Technical Annex

to the *Economic Note* entitled "How Should Bitcoin Be Regulated?" published by the Montreal Economic Institute on May 29, 2014

Part 1 – Additional Information on the Regulatory Situation in Quebec and Canada

Up until now, the messages conveyed by the authorities regarding Bitcoin, be they central banks or governments, have been primarily concerned with informing investors about, and protecting them from, the volatility of bitcoins.

Among others, the Autorité des marchés financiers (AMF), the Quebec agency that regulates financial markets, made such a cautionary statement. In a press release issued on February 5, 2014 following the opening of the first Bitcoin ATM in Montreal, the AMF cautioned Quebecers to be wary of the risks of fraud and Ponzi schemes related to digital currency. The AMF also pointed out that "transactions involving virtual currency, also known as cryptocurrency, are not covered by the financial services compensation fund or the deposit insurance fund," and that the agency would take action in the event of violations of the *Securities Act*, the *Derivatives Act* or the *Money-Services Businesses Act*.[1]

As mentioned in the *Economic Note*, Revenue Canada became the first Canadian governmental authority to issue an official statement regarding Bitcoin. In a short press release, it declared that it considered bitcoins to be simple goods exchanged under a barter system. This entails an obligation to declare the revenues from such transactions. Any profits or losses related to the purchase and sale of bitcoins must also be considered capital gains or losses, and be declared as such.[2]

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[1] Autorité des marchés financiers, "Alert - Bitcoin virtual currency," News release, February 5, 2014.
[2] Canada Revenue Agency, "What you should know about digital currency," Press release, November 5, 2013.

In an email sent to *The Wall Street Journal*, an employee of the Finance Department reiterated this position, stating that "[o]nly Canadian bank notes and coins are recognized as legal tender in Canada."[3]

A spokesman for the Bank of Canada also stated that the Bank would be increasingly interested in Bitcoin and in other alternative means of payments, for "financial-stability considerations," and he emphasized that payment systems like Bitcoin generally require much less oversight and regulation because they pose much less risk to the Canadian financial system.[4]

Beyond fiscal matters, which are covered by Revenue Canada, the main law that could affect various Bitcoin companies is the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act*.[5] The Financial Transactions and Reports Analysis Centre of Canada (FINTRAC) is Canada's financial intelligence unit, whose mandate is to facilitate the detection, prevention and deterrence of money laundering and the financing of terrorist activities. As was mentioned in the *Economic Note*, in the spring of 2013, FINTRAC informed several Canadian Bitcoin exchanges that they were not considered money services businesses (MSBs),[6] and that they were therefore exempt from money laundering laws.

However, an undated internal FINTRAC document, obtained in February by *The Wall Street Journal*, indicated that the organization had "identified several ways to regulate and mitigate the risk of using bitcoin in Canada." The document described a few of these options, including choking bitcoin's oxygen by denying Canadians access to the foreign-exchange market, by regulating bitcoin exchange houses and "by forcing exchange houses underground, a move that would likely devalue the virtual currency."[7]

Further details about the government's intentions with regard to Bitcoin had to wait until the February 2014 federal budget. In a section of the budget entitled "Strengthening Canada's Anti-

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[3] David George-Cosh, "Canada Says Bitcoin Isn't Legal Tender," *Wall Street Journal* blog (Canada Real Time), January 16, 2014.
[4] *Ibid*.
[5] Matthew Burgoyne, "All you need to know about federal bitcoin law in Canada," *Coindesk*, October 23, 2013.
[6] Jasper Hamill, "Canadian Regulators Welcome US Bitcoin Refugees with Open Arms," *The Register,* May 20, 2013.
[7] David George-Cosh, "Canada Regulators Look at Ways to Get a Better Handle on Bitcoin," *Wall Street Journal* blog (Canada Real Time), February 11, 2014.

Money Laundering and Anti-Terrorist Financing Regime," the government affirmed its intention to introduce legislative amendments:

> Canada's regime remains strong and effective and is consistent with international standards. However, it is important to continually improve Canada's regime to address emerging risks, including virtual currencies, such as Bitcoin, that threaten Canada's international leadership in the fight against money laundering and terrorist financing.[8]

With this goal in mind, the Standing Senate Committee on Banking, Trade and Commerce undertook a five-year review of the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act*. The government then plans to introduce legislative amendments and regulations to strengthen the regime and, again according to the 2014 Budget, to "improve Canada's compliance with international standards, while minimizing the compliance burden."[9]

To this end, Bill C-31, which is an Act to implement certain provisions of the latest budget, was introduced on March 28, 2014. It included amendments to the *Proceeds of Crime (Money Laundering) and Terrorist Financing Act*, which make virtual currencies subject to the law. The effect of this will be to require certain companies that use virtual currencies to adhere to the same requirements as other money services businesses in terms of accounting, client identity verification and reports to be sent to FINTRAC in the case of suspicious transactions.[10]

The Standing Senate Committee on Banking, Trade and Commerce also launched a study on digital currency at the end of the month of March. As a part of this study, the Committee examined the use of digital currency. In his opening remarks, Senator Irving Gerstein said:

> *Today the committee is holding its inaugural meeting on the use of digital currency, including the potential risks, threats and advantages of these electronic forms of exchange.*

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[8] Government of Canada, *2014 Federal Budget*, February 11, 2014, p. 133.
[9] *Ibid*., p. 134.
[10] Bill C-31, House of Commons of Canada, March 28, 2014, article 256 (2).

> *Digital currency is clearly a timely and relevant topic. Hardly a day goes by that there is not a reference of some kind in the news. The goal of this first stage of hearings is to better understand the subject matter before the committee.*
> *As I mentioned yesterday in the Senate, no government to date has defined what digital currency actually is, and this lack of definition has led to much confusion on how to deal with it.*
> *I think that United States Senator Thomas R. Carper, Chairman of the Senate Committee on Homeland Security, put it best when he said: "Virtual currencies, perhaps notably bitcoin, have captured the imagination of some, struck fear among others and confused the heck out of many of us."*
> *Understandably, digital currency is attracting a lot of attention from regulators, law enforcement, and investors and entrepreneurs.*[11]

Finally, note that in Canada, Bitcoin companies also need to comply with provincial consumer protection laws. Like all businesses, they have to respect the various laws that govern their dealings with the public.

So far, Canada has been considered a welcoming place for Bitcoin companies. This has allowed many companies to get off the ground, to grow and to create jobs by concentrating their efforts on researching innovative products rather than ensuring their compliance with excessive regulations. The recent developments announced in the most recent federal budget have raised questions about the nature of the regulatory response that Canada is preparing to formulate regarding Bitcoin and other digital currencies.

Part 2 – Two Governments That Are Less Welcoming to Bitcoin: China and Russia

CHINA

[11] Senator Irving Gerstein, President, opening remarks at the Standing Senate Committee on Banking, Trade and Commerce's inaugural meeting on the use of digital currency, March 26, 2014.

China's banks and financial institutions are not allowed to deal in bitcoins. They cannot offer bitcoin services to their clients, nor can they buy or sell bitcoins. In December 2013, China's central bank, along with four governmental departments and commissions, issued a Notice about the risks of Bitcoin. It stated that Bitcoin—defined as a "virtual commodity"—was by nature not a currency, and that bitcoins should not be circulated and used in the market as a currency. The Notice also stated that Bitcoin entailed risks in terms of money laundering, and proposed increased oversight of websites providing Bitcoin services or information.[12] The authorities added that individuals were free to buy and sell bitcoins at their own risk.

In March 2014, there were rumours going around that China's central bank was getting ready to apply the measures mentioned in its December 2013 statement by ordering banks to close the bank accounts of bitcoin exchanges, and by punishing offending banks if need be.[13]

RUSSIA

Although there is no specific regulation of Bitcoin in Russia, the law stipulates that the ruble is the country's exclusive method of payment and that it is forbidden to introduce any other monetary unit into the market. According to Russian law firm Tolkachev and Partners, the law requires that all prices for financial transactions in the country be defined in rubles.[14] If Bitcoin is considered by certain parties to be a foreign currency (or substitute) for the purposes of a particular transaction, such a transaction could be recognized as illegal and prosecuted under Russian law. The Russian context is increasingly worrisome with regard to the role of electronic payment systems in money laundering. As explained by the general prosecutor's office, Russia's most powerful legal entity, "Anonymous payment systems and cryptocurrencies that have gained considerable circulation, including the most famous of them, Bitcoin, are money substitutes and cannot be used by individuals and legal persons."[15] The regulatory authorities' next actions could seriously impede the development of Bitcoin in Russia.

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[12] Global Legal Research Center, *Regulation of Bitcoin in Selected Jurisdictions,* The Law Library of Congress, January 2014, p. 6.
[13] Simon Rabinovitch, "Bitcoin set for fresh Chinese regulatory attack," *Financial Times*, April 2, 2014.
[14] Global Legal Research Center, *op. cit*., note 12, p. 19.
15 Kathrin Hille and Stephen Foley, "Russia prepares crackdown on Bitcoin," *Financial Times*, February 9, 2014.

Part 3 – Bitcoin and the Banks

Bitcoin being a digital currency, it is understandable that it would attract the attention of banks and of the financial industry.

The *Economic Note* mentions that the first partnership between a bank and a Bitcoin exchange took place in Germany. In July 2013, Bitcoin Deutschland GmbH, the company that manages the exchange platform Bitcoin.de, entered into a partnership with Fidor, a bank, in order to provide banking services to Bitcoin.de clients. These services are subject to the regulations in effect in the German financial market, including regulations dealing with money laundering.[16]

In October 2013, another exchange, Kraken, in turn established a partnership with Fidor in order for the bank to provide traditional banking services to Kraken's European clients.[17]

In Canada, the banks have not been very forthcoming about Bitcoin. In April 2014, however, the chief executive of the Bank of Montreal, Bill Downe, did tell the *Financial Post* that he would be open to his institution accepting bitcoin transactions one day. Mr. Downe specified that if Bitcoin were reliable and well-regulated, "then there's no reason why we couldn't be an intermediary in bitcoin-related transactions. Because if you wanted a Swiss franc transaction or a Japanese yen transaction or a U.S. dollar transaction, we can do that transaction for you. If bitcoin [can be] a reliable medium of exchange, then at that point in the future, we would be able to [conduct business] with bitcoin."[18]

A few months ago in the United States, Wells Fargo became the first large bank to show an interest in Bitcoin by organizing a meeting that included government representatives. The invitation to the event stipulated that:

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[16] "Bitcoin.de and Fidor Bank AG Agree on Large-Scale Partnership," Press release, July 11, 2013.
[17] Andrew Saks McLeod, "The Legitimization of Bitcoin: Kraken Partners with BaFin Regulated Fidor Bank," *Forex Magnates*, October 9, 2013.
[18] John Greenwood, "BMO open to Bitcoin if virtual currency is regulated, reliable, says CEO Bill Downe," *Financial Post*, April 1, 2014.

> Our panel of experts will weigh in on market trends, investment opportunities, compliance imperatives, and interoperability with traditional fiat currencies. What industries will be disrupted? Which will be enhanced? Particular attention will be given to regulatory compliance, risk management, and policy frameworks.[19]

Several banks have nonetheless published analyses and research papers on Bitcoin. In February 2014, JP Morgan published a report entitled "The audacity of bitcoin." It highlighted among other things that in terms of a medium of exchange, a unit of account and a store of value, bitcoin was far inferior to fiat money. The authors nonetheless pointed out that Bitcoin's greatest appeal is the inexpensiveness of fund transfers:

> As complicated as this process is, it begins to address several acknowledged deficiencies of fiat currencies. It provides steady, predictable growth in the money supply. It eliminates the risk of capital controls because the network lacks a central authority. It provides verification of fund balances to avoid fraud. And it eliminates or at least significantly reduces transaction costs for payments [...] One doesn't need to be the caricatured miscreant, Austrian economist or anarchist to appreciate the appeal of such a system.[20]

Bank of America analyst David Woo, for his part, published a note to clients of the bank that expressed a more positive view of Bitcoin. Among other things, it stated that this digital currency has "clear potential for growth," that the maximum value of a bitcoin could reach US$1,300 and that Bitcoin could become a serious competitor to traditional money transfer providers.[21]

Finally, in Quebec, Desjardins published an economic study on Bitcoin in November 2013 entitled "The limits of currencies like Bitcoin" in which the author concluded that electronic currencies like bitcoin have their limits, and their risks. Contrary to traditional currencies, these "cryptocurrencies" based purely on speculation are not controlled by governments or central

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[19] Wells Fargo event invitation.

[20] John Normand, "The audacity of bitcoin: Risks and opportunities for corporates and investors," J.P. Morgan Global FX Strategy, February 11, 2014, p. 4.

[21] Sam Ro, "BOOM: A Major Wall Street Bank Just Initiated Coverage on Bitcoin and Identified a Fair Value," *Business Insider*, December 5, 2013.

banks, stipulated the note, adding that the absence of a regulatory framework and of regulatory mechanisms is very problematic:

> Anonymity and the absence of rules provide fertile ground for illegal activity. The Silk Road website, which the Federal Bureau of Investigation (FBI) shut down last October for illicit trade, accepted payment in bitcoins exclusively. Other similar websites are flourishing online, and because of the benefits cryptocurrencies offer, they are the ideal complement to the service offer.
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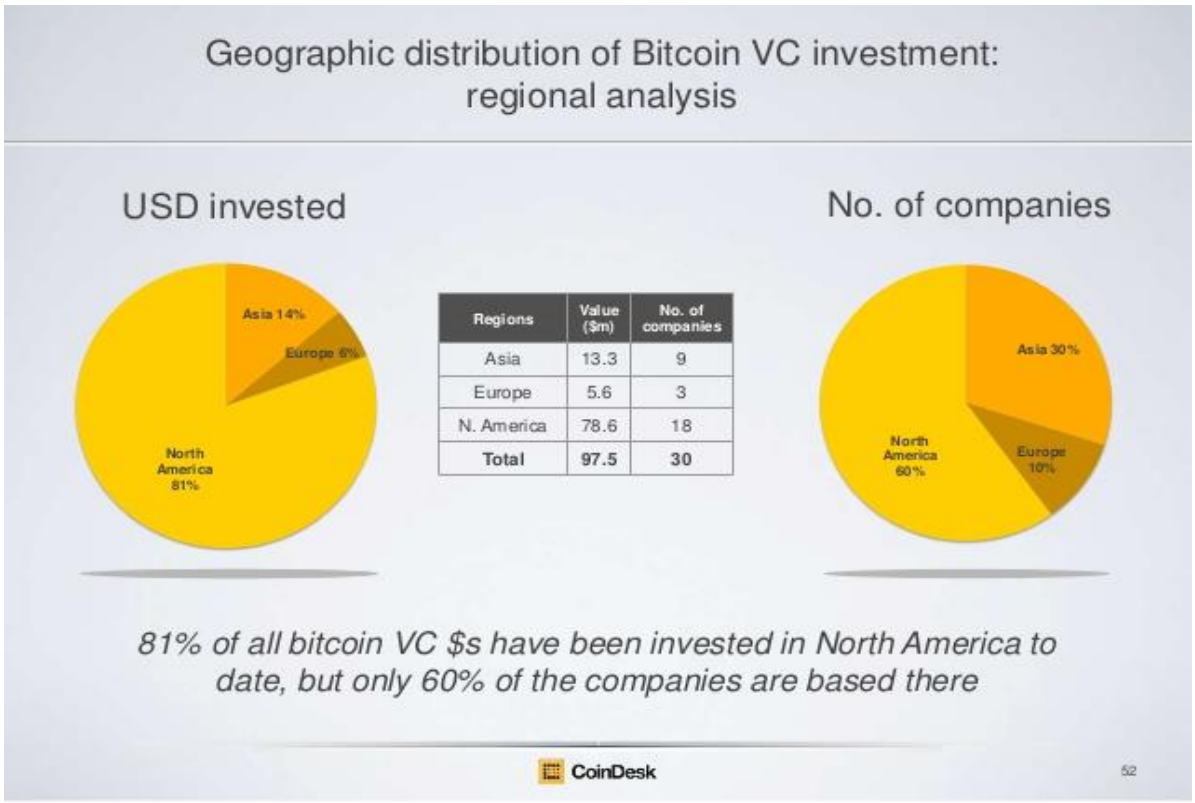
> Another less honourable characteristic of these currencies is their veneer as a potential Ponzi scheme. The way cryptocurrencies are created seems to give the first movers the edge. This might explain why so many people are trying to kick-start these types of currencies.[22]

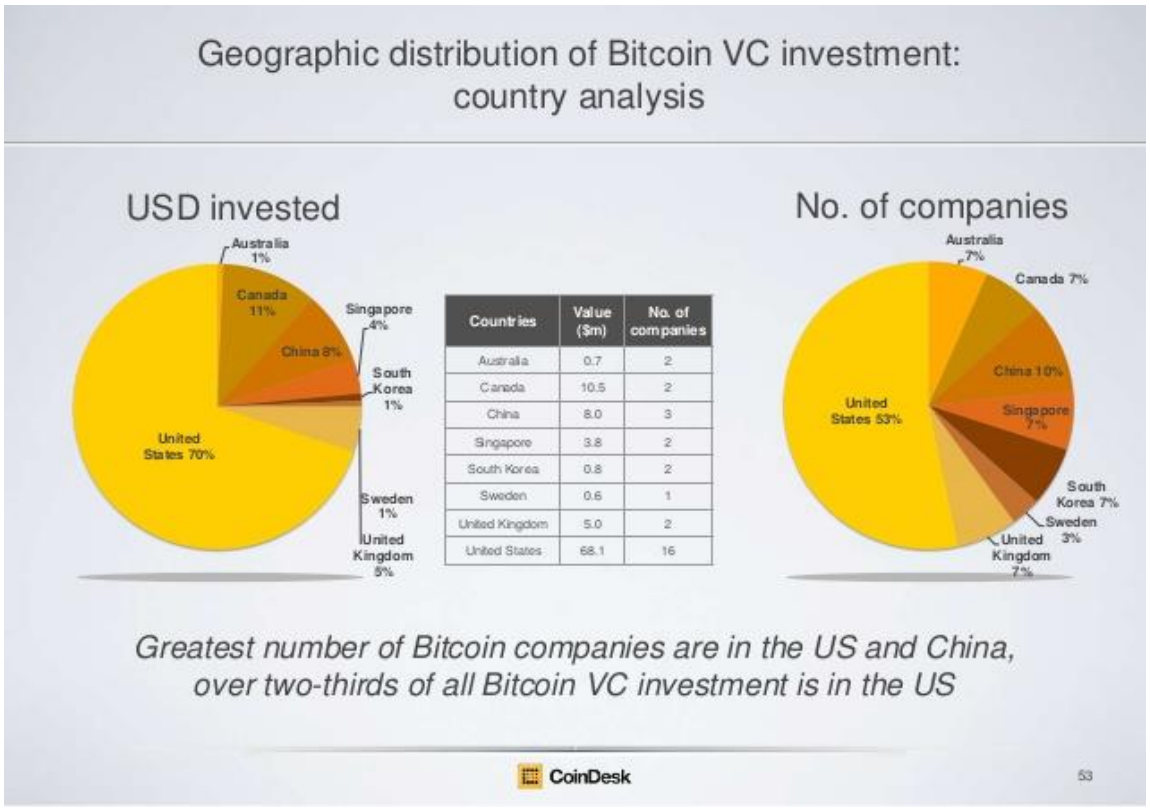
[22] Hendrix Vachon, "The limits of currencies like Bitcoin," Economic Studies, Desjardins Group, November 21, 2013, p. 4.

Part 4 - Bitcoin and Venture Capital



Regions	Value ($m)	No. of companies
Asia	13.3	9
Europe	5.6	3
N. America	78.6	18
Total	**97.5**	**30**

Source: Coindesk, *State of Bitcoin 2014*, February 2014, p. 52.



Countries	Value ($m)	No. of companies
Australia	0.7	2
Canada	10.5	2
China	8.0	3
Singapore	3.8	2
South Korea	0.8	2
Sweden	0.6	1
United Kingdom	5.0	2
United States	68.1	16

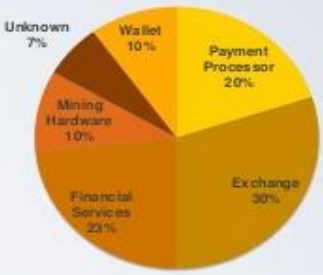
Source: Coindesk, *State of Bitcoin 2014*, February 2014, p. 53.

Sector distribution of Bitcoin VC investment

USD invested

Sector	Value ($m)	No. of companies	Avg./ company ($m)
Payment Processor	36.7	6	3.62
Exchange	14.0	9	4.9
Financial Services	22.5	7	3.9
Mining Hardware	13.1	3	0.4
Unknown	10.0	2	0.3
Wallet	1.3	3	0.8
Total	**88.5**	**30**	**3.25**

No. of companies



- *38% of all VC investment is in payment processors*
- *Mining hardware has only received 13% investment even though there is over $200m in mining hardware revenue to date*

CoinDesk

55

Source: Coindesk, *State of Bitcoin 2014*, February 2014, p. 55.