28 November 2014

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Senate Economics References Committee: Inquiry into digital currency

The US economist Paul Krugman remarked in 1998 that "the growth of the Internet will slow drastically, as the flaw [...] becomes apparent: most people have nothing to say to each other!" It was a reasonable assertion to make, before we had the means for global conversations it was hard to imagine why people in Perth, Panama, and Paris would have any need to talk to each other. But talk to each other they do, in droves. So while right now we may struggle to imagine why people would want to make everyday payments to people on the other side of the planet, things will look very different once such a facility is actually available.

Definition of Digital Currencies

Given that almost all currency is now *digital*, in the sense that it is stored and managed electronically, and the spectrum of non-state currency is so broad, we think a long-term regulatory regime should work on the basis of a broad taxonomy of currencies rather than a single definition of "digital currency".

We expect a proliferation of corporate and community schemes that involve exchangeable digital tokens, allowing a rich and nuanced social and economic activity. In the words of the political economist Benjamin J Cohen, we are heading for a return to "the heterogeneous multiform mosaic that existed prior to the era of territorial money".[1]

[1] "The Future of Money", Benjamin J Cohen, Princeton University Press 2006

One useful way of anticipating and distinguishing these schemes is to define them in terms of who, if anyone, has the power to issue new tokens or currency units. The breakdown may look something like this:

Corporate Currencies

Units of monetary value issued and managed by a corporate entity, for use as in customer loyalty programme, units for an in-game economy, or internal payments mechanism for an online retail platform.

Community Currencies

Units of monetary value issued and managed by a community of users, based on consensus and a set of predefined rules. This may or may not include a central issuing authority. These schemes may be based around an online community, a region, a shared interest, or a shared set of values.

We also find useful the European Central Bank's October 2012 report,[2] which includes a schema based on the interaction of a currency with the non-virtual economy:

Type 1 - Closed virtual currency schemes

Schemes with almost no link to the real economy, including "in-game only" schemes. The virtual currency can only be spent on virtual goods and services offered within the virtual community. (Example: World of Warcraft Gold)

Type 2 - Virtual currency schemes with unidirectional flow

The virtual currency can be purchased directly using real currency at a specific exchange rate, but it cannot be exchanged back to the original currency. (Example: Facebook Credits)

[2] "Virtual Currency Schemes", European Central Bank, October 2012

Type 3 - Virtual currency schemes with bidirectional flow

Users can buy and sell virtual money according to the exchange rates with their currency. These schemes allow for the purchase of both virtual and real goods and services. (Example: Linden Dollars)

We would distinguish a subset of Type 3 virtual currencies -- those based around a cryptographic block chain -- due to their unique properties and distributed structure:

Type 3a - Cryptocurrencies

Virtual money managed via a distributed and cryptographically secured ledger, rather than a centrally managed database. The structure of these systems make them resilient but largely unregulated, albeit governed by community consensus. (Example: Bitcoin)

Effective Regulation for Digital Currencies

In drawing up legislation and recommendations, we ask that the Senate endeavour to be:

Cognisant of the Unique Advantages of Digital Currencies

As a network, Bitcoin introduces a level of transparency previously unseen in the financial world. Anybody with an Internet connection is able to download a full copy of the block chain, the community's digital ledger with a record of every standard transaction on the network, recorded pseudonymously. On a network level, Bitcoin operates on the principle of security by transparency, (in contrast to the "security by obscurity" of incumbents). The result is that, like robbing a glass bank, it becomes very difficult to execute network-level malicious activity in Bitcoin, and almost impossible to hide it.

This network transparency also allows exciting new possibilities at a company level. Currencies based around a public ledger, such as the Bitcoin block chain, allow companies to do proof-of-solvency auditing and realtime financial reporting. This means a company can produce a cryptographic proof that it has material access to a given level of digital currency at a given time,

and has not lent or lost its client funds. While such measures may not be mature enough to be mandatory, efforts to build tools and methodologies for novel financial transparency should be welcomed by regulators and kept in consideration as valid measures of enhanced disclosure.

Competitive & Pragmatic in Regulatory Expectations

One of the lessons of the music industry's battle against file-sharing is that if a digital innovation is not welcomed into a legal, regulated space, it can still thrive outside of that space.

With near-instant, near-free transactions, digital currencies offer a competitive proposition that will likely thrive regardless of regulatory regime. The danger is that overly strict regulation pushes this activity into the informal economy, and offshore to territories with more accommodating regulations.

A typical Bitcoin transaction costs 0.4 cents AUD, regardless of transaction size, with higher fees available to ensure faster processing. A typical transaction will get initial confirmation within seconds, block confirmation in eight minutes, and full network confirmation in one hour. Transactions are location agnostic, a payment to the other side of the world will be as fast and cheap as a local payment. This offers huge advantages for financial products which have thus far remained stubbornly uncompetitive, most notably remittances, and financial products for underbanked populations, in both developing and developed economies.

The unconventional structure of digital currencies should not distract us from the huge material benefit they can provide to those who need them most.

Focused on the Players not the Protocol

Where a digital currency is managed by a central issuing body, that body should be the focus of regulation, treated with the same expectations as any body issuing a financial instrument.

Where a digital currency has no central issuing body, such as Bitcoin, direct intervention into the mechanics of the protocol will usually be infeasible. Regulators should instead work with community players to ensure that the currency's infrastructure is being responsibly managed and used. This can be done via a combination of community engagement, consultations, and an open-door policy for users and companies operating within the space. The UK Financial

Conduct Authority's "Innovation Hub", which welcomes informal interaction with Bitcoin companies, may serve as a useful model.

Naturally, for a consensus-based currency some of the regulatory focus should fall on gateway operators, who might be given the regulatory responsibilities of foreign exchange operators, with an expectation of additional due diligence given the different risk profile of digital currencies. However, this should not be a repeat of New York's BitLicense fiasco, where an unworkable regulatory burden pushes the target companies into unregulated jurisdictions.

Unambiguous & Committed

Much of the uncertainty faced by digital currency companies is not the absence of a rulebook, but rather an abundance of possible existing rulebooks and no clarity on which one will ultimately apply.

For many of the big regulatory questions around digital currencies, the easiest way to provide clarity may be to treat them in the same manner as foreign currencies. This means imposing the same obligations for companies holding funds, lending, offering financial advice; the same guidance for accounting standards and tax returns; and the same judicial treatment for financial crime. This would offer the quickest route to extending robust protection to consumers and merchants currently using digital currencies.

Expected Industry Impact

Regardless of adoption levels, digital currencies will exert competitive pressure on incumbents to match their capabilities and efficiencies.

Payments Industry -- Competitive Pressure, Changing Consumer Expectations

Exposure to digital currencies drastically increases consumer expectations about the pricing and speed of international payments. When a Bitcoin user can send money from Melbourne to Manila for less than a cent in under an hour, she might legitimately ask why she can't do the same using more traditional payment channels. The necessary technology is already available, but uncompetitive market conditions in international payments have left consumer offerings slow

and expensive. We expect that competitive pressure from digital currencies will make such offerings more accessible to mainstream markets, be it from new players or from panicked incumbents.

Credit and debit cards work on a principle of "Pull" - merchants are authorised to withdraw money from a customer's account. This involves a huge degree of trust, the merchant effectively holds the keys and passwords to their customers' money. Digital currencies are generally designed around a purely "Push" based mechanism, a payer sends the payment to a specified address and never needs to share their authorisation credentials. "Push" systems are generally more secure than "Pull" systems, and we expect digital currencies to serve as a proof-of-concept and catalyst for a broader market shift from "Pull" to "Push".

Retail Industry -- An Increasingly Global Market

Digital currencies allow retailers, particularly retailers of non-material goods, to sell to a truly global community of consumers. The inverse is true, that Australian retailers will find foreign rival competing with more ease for domestic market share. Again this is particularly true for non-material goods.

In offering quick, frictionless payments, digital currencies will also make it easier for retailers to experiment with new sales models, including, tipping, pay-by-use, and crowdfunding.

Banking -- Improved Financial Inclusion, Market Diversification

Digital currencies are part of a broader trend of unbundling banking services. While Australia has relatively strong rates of financial inclusion, over one fifth of the adult population do not have debit cards,[3] so there is significant room for improvement.

Internationally, Australian financial services institutions will be in a position to provide low-cost banking services to global audiences, a huge opportunity given the growing middle class populations in the developing world. In East Asia & Pacific almost half of adults have no bank account, and in South Asia the numbers of unbanked are higher still. The widespread adoption of smartphones, alongside other innovations, has allowed firms to lower the cost of storing, moving, and lending money in underdeveloped markets. The first generation of these

[3] World Bank Financial Inclusion Database 2011

innovations included mobile wallets and micro-loans,[4] we expect digital currencies and the ecosystems they spawn to be central to the next wave of financial innovation.

As the Australian Financial System Inquiry (FSI) interim report identified,[5] the banking sector in Australia is highly concentrated, and the market is distorted by the perception that certain players are "too-big-to-fail" and thus government backed. A properly nurtured ecosystem of digital currency companies could create a range of credible small-to-medium financial providers, making the sector overall more competitive and resilient.

Australia's Potential as a FinTech Leader

In research conducted for the government of New South Wales, KPMG found that "FinTech", the current wave of technological innovation in finance, is disrupting the traditional financial services landscape and creating new business models.[6] Technology and finance are key sectors for the Australian economy, but they're also ones which by necessity must be integrated with the global economy, and as a result the country must constantly defend them. The Australian market on its own is simply too small to support local champions with no international presence, such players will always be vulnerable to competition from players in much larger Asian markets.

In this global market, the role of digital identity becomes more important than ever. The FSI interim report[7] has already identified that government can play a useful role in building a digital identity platform for general use. Estonia is pursuing an even more ambitious plan, opening up its e-identity platform to residents of any country in the world. This is the kind of proactive leadership that projects a country into the role of a global innovator.

The movement of software company Atlassian's headquarters from Australia to the UK suggests the current national climate is not fulfilling its potential as an operational base for global finance and technology businesses. As the NSW KPMG report found, the UK has been actively targeting Australian FinTech startups to relocate to London, and that's something CoinJar can confirm first-hand.

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[4] The Economist, 15 November 2014

[5] Financial System Inquiry Interim Report, July 2014

[6] "Unlocking the potential: The Fintech opportunity for Sydney", KPMG, October 2014

[7] Financial System Inquiry Interim Report, July 2014

About CoinJar

CoinJar is digital finance startup founded in Melbourne, a successful alumnus of the AngelCube accelerator programme and Sydney-based venture capital firm Blackbird Ventures. The company has 13 full-time employees, healthy operations, and an ambitious product pipeline. Our main offering is a hosted wallet service that allows users to safely acquire, store, and spend the virtual currency Bitcoin. Our long-term goal is to take the efficiencies of Bitcoin, and port them to a multi-currency platform that is as safe, simple, and secure as traditional banking, and our roadmap includes broad integration with existing payments infrastructure.

The current Australian Taxation Office's guidance[8] that Bitcoin gateway companies charge customers GST has rendered us uncompetitive against non-Australian rivals. We look forward to working with Australian policymakers to fix anomalies like this, so that Australian companies like CoinJar can grow and compete in this exciting new industry at the intersection of finance and computing.

[8] "Tax treatment of crypto-currencies in Australia – specifically bitcoin", Australian Tax Office, 20 August 2014

Hyperlinks for References

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