programs, working with some of the world’s leading retail, commercial and investment banks. He has deep expertise in cyber risk, operational risk, financial crime, security, financial architectures, performance management, banking operations and trading.

Meryl Lutsky
New York State
Office of the Attorney General
Former Chief, Money Laundering Investigations Unit

Meryl Lutsky served as a prosecuting attorney for more than 20 years, the last 12 of which she spent leading the Statewide Crime Proceeds Strike Force and Money Laundering Unit for the New York State Attorney General’s Office. In this role, she created multi-agency and multi-disciplinary task forces consisting of local, state and federal attorneys, investigators, auditors and analysts, and partnered with state and federal banking regulators to identify, investigate, prosecute, and remediate complex Money Laundering crimes and violations of the Banking and Tax Laws, including those related to Cyber Hacking, Identity Theft, Human Trafficking, Public Corruption, etc.

Anthony Dell
Compliance By Design LLC
Chief Executive Officer

Anthony Dell is an Executive-Level Compliance Strategist with a Vision of the future, balancing decades of corporate, ethics, legal, operations, and regulatory compliance experience with a passion for technology and an eye for industry disruption. Dell is a C-Suite executive with proven business acumen. He frequently speaks publicly on expert design+build for risk-intelligent, cost-effective, scalable programs that protect and enhance enterprise value with demonstrable ROI. Dell takes an engineer's approach infused with high EQ and artist's hand for innovation and technology in strategy, policy, risk, compliance, audit, and legal functions that flex through rapid change.
### CRYPTOCURRENCY REQUIREMENTS

Three main stakeholder activities have been identified within the current cryptocurrency environment with specific regulatory, security, and reporting requirements outlined per each:

<table>
<thead>
<tr>
<th><strong>Custodians</strong></th>
<th><strong>Exchanges</strong></th>
<th><strong>Alternative Trading Systems</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regulatory Requirements</strong></td>
<td><strong>Security Requirements</strong></td>
<td><strong>Reporting Requirements</strong></td>
</tr>
<tr>
<td>▪ Depending on activities and registration status, Custodians may be required to maintain one-to-one value of reserves in dollars</td>
<td>▪ Inventory and manage technology such as physical digital signature devices, data centers, and virtual servers</td>
<td>▪ Maintain statutory reporting requirements as a qualified custodian</td>
</tr>
<tr>
<td>▪ Perform KYC / due diligence on customers and combat money laundering activities</td>
<td>▪ Establish hardened facilities, building access, security clearance and physical security plan</td>
<td>▪ Maintain statutory reporting requirements as a qualified custodian</td>
</tr>
<tr>
<td>▪ Perform KYC / due diligence on customers and combat money laundering activities</td>
<td>▪ Implement data security policies and procedures</td>
<td>▪ Maintain reporting similar to securities reporting if guidance becomes regulation</td>
</tr>
<tr>
<td>▪ Maintain effective implementation of a written policy that identifies and assesses the full range of fraud-related and similar risk areas</td>
<td>▪ Establish cybersecurity program</td>
<td>▪ Maintain existing broker-dealer reporting requirements</td>
</tr>
<tr>
<td>▪ Maintain effective risk procedures and controls</td>
<td>▪ Develop business continuity and disaster recovery plan</td>
<td>▪ Report to FINRA weekly volume information and number of securities transactions within the ATS by security</td>
</tr>
<tr>
<td>▪ Comply with OFAC sanctions obligations</td>
<td>▪ Self-certify allowed by CFTC for BitCoin futures</td>
<td>▪ Provide additional reporting requirements if trading reaches more than 5% of specific securities</td>
</tr>
<tr>
<td>▪ Maintain effective risk procedures and controls</td>
<td>▪ Implement network monitoring of technology and processes</td>
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KEY REGULATORY INITIATIVES WORLDWIDE

Regulators have expressed an interest to oversee cryptocurrency and ensure a safe regulatory framework, however there are few laws currently implemented.

USA
Comprehensive strategy is being developed as each regulator is overseeing their scope independently. Cryptocurrency is not viewed as legal tender, however the CFTC has allowed it to be traded on futures exchanges. SEC is looking to treat exchanges / wallets with securities laws. IRS has declared that taxes must be paid. NYDFS requires written policies and procedures regarding AML and fraud.

UK / EU
Discussions ongoing for requiring AML on customers and reporting suspicious transactions for exchanges and wallets. Working group to be formed to develop comprehensive regulatory strategy. Cryptocurrency is not viewed as legal tender.

JAPAN
Cryptocurrency is legal tender in Japan. Exchanges are required to hold capital requirements and have cybersecurity, operational, and training stipulations in order to receive a license from the FSA. Regulations also include verifying customer identities, AML, and segregating accounts.

CHINA
Strict enforcements to limit cryptocurrencies including banning ICOs, freezing bank accounts that are linked with cryptocurrencies, and banning internet / mobile access to virtual exchanges.

SINGAPORE
Relaxed view on cryptocurrency risks, however recent fraudulent actions have increased potential for regulatory oversight in future regarding consumer protection. Not viewed as legal tender.
KEY REGULATORY TIMELINE

Over the past few years, regulations have been implemented to coincide with the increased interest in cryptocurrencies, however key clarification on outstanding issues from regulators should be provided in 2018.

USA:
- Cryptocurrency to be taxed as property per IRS guidelines
- Cryptocurrency designated as a commodity, to be regulated by CFTC
- CFTC allows futures trading and self-certification
- FRB declares to not have oversight of cryptocurrencies
- OCC does not view cryptocurrency as a threat to banking system
- Treasury declares that virtual currency does not have tender status
- OFAC provided guidance of requiring sanctions compliance for cryptocurrencies
- Companies providing wallet services, per Treasury, should KYC customers
- SEC is seeking to apply securities laws to exchanges and wallets
- SEC is announcing plans to make working group to study crypto regulations
- FINCEN will view cryptocurrencies as securities and require compliance from exchanges with BSA
- Plans to release cryptocurrency framework and to treat them as securities
- Guidance on custodian requirements and broker-dealer registration

Canada:
- Regulates digital currencies as MSB and includes registration and other requirements for exchanges. Securities laws to be applied on case-by-case basis.

USA (NY):
- NYDFS issues guidance for exchanges on areas of potential fraud
- Issued to study potential cryptocurrency regulations
- Provides framework for exchanges on policies and procedures for areas of potential fraud

USA (NH):
- Commission issued to study potential cryptocurrency regulations

USA:
- NYDFS issues rule requiring exchanges to receive license
- Issues to study potential cryptocurrency regulations

USA (federal):
- Releases framework to determine applicable regulations
- Releases framework to determine applicable regulations

UK / EU:
- Announced plans to require AML, due diligence, and SARs
- Announced plans to make working group to study crypto regulations

China:
- Banned ICOs, access to virtual exchanges, and account freezes
- Releases framework to determine applicable regulations

South Korea:
- Requires actual names from investors, user-friendly contracts from exchanges, and registration from exchanges. Tax framework to be released in July.

Switzerland:
- Releases framework to determine applicable regulations

Global:
- G20 to release cryptocurrency framework in July
- Plans to release cryptocurrency framework and to treat them as securities

Legend:
- USA (state)
- USA (federal)
- Canada
- Asia
- Europe

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WHAT QUESTIONS DO YOU HAVE FOR OUR PANELISTS?
Virtual Currency: Friend or Foe?

Posted on February 28, 2017 by Gizem Alper

AML and Other Regulatory Concerns

Virtual currency is gaining momentum by the day. There are many tax, compliance and regulatory issues still to be resolved around virtual currency, making it a controversial form of tender. However, if the issues are to be handled through a global initiative, this innovative financial tool may be helpful to developing societies globally.

Virtual currency – the most widespread one being bitcoins – was introduced several years ago and has been evolving somewhat rapidly ever since. To this extent, it has been debated by many economists whether virtual currency is "a return to the dark ages[1]" or indeed an innovative financial solution. However, as controversial as it is, it seems virtual currency is here to stay. Therefore, in order to tackle some regulatory and compliance concerns, it is necessary to introduce legal and compliance measures.
The main issue concerning virtual currency is that it is merely an open-source protocol and does not belong to a state; hence, there is no central bank involved in the issuance and regulation thereof. Moreover, the “role” of bitcoin is still not crystal clear. For example, in a judgement in 2015, the European Court of Justice ruled that bitcoin was to be classified as a type of currency. On the other hand, U.S. courts have generally ruled that virtual currency is “intangible personal property” or “means of payment.” Likewise, the U.S. Securities and Exchange Commission (SEC) considers bitcoins as “security.” Nevertheless, in 2013, Financial Crimes Investment Network (FinCEN) identified bitcoins as “convertible virtual currency.” However, the U.S. Internal Revenue Service (IRS) treats virtual currency as “property” for tax purposes.

A crucial concern pertaining to virtual currency is anti-money laundering (AML). Virtual currency in essence is pseudonymous, meaning that the transactions and accounts may not be linked to real-world identities. Therefore, tracing the transactions and the persons involved may be very tricky at times. Furthermore, due to the complexity of infrastructure, it is difficult to pinpoint a central administrator.

Several jurisdictions have extended AML measures to virtual currency. To this extent, the European Union has adopted a draft for the amendment of the AML directive which will extend to virtual currency[2]. The said draft amendments intend to monitor activities realized through virtual currency. However, it only targets exchanges and wallet providers, not individual users. Therefore, it will not ultimately be sufficient to control fraudulent activities. On the other hand, FinCEN has also extended AML and know-your-customer (KYC) rules to virtual currency users who are administrators or exchangers. Thus, individual users are also not covered under FinCEN regulations.

Apart from AML, taxation, consumer protection and exchange regulations are also major regulatory and compliance issues concerning virtual currency. Although the U.S., U.K. and some European jurisdictions have tax policies in place, because virtual currency is not regulated globally, it may give rise to “tax haven” activities, especially in cross-border transactions. In terms of consumer protection, virtual currency transactions are may be used for fraud and unethical sales.

Nevertheless, virtual currency has some advantages. Virtual currency is a fast and global financial solution. Moreover, it is cost efficient, enabling users to utilize financial transactions with minimal or zero costs. Another advantage is that due to encrypted private keys, virtual currency is a means to avoid identity theft, which is a major problem in the finance industry nowadays.

CCI Recommends:
Above all, virtual currency may be a solution for developing countries where there is a lack of banking infrastructure. In this sense, I believe it can be even used as a tool to further realize the sustainable development goals of the United Nations.

In terms of utilizing the benefits of virtual currency, there are still many regulatory and compliance issues that need to be tackled on a global scale. A global set of rules is a necessity, as virtual currency is not a central currency pertaining to any state and is, therefore, frequently used in cross-border transactions.

Unfortunately, the main obstacle for global regulations is that virtual currency is restricted or banned in some jurisdictions. However, I am optimistic that a global initiative for regulating virtual currency may give rise to acceptance of it in the jurisdictions that initially banned virtual currency, mainly due to concerns arising from monitoring transactions.

To that extent, I believe the primary problem to be tackled is the “role” of virtual currency. There should be a global mutual understanding as to whether virtual currency is a commodity or currency. This will – at the least – enable national legislators to further regulate on compliance and tax regimes concerning virtual currency.

Furthermore, another crucial issue to tackle is global licensing or a global authority overseeing and monitoring the activities for which virtual currency is used. Although there are several jurisdictions (for example, Luxembourg, the U.K., the state of New York) that have granted licenses for virtual currency, it is still primitive. I believe it is a necessity that such licensing is effectuated at a global level in order to provide for a set of rules as regards AML and for adopting at least a minimum global standard for KYC. Moreover, global monitoring supported by states will enable the adoption of exchange regulations to prevent volatility. Such an approach will be a major step for preventing suspicious financial activities and ensuring that virtual currency is indeed an innovative solution and functions as an accelerator in cross-border transactions.

In summary, if an appropriate system is implemented at a global scale, virtual currency will become a global financial instrument that will benefit societies worldwide, especially those that lack financial infrastructure.

Gizem Alper
(http://www.corporatecomplianceinsights.com/author/gizem-alper/)

Gizem Alper is a corporate lawyer registered to the Istanbul Bar Association. She is currently a visiting scholar at The New School, Milano School of International Affairs, Management and Urban Policy in NYC. Gizem holds a Ph.D. Law from Istanbul University and an LL.M. from Leiden University and has amassed extensive experience in corporate and transactional law and compliance with multinational companies and in the banking industry.
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NEW YORK (Thomson Reuters Regulatory Intelligence) - As debate intensifies among large U.S. firms over whether crypto-currencies like bitcoin are a passing fad or potential game-changer, recent enforcement actions suggest banks will need to adapt their compliance functions and processes if they plan to venture into this unchartered terrain.
What has caught the attention of some legal experts is a recent action (here) by the Commodity Futures Trading Commission against a bitcoin Ponzi scheme. The agency used its anti-fraud authority in bringing charges against the New York firm Gelfman Blueprint Inc., which according to the agency ran a “pooled commodity fund that purportedly employed a high-frequency, algorithmic trading strategy.” In reality, the strategy was fake, the purported performance reports were false, and the firm’s performance reports included “statements that created the appearance of positive bitcoin trading gains.”

James McDonald, head of enforcement at the CFTC, said “the defendants here preyed on customers interested in virtual currency, promising them the opportunity to invest in Bitcoin when in reality they only bought into the defendants’ Ponzi scheme.”

At a minimum, what the CFTC action, along with recent guidance from the Securities and Exchange Commission on how certain digital currency fund raising attempts – initial coin offerings (ICOs) – can be considered securities, suggests is that both agencies are monitoring these markets closely. Should there be any hint of fraud, they will use their enforcement actions to shut down such schemes.

For firms regulated by either agency the warning is clear: if you want to enter these markets, you have to take existing rules and regulations and adapt them to these new and innovative markets.

“Firms should consider adapting traditional compliance principles developed to address SEC and CFTC anti-fraud and anti-manipulation rules to virtual currency activities,” law firm Davis Polk said in a note to clients in reviewing the CFTC action.
LARGE BANKS AT ODDS OVER BITCOIN

Just how much interest there is among U.S. regulated firms to step into the crypto-currency market is difficult to gauge. Some of the largest U.S. firms in recent weeks have voiced conflicting views over virtual currencies, in particular bitcoin. JPMorgan chief executive Jamie Dimon called the crypto-currency a “fraud” that would eventually “blow up.”

However, Dimon’s chief financial officer, Marianne Lake, seemed to undercut her boss’s views when during a recent third quarter earnings call with analysts, she said: “We are very open minded to the potential use cases in the future for digital currencies that are properly controlled and regulated.”

Morgan Stanley’s CEO, James Gorman, meanwhile, has also offered a measured view, calling bitcoin “more than just a fad,” while Lloyd Blankfein, head of Goldman Sachs, said the firm was “still thinking” about the digital currency, after reports emerged that the bank was exploring a new trading platform dedicated to crypto-currencies.

Meanwhile, Abigail Johnson, CEO of Fidelity Investments, has perhaps taken the boldest approach yet among U.S. firms, allowing its clients to see their holdings of bitcoin and other virtual currencies held on digital asset exchange Coinbase on the company’s website.

The wide range of views among incumbent institutions is perhaps not surprising. Banks and regulators, both here and abroad, are grappling to understand how digital currencies might transform existing payment and banking services.

Speaking at the annual meeting of the Institute of International Finance recently, Carolyn Wilkins, senior deputy governor for the Bank of Canada, acknowledged that digital currencies had the potential to radically transform financial services, but she was not quite ready to embrace a world where financial intermediaries – that is, banks – were no longer needed.

“I don’t see an underlying change in intermediation,” Wilkins told the conference.
“There will be different and perhaps competing forms of payment . . . but you can’t throw out monetary theory because we’ve found a new technology,” said Wilkins.

However, a top Federal Reserve official has warned that regulators need to become more proactive in addressing the threats posed by new financial entrants.

In a recent interview with Reuters, St. Louis Fed President James Bullard said growing competition from fintech players has become the “number one issue” for large financial firms, and regulators are “fighting the last war” by focusing on tweaks to post-crisis financial rules.

“We need to speed up our consideration of the fintech issues and think harder about what is the regulatory environment that is going to be appropriate. I think we have been complacent so far,” Bullard said.

“That is the battleground for the next 10 years. It is not the same as the battleground for the previous 10 years,” he said.

RECENT DEVELOPMENTS POINT TO REGISTERED AND LEGITIMIZED MARKETS

Perhaps what is further fueling the need for some large institutions to take notice are recent developments that are edging digital currencies towards a more legitimized, and potentially, regulated marketplace. Apart from the SEC's recent guidance, other regulators around the globe have raised a warning flag over the risks of investing in ICOs, and in some cases, such as in China, authorities have moved to shut down certain exchanges.

At the same time, however, initiatives in the private sector have sought to bring the unregulated marketplace more in line with traditional markets.

Earlier this month, a U.S. joint venture, which includes the online retailer Overstock.com, and The Argon Group, an investment bank specializing in ICOs, launched the first SEC-registered digital exchange. Analysts said the decision to help bring ICOs to market with an SEC-approved exchange could perhaps pave the way for similar exchanges and help bring crypto-currencies within the oversight of the SEC and other regulators.
OLD TOOLS FOR NEW WORLD

The message emerging for banks and others who may be contemplating a foray into digital currencies is that existing rules and regulations may well be up to speed in addressing this type of innovation. If a digital offering is a commodity, then expect the CFTC to weigh in. Alternatively, if the digital coin looks and smells like a security, the SEC will be ready to intervene at the slightest scent of fraud.

“Bitcoin is a commodity, and when I read the CFTC action my gut was the old law is standing up quite nicely in the new world,” said Margaret Paulsen, senior managing director at PwC, the consultancy. “To me the CFTC has tools to address the downside of innovation in this market.”

“If I were in the industry and I were entering into this marketplace, I’d be taking out my risk management and compliance tools and make sure that my old tools work for my new market and if they don’t try to adapt them,” she added.

(Henry Engler is a North American Regulatory Intelligence Editor for Thomson Reuters Regulatory Intelligence. He is a former financial industry compliance consultant and executive, and earlier served as a financial journalist with Reuters. Email Henry at henry.engler@thomsonreuters.com)

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