



OCTONOMICS

# CONSULTATION PAPER 21-402 COMMENTS

## Framework for Crypto-Asset Trading Platforms jointly proposed by CSA & IIROC

Presented to

British Columbia Securities Commission  
Alberta Securities Commission  
Financial and Consumer Affairs Authority of Saskatchewan  
Manitoba Securities Commission  
Ontario Securities Commission  
Autorité des marchés financiers  
Financial and Consumer Services Commission (New Brunswick)  
Superintendent of Securities, Department of Justice and Public Safety, Prince Edward Island  
Nova Scotia Securities Commission  
Securities Commission of Newfoundland and Labrador  
Superintendent of Securities, Northwest Territories  
Superintendent of Securities, Yukon  
Superintendent of Securities, Nunavut

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## Individual citizen initiative

This text is not about defending a commercial interest. This text is about philosophy, ethics and fundamental beliefs. It is also about preventing a disadvantageous position for all Canadians in terms of property rights, liberty and free speech.

## Funding

This document received no funding. It is an individual contribution from Octonomics' founder, Elisabeth Préfontaine. The author is not bound to providing more work beyond the submission of this paper. Tips and donations are welcomed and can be expressed in BTC. Thank you in advance as your identity or location will not be known.



## About the author

In over 25 years of work experience, Elisabeth has witnessed a broad spectrum of transformations in financial technologies. In fact, she is one of the few who can claim to have both traded a physical coupon bond in a bank branch and also bitcoins.

She witnessed the birth of online banking while employees of financial institutions were still using an intranet and she also took part in Bank of Montreal's attempt at creating the world's first virtual bank in the late 1990's. Early 2000, she migrated towards capital markets where spent five years on the sell-side of a swap and of a bond trading desk. Then in the mid 2000's, and for over ten years, she actively contributed to foster the market's understanding of ETFs as a technological platform transformation for investment funds. She is the former Head of Wealth Sales for BlackRock in Canada.

Her academic profile includes the CFA and the CAIA designations and also both a Bachelor's degree and an MBA from *Université du Québec à Montréal*.

## Disclosure

The author discloses a diversified portfolio composed of traditional assets, alternatives and bitcoin.

## Language

Even though the initiative originated from Quebec, this paper is presented in English. This is to ensure it is understood by rest of Canada without having to increase production costs. With funding, an official French translation could be produced under Octonomics' sole approval or supervision.

## Caution

Bitcoin is a technological experiment with a successful ten-year track record. As in any journey, it should be understood that there is no guarantee of success. But ignoring may be just as hazardous.

Bitcoin is a trailblazer.



## Introductory Remarks

On March 14 2019, the Canadian Securities Administrators (CSA) and the Investment Industry Regulatory Organization of Canada (IIROC) have jointly proposed a framework for crypto-assets trading platforms called Consultation paper 21-402<sup>1</sup> and are seeking feedback from the financial technology community, market participants, investors and other stakeholders.

This is the context under which Octonomics, an independent research firm, is submitting this paper. Octonomics' comments cover Bitcoin specifically and not the plethora of so called crypto-assets. Should securities regulators find elements brought forward in this document applicable to other crypto-assets, a clear stance and definition would be welcomed.

As it stands, the Canadian securities regulators (IIROC and CSA) do not distinguish between the various types of crypto-assets and they bundle 2000+ different "things" into one big category and 200+ platforms as one big type. This lack of nuance is problematic as it paints an entire industry with the same brush, it stigmatizes entrepreneurs, complexify banking relationships and may mislead the public. Canadian securities regulators must state, in plain English, what they are after and what they consider to be a security in the crypto-asset realm. This seems like a logical first step before attempting any regulatory initiative.

However, when it comes to Bitcoin, the securities regulators are outside the scope of their jurisdiction and the first section of this paper aims at making that demonstration. This paper will also highlight a way for securities regulators to influence the development of Bitcoin-platforms without stepping outside of their jurisdiction. Parallels with gold and real estate will be used to demonstrate that securities regulators did not have to regulate gold or real estate trading platforms to allow their inclusion in investment funds structure. Gold and real estate are not securities. Yet, they were included in regulated financial products.

Bad actors such as exposed by the recent QuadrigaCX debacle are harmful to the entire industry. However, cases of frauds, incompetence, data breaches and critical errors are not solved by additional layers of regulation. If it was the case, if regulators had such mighty powers, software viruses, phishing attack, credit card frauds and personal ID theft would no longer exist.

The point is, technological solutions, good education on the subject and skin in the game are the best mechanisms to combat bad actors because participants have a vested interest in preventing what could be detrimental to the emerging Bitcoin industry. Hackers are not stopped by regulation. They are surely not desirable, but they nevertheless play a crucial role; they poke holes at weaknesses. They identify vulnerabilities more effectively than the most zealous regulators could.

Protection of the public and security/safety progress don't happen because meetings, discussions and consultation papers are produced about how things should be. Things are. Technology is not the enemy. Lack of skin-in-the-game is.

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<sup>1</sup> [https://www.osc.gov.on.ca/en/SecuritiesLaw\\_csa\\_20190314\\_21-402\\_crypto-asset-trading-platforms.htm](https://www.osc.gov.on.ca/en/SecuritiesLaw_csa_20190314_21-402_crypto-asset-trading-platforms.htm) (04/08/2019)



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# 1. Bitcoin is not a security

Bitcoin is a broad topic and links together many disciplines such as cryptography, game theory, monetary theory, monetary history, economics, computer science, network dynamics, thermodynamics and information theory. The present section shall be understood as a demonstration that Bitcoin, Bitcoin-related dealings, trading, and applications unequivocally sit outside the scope of the securities or derivatives legislation. This demonstration should make the case as to why the proposed framework for crypto-assets trading platform by the Consultation paper 21-402 does not apply to Bitcoin.

## 1.1 Bitcoin never was a security

Here is a brief but straightforward explanation as to why Bitcoin was not a security from the start.

### Monetary capital

- No monetary capital was raised to develop Bitcoin.
- There was never a bitcoin Initial Coin Offering (ICO).
- There was no investment of capital from a founder.
- There was no premine (i.e. founders keeping a portion of the tokens for themselves).
- There is no bounty program, or free tokens offered to “promoters”.
- No capital was spent to promote its launch.
- Growth was entirely organic.
- Bitcoin was born out of an 8-page idea.<sup>2</sup>
- The early-stage was sustained by volunteers.
- Bitcoin is not debt; Bitcoin is not equity. Bitcoin is Bitcoin.

### Value

- Bitcoin is a bearer instrument. It solves for the double spending problem in the digital world.
- Bitcoin is functional since its inception and has an up time of 99.9837111434%<sup>3</sup> since then.
- Bitcoin has no financial statements.
- Bitcoin doesn't share security-like attributes such as a profit-sharing interest.
- The currency bitcoin has unique characteristics where individuals can express personal preference (see section 1.3)
- The market has spontaneously attributed value to it.
- The price is market driven. The value of one bitcoin is one bitcoin
- The network effect of Bitcoin has value: its community, its users, its developers.
- The proof-of-work has value. It is an expensive monument of immutability.
- The stability at the base layer has value.
- The transparency and predictability of Bitcoin's monetary policy has value.
- The self-regulating mechanism embedded in bitcoin has value.
- Bitcoin is its own and we are still early in the discovery of its full potential.

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<sup>2</sup> <https://bitcoin.org/bitcoin.pdf> (04/15/2019)

<sup>3</sup> <http://bitcoинуptime.com/> (05/12/19 at 12H14 EST)



## Decentralization

- Bitcoin is not a common enterprise. It is a network.
- Bitcoin is a decentralized system recording sequence of transactions with 80,000+ nodes<sup>4</sup>
- Bitcoin is not a company. There is no authority in charge, no management team, no CEO, no head office, no sales team, no tech support line.
- It is not centrally planned in an effort to deliver an eventual product. Bitcoin exists.
- No one person (or entity) controls the network or the protocol or can change the rules.
- No2X<sup>5</sup> is a specific event that proved, in real life, bitcoin's decentralization and uniqueness versus other centralized cryptocurrencies.

## Unique phenomenon

- A replica or a bitcoin 2.0 / 3.0 / 4.0 would inevitably be centrally planned.
- That central planning would most likely involve, securities-like characteristics.
- Now that the path to creation is known a 51% attack could be successful in the early days.

This section aimed to demonstrate that Bitcoin is not and never was a security. It is very possibly a one-time phenomenon and draws a line between bitcoin and the rest of so-called crypto-currencies.

We ended up with 2,000+ crypto-currencies because of the Blockchain bubble. A very sticky narrative has developed around the *"technology underpinning bitcoin"*, as if it could be considered in isolation. The market<sup>6</sup> created the name 'blockchain' which led to marketing narratives and fund-raising pitch decks being created. Much like the "snake-oil" claims of previous centuries, this new technology would solve almost any problem in the world (from lettuce tracking to identity management). This spurred the rise of blockchain projects raising capital through ICOs (initial coin offerings) in a tulip-bulb like mania.

We ended-up with 2000+ so-called crypto-currencies because very few took the time to first understand what, how and why bitcoin is. If organized true data without a central authority is not needed, then a decentralized and open architecture are not needed. This would have helped contrast the Bitcoin's network and infrastructure with Initial Coin Offerings (ICOs) which are an essentially a global venture-capital crowd funding mechanism.

Could there be networks that initially started as an ICO and now are too far advanced and can no longer be considered a security? Perhaps. This will be a definition question that securities regulators will need to answer. But Bitcoin did not start as an ICO.

Understanding the uniqueness of Bitcoin's conception and how it gave life to a digitally native scarce asset is the most direct way to comprehend what makes it different from a security-like vehicle.

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<sup>4</sup> <https://luke.dashjr.org/programs/bitcoin/files/charts/software.html> (05/13/2019)

<sup>5</sup> <https://www.forbes.com/sites/ktorpey/2019/04/23/this-key-part-of-bitcoins-history-is-what-separates-it-from-competitors/#f864ce8ae5ec> (04/25/2019)

<sup>6</sup> The term blockchain was not utilized in bitcoin's white paper. The paper rather refers to a chain of blocks.



## 1.2 What is Bitcoin? Bitcoin is text.

Bitcoin is surely different from anything we have seen before. Some argue that Bitcoin is a form of money, others argue it is a commodity and some simply don't see anything in Bitcoin. However, this does not matter. What matters is that Bitcoin exists and its network and protocol do exactly what they are meant to do, since over ten years. Bitcoin is text, information, speech. It communicates.

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"Bitcoin is a distributed ledger system, maintained by a network of peers that monitors and regulates which entries are allocated to what Bitcoin addresses. This is done entirely by transmitting *messages* that are *text*, between the computers in the network (known as "nodes"), where cryptographic procedures are executed on these *messages* in *text* to verify their authenticity and the identity of the sender and recipient of the *message* and their position in the public ledger.

The *messages* sent between nodes in the Bitcoin network are human readable, and printable. There is no point in any Bitcoin transaction that Bitcoin ceases to be *text*.

*It is all text, all the time.*

"The purpose of Bitcoin is to absolutely verify the ability of the owner a cryptographic key (*which is a block of text*) that can unlock a ledger entry in the global Bitcoin network"<sup>7</sup>

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There are deep implications to understanding Bitcoin in such a way as it has ramifications to the fundamental freedoms 2(b) of the Canadian Charter of Rights and Freedoms<sup>8</sup>.

FUNDAMENTAL FREEDOMS

Fundamental freedoms

**2.** Everyone has the following fundamental freedoms:

- (a) freedom of conscience and religion;
- (b) freedom of thought, belief, opinion and expression, including freedom of the press and other media of communication;
- (c) freedom of peaceful assembly; and
- (d) freedom of association.

Is IIROC, the national **self-regulatory** organization overseeing all investment dealers and trading activity on **debt and equity** marketplaces in Canada, and the CSA, aiming to challenge the Constitutional act of 1982 by trying to legislate software developments, text and messaging systems?

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<sup>7</sup> <https://hackernoon.com/why-america-cant-regulate-bitcoin-8c77cee8d794> (04/15/2019)

<sup>8</sup> <https://laws-lois.justice.gc.ca/eng/Const/page-15.html> (04/15/2019)



## 1.3 The general understanding of bitcoin is “digital gold”

The perception of value varies from one individual to the other. Individuals will purchase comic books, preserve them in their original sleeves without ever reading them. Others will purchase figurines, keep them in their original boxes and never play with them. Others will collect vintage cars knowing very well they can only drive one at a time. Other examples include, watches, antique furniture, precious stones, paintings, sculptures, fine jewelry and wine.

The point here is their value is not tied to their use, but rather attached to the perceived value in the eyes of the owner. Gold has a valuation significantly above its industrial or ornamental usage. In today's world, it is unlikely anyone buys a pair of shoes with gold. As such, bitcoin doesn't need to be money (in the transactional definition of the term), but it can be valuable. What these examples have in common is scarcity. Some individuals will own them to store value, to brag, to seduce a mating partner or to speculate on the future price appreciation. Generally speaking, individuals will self-custody them.

I do not have the pretention to define something as complex and broad as bitcoin nor to define its full potential, for one reason: it is the free market that dictates what Bitcoin is. I invite the curious reader to consider these selected texts<sup>9 10 11 12 13</sup> to realize the depth and uniqueness of the topic. For the first time in the history of mankind, a scarce digital asset exists. Bitcoin is not debt or equity; Bitcoin's infrastructure permits the first digitally native bearer instrument without a central authority. Bitcoin is its own.

The monetary policy of the Bitcoin protocol is crystal clear. Its predictability, its limited supply and its stability at the base layer are valuable attributes. Accordingly, bitcoin is often referred to as “digital gold”<sup>14 15 16 17 18 19 20</sup>. Therefore, bitcoin can be viewed as a limited-supply consumer goods. It can be argued that bitcoin is;

- rarer than gold since technological innovation cannot increase its actual supply or the speed of production.
- more portable than gold as it can be used over the Internet, ham radio, satellite or paper.
- useful in a way that gold can't be, as bitcoin can be programmed.

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<sup>9</sup> [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2275730](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2275730) (04/12/19)

<sup>10</sup> <https://blockstream.com/satellite/> (04/12/19)

<sup>11</sup> <https://grisha.org/blog/2018/01/23/explaining-proof-of-work/> (04/12/19)

<sup>12</sup> <https://medium.com/@BrandonQuittem/bitcoin-is-a-decentralized-organism-mycelium-part-1-3-6ec58cdcfaa6> (04/12/19)

<sup>13</sup> The Bitcoin Standard by Saifedean Ammous (04/12/19)

<sup>14</sup> <https://finance.yahoo.com/news/in-quest-for-digital-gold-161310664.html> (04/12/19)

<sup>15</sup> <https://www.youtube.com/watch?v=zveT0W-JCa8> (04/12/19)

<sup>16</sup> <https://dailyhodl.com/2019/04/04/messari-ceo-says-bitcoin-is-digital-gold-30-trillion-wealth-transfer-heading-to-btc/> (04/12/19)

<sup>17</sup> <https://cointelegraph.com/news/british-financial-historian-niall-ferguson-says-bitcoin-is-an-option-on-digital-gold> (04/12/19)

<sup>18</sup> <https://www.adamantcapitalfund.com/bitcoin-digital-gold-or-digital-cash/> (04/12/19)

<sup>19</sup> <https://bitcoinexchange.com/block-one-ceo-brendan-blumer-says-bitcoin-is-the-best-store-of-value-a-real-gold-replacement/> (04/12/19)

<sup>20</sup> <https://www.forbes.com/sites/investor/2019/04/16/bitcoin-is-the-new-gold/#4168b883239a> (04/12/19)





The curious reader will probably enjoy the following text: *Shelling Out: The origins of Money, Nick Szabo*<sup>21</sup>. A special consideration must be paid to the concept of unforgeable costliness in the context of the energy consumption as it anchors Bitcoin in the physical world. Proof-of-work (energy consumption), the difficulty adjustment and the monetary policy are important concepts to understand in order to draw parallels and grasp the comparison with digital gold and to unbundle bitcoin from other crypto-assets.

Some won't see any value and won't buy bitcoin. This is simply how a market operates (i.e. where conflicting views meet). It is by the same market mechanism that someone did not invest in Amazon +/- 20 years ago when it was trading in the low double digits. Some saw value beyond a simple online book store, some disagreed, some have been rewarded, some have not.

Bitcoin is neither a debt or an equity instruments and from the start never fit the definition of a security. It can rather be viewed as a consumer goods or a commodity and its dealing, trading and marketplace activities sit outside IROC and CSA's legislative scope.

## 1.4 How is the U.S. SEC and the U.S. CFTC treating bitcoin?

The U.S. Securities and Exchange Commission (SEC) has stated that Bitcoin is not a security. Here is a video interview<sup>22</sup> dated June 6<sup>th</sup> 2018, where the Chairman of the SEC, Jay Clayton is crystal clear:

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*"...Cryptocurrencies, these are replacements for sovereign currency, replace the Dollar, the Yen, the Euro with Bitcoin. That type of currency is not a security. Let me turn to what is a security (...)"*

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The U.S. Commodity Futures Trading Commission (CFTC) has also already stated that:

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*"Yes, virtual currencies, such as Bitcoin, have been determined to be commodities under the Commodity Exchange Act (CEA)<sup>23</sup>"*

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Why is it that a year later, Canadian securities regulators are still not clearly expressing themselves on the matter? Vague language such as "may represent" is used in their communication. The aim is still unclear and may lead to believe that *all* crypto-assets are targeted by the security's regulatory regime? If Canadian securities regulators were misunderstood, and if Bitcoin's ecosystem is not concerned by 21-402, a clear stance would be welcomed.

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<sup>21</sup> <https://nakamotoinstitute.org/shelling-out/> (04/18/2019)

<sup>22</sup> <https://www.cnbc.com/video/2018/06/06/sec-chairman-cryptocurrencies-like-bitcoin--not-securities.html> (04/12/19)

<sup>23</sup> [https://www.cftc.gov/sites/default/files/idc/groups/public/%40customerprotection/documents/file/oceo\\_bitcoinbasics0218.pdf](https://www.cftc.gov/sites/default/files/idc/groups/public/%40customerprotection/documents/file/oceo_bitcoinbasics0218.pdf) (04/18/19)



## 2. The commerce of (non-securities) valuables

In this section, we will explore the commerce of gold in Canada and will use this example to demonstrate that as long as gold is held outside of an investment structure (such as an ETF or a closed ended investment trust), it sits outside the securities legislation. Different cases involving buy and sell transaction, custodial-relationship and collateralized loans will be presented.

### 2.1 Individuals buying/selling/storing physical gold

#### Key Messages

- Individuals are free to own, collect, and speculate on collectibles/store of value.
- Securities regulators do not oversee the dealers or trading activities of such items.
- Asset custody by a third party doesn't change the nature of an asset into an investment contract or a derivative.

In this section, we will address Part 3 of the consultation paper called "Risks related to Platforms". To accomplish this, we will use the example of Kitco Metals Inc.

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*"Kitco Metals Inc. is also one of the world's premier **retailers** of precious metals and a leading supplier of refining services, labware for mineral analysis and precision-crafted devices for high-technology manufacturing processes. From our offices in Montreal, New York (Subsidiary) and Hong Kong, we **buy and sell a wide range of precious metal products** in gold, silver, platinum, palladium and rhodium. We also provide metals **for custodial storage programs to individual customers and corporations** the world over."*<sup>24</sup>

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Replacing precious metals with bitcoin will allow to compare very similar business models.

- Kitco is a FINTRAC<sup>25</sup> reporting entity.
- Kitco is not subject to securities regulation.
- Kitco is subject to code of law and was held accountable by authorities in this unflattering case<sup>26</sup>.
  
- Kitco offers transactional-only services (non-custodial).
- Kitco offers custodial services (allocated storage).
  
- Kitco is not concerned with suitability of the investment in precious metals.
- Kitco does not have an education obligation about the metals, but does so voluntarily.
- Kitco presents buy or sell prices and the client is free to trade or not at these levels.
- Smaller gold coins trade at a premium versus the bullions. Price and premium can vary between retailers.

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<sup>24</sup> <http://corp.kitco.com/en/index.html> (04/12/19)

<sup>25</sup> <https://www.canada.ca/en/financial-transactions-reports-analysis.html> (05/05/19)

<sup>26</sup> <https://www.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/quebec-names-kitco-metals-among-companies-in-alleged-tax-fraud/article15821055/> (05/10/19)



## **Non-custodial relationship (transactional)**

Bob goes to Kitco and exchanges CAD \$1,000 for X amount of gold coins. There is no custodial relationship. Bob gives CAD\$ and received gold coins in exchange from Kitco. He leaves the store with his newly purchased gold coins and self-custodies according to the method of his choosing.

This is similar to a non-custodial bitcoin exchange.

## **Custodial relationship**

Alice goes to Kitco and exchanges CAD \$100,000 for X amount of gold bullions and coins. For reasons of her own, Alice does not wish to custody the gold herself. She considered renting a safety deposit box at a bank but does not like the fact that the bank is not liable for loss or damage occasioned by fire, theft or any other cause. Instead, Alice is considering Kitco's allocated storage program where precious metals bullions can be stored on a segregated and allocated basis. Before entering this custodial relationship, Alice consults the website<sup>27</sup> and obtains information about key aspects, such as safeguards, process, policies and procedures, insurance, independent audit and the FAQs regarding the custody of the assets.

To my knowledge, this disclosure of information is not required by a regulatory body. It is rather a market-driven business decision where clearly articulating the safety of the value proposition will set the transparent business apart from a competitor that would not. It seems logical to think that market competitive forces will favor the more credible, transparent and professional businesses.

In Alice's example, the act of dealing with a custodian did not transform her gold into an investment contract or a derivative. This is similar to custodial bitcoin exchanges, where both transactional and custodial services are offered.

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<sup>27</sup> <https://online.kitco.com/faq/kitco-allocated-storage#faq-What-is-the-Kitco-Allocated-Storage-program?>  
(04/14/19)



## 2.2 Investment funds buying / selling / storing physical gold

### Key messages

- Securities regulators oversees securities that invest in gold or real estate.
- Previous regulators have faced similar concerns and have created a time-tested path.
- Securities regulators did not have to regulate the market places or the trading of real estate or gold to allow their inclusion in investment trusts.
- Regulators must not single out some assets with more stringent rules.

### 2.2.1 ETF investing in Gold (American example)

Except for certain aspects that we will cover later, gold ETFs have already paved part of the way for a bitcoin ETF. An examination of the prospectus<sup>28</sup> State Street's exchange traded funds (ETF) GLD will be helpful because it has considerations pertaining to trading, custody, price determination, valuation, conflict of interest, and the various risks associated with the funds.

GLD was launched in 2004 with \$115 million USD in assets. As of April 15<sup>th</sup> 2019, the funds asset under management is over \$31 billion USD (the trust claims to own 757,85 tonnes of gold). The funds description provided below explains clearly what barriers it is trying to lower with its offering. A Bitcoin ETFs would want to lower the exact same barriers.

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"SPDR Gold Shares represent **fractional, undivided beneficial ownership** interests in the Trust, the **sole assets of which are gold bullion**, and, from time to time, cash. SPDR Gold Shares are intended to **lower a large number of the barriers preventing investors** from using gold as an **asset allocation and trading tool**. These barriers have included the **logistics of buying, storing and insuring gold**. In addition, **certain pension funds and mutual funds do not or cannot hold physical commodities, such as gold**, or the derivatives."<sup>29</sup>

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15 years ago, regulators and lawyers have already alleviated some of the similar concerns (valuation, safeguarding, liquidity, etc.) that the Consultation paper 21-402 is bringing forward. Thus, this could represent a comparable basis for securities regulators to work from. They have the opportunity to formulate, based on previous work, what is expected from non-securities crypto-assets trading platforms so they can service the needs of a funds structure. The following questions are addressed by GLD's prospectus:

Custodians / Sub custodians  
 Price Determination  
 Price Volatility  
 Price Manipulation

Factors impacting gold prices  
 Delivery of required deposits  
 Market regulation  
 Etc.

<sup>28</sup> <https://www.spdrgoldshares.com/media/GLD/file/SPDR-Gold-Trust-Prospectus-20170508.pdf> (04/14/19)

<sup>29</sup> <https://www.spdrgoldshares.com/usa/> (04/14/19)



Noteworthy language from the GLD prospectus has been extracted and provided below to highlight precedents set by regulators who previously had to deal with similar concerns raised by 21-402.

- The value of the gold held by the Trust is determined using the LBMA Gold Price PM. Potential discrepancies in the calculation of the LBMA Gold Price PM, as well as any future changes to the LBMA Gold Price PM, could impact the value of the gold held by the Trust and could have an adverse effect on the value of an investment in the Shares.
- If concerns about the integrity or reliability of the LBMA Gold Price PM arise, even if eventually shown to be without merit, such concerns could adversely affect investor interest in gold and therefore adversely affect the price of gold and the value of an investment in the Shares.
- Crises may motivate large-scale sales of gold which could decrease the price of gold and adversely affect an investment in the Shares.
- The Trust's gold may be subject to loss, damage, theft or restriction on access
- The Trust may not have adequate sources of recovery if its gold is lost, damaged, stolen or destroyed and recovery may be limited, even in the event of fraud, to the market value of the gold at the time the fraud is discovered.
- Because neither the Trustee nor the Custodian oversees or monitors the activities of subcustodians who may temporarily hold the Trust's gold bars until transported to the Custodian's London vault, failure by the subcustodians to exercise due care in the safekeeping of the Trust's gold bars could result in a loss to the Trust.
- The ability of the Trustee and the Custodian to take legal action against subcustodians may be limited, which increases the possibility that the Trust may suffer a loss if a subcustodian does not use due care in the safekeeping of the Trust's gold bars.
- The gold bullion custody operations of the Custodian are not subject to specific governmental regulatory supervision.

### **2.2.2 Investment Trust investing in Gold (Canadian example)**

In search of a Canadian equivalent to GLD, the Sprott Physical Gold Trust has been identified as a potential comparable. The investment format is different. GLD is open-ended, PHYS is closed-end and both are regulated by their respective securities regulators and both are available to the general public. PHYS is listed on both the TSX and NYSE Arca. When consulting the prospectus<sup>30</sup> of PHYS, a noticeable difference with GLD can be observed. Constraints imposed to the receipt of PHYS prospectus appeared to be much less rigid in Canada than in the U.S. for GLD. Only four risks are identified in PHYS's prospectus versus 24 in GLD's. Certain risk factors brought forward in 21-402 such as price determination, price volatility, price manipulation, factors impacting gold price have been explicitly covered in GLD but were not a requirement in Canada. If these risk factors were not required for an investment trust to invest in gold in Canada, why is Bitcoin treated differently?

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<sup>30</sup> <http://www.sprott.com/media/1443/phys-prospectus-en.pdf> (05/01/19)



### 2.2.3 ETF investing in Real Estate Investment Trust (American example)

Investment trust also have the possibility to invest in real estate. Just like gold, real estate is not a security. Bitcoin could be compared to a form of “digital real estate” because its supply is limited. Said differently, there is a limited set of Unspent Transaction Outputs (UTXO), known as: the bitcoins.

Real Estate differs from traditional stocks and bonds and comes with special risks and intricacies that are also different than with gold. It is therefore interesting to look at how particular provisions were drafted and included in the prospectus<sup>31</sup> to reflect these particularities associated with real estate investing. IYR is an example of a U.S. real estate ETF and shares risks that could be applicable to bitcoin;

- Cyber security risks (page 3)
- Market Trading Risk: Absence of Active Market/ Risk of Secondary Listings / Secondary Market Trading Risk (...) (page 5-6)
- Liquidity risks (page 8)
- Regulatory risks (page 9)
- Operational risks (page 9)
- Determination of Net Asset Value (NAV) (page 17)

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<sup>31</sup> <https://www.ishares.com/us/library/stream-document?stream=reg&product=I-DREAL&shareClass=US+Class&documentId=1280409~1280118~926348~1255433~1192007&iFrameUrlOverride=%2Fus%2Fliterature%2Fprospectus%2Fp-ishares-us-real-estate-etf-3-31.pdf> (04/23/19)



## 2.2.4 ETF investing in Real Estate Investment Trust (Canadian example)

A Canadian example is XRE (iShares S&P/TSX Capped REIT index ETF). The prospectus<sup>32</sup> is a 180 pages umbrella covering at once, all the products offered by the ETF provider (as opposed to a per product prospectus approach). Risks are presented in a simpler form and the prospectus has been receipt with a “tick the box” approach. For example, risks are presented as follows;

**Additional Risks Relating to an Investment in Certain iShares Funds**

In addition to the general risk factors applicable to all iShares Funds, there are certain risk factors inherent to an investment in the iShares Canadian Equity Funds, as indicated in the table below:

Additional Risks Relating to an Investment in the iShares Canadian Equity Funds																
	XCG	XCS	XCV	XDV	MEG	XEI	XEN	XFN	XIC	XIT	XIU	XMA	XMD	XRE	XST	XUT
Cease Trading of Securities Risk	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Developed Countries Investments Risk	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
General Risks of Equity Investments	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Income Trust Investments Risks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Large-Capitalization Companies Risk	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Non-Capitalization Weighted Strategy Risks				✓												
North American Economic Risk	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sector Risk	✓		✓	✓	✓		✓	✓		✓		✓		✓	✓	✓
Small-Capitalization Companies Risk	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Voting of Index Securities Risk	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

This text pertaining to risk is also available in the XRE prospectus.

**XRE.** REITs generally are subject to certain risks related to their direct ownership of real estate. Real property investments are affected by general economic conditions, local real estate markets, supply and demand for leased premises, competition from other available premises and various other factors. The value of real property and any improvements thereto may also depend on the credit and financial stability of the tenants and upon the vacancy rates of the property portfolio. There are also certain types of risks relating to the ownership of real estate, generally of a catastrophic nature, such as wars or environmental contamination, which may be either uninsurable or not insurable on an economically viable basis. In addition, environmental laws may render a REIT liable for the costs of removal of certain hazardous substances and remediation of certain hazardous locations. Real estate ownership may also require certain significant expenditures, including property taxes, maintenance costs, mortgage payments, insurance costs and related charges regardless of whether the property is producing any income.

Another example is BMO’s ZRE ETF where in the 242 pages *simplified* prospectus<sup>33</sup> we can also see additional risks relating to investing presented in a “tick the box” framework (page 130).

Based on both gold and REITS prospectuses, it can be noticed that Canadian securities regulators are satisfied with risks being disclosed in a simpler format and did not require explicit definitions. The naming of the risk sufficed.

<sup>32</sup> <https://www.blackrock.com/ca/individual/en/literature/prospectus/ishares-index-funds-prospectus-en-ca.pdf> (06/05/19)

<sup>33</sup> [https://www.bmo.com/assets/pdfs/gam/bmoam\\_etfs\\_prospectus\\_february-7-2019-en.pdf](https://www.bmo.com/assets/pdfs/gam/bmoam_etfs_prospectus_february-7-2019-en.pdf) (06/05/19)



## 2.3 Collateral loans

### Key Messages

- Pledging collateral doesn't change the nature of an asset into an investment contract.
- A lien on an asset is not a derivative or an investment contract.
- Securities regulators do not oversee collateralized loans.

Consultation paper 21-402 (page 2) reads as following:

*"However, securities legislation may still apply to Platforms that offer trading of crypto assets that are commodities, because the investor's contractual right to the crypto asset may constitute a security or a derivative. We are evaluating the specific facts and circumstances of how trading occurs on Platforms to assess whether or not a security or derivative may be involved. Some of the factors we are currently considering include:"*

The list of factors provided mostly revolve around the concept of custody. As illustrated before, the custodial act of gold (in a bank-held safety deposit box, in a vault at Kitco or through an investment trust's custodian) does not transform gold itself into a security or a derivative. However, the list of factors presented in 21-402 did not include bitcoin-backed lending related cases. In the spirit of making sure this paper covers as many angles as possible, I aim to demonstrate that bitcoin-backed lending does not involve a security or a derivative.

### Pledging an asset in exchange for money

For all sorts of reasons, individuals may need to borrow against assets they own. They would pledge these assets as collateral in exchange for fiat currency. Gold, jewelry, electronics, art, special collection, etc., are examples of assets that a lender could accept as collateral. If the loan is not repaid according to negotiated terms, the lender becomes the official owner of the pledged collateral. This is essentially the concept of Pawnbrokers (or collateral loans). Applicable Pawnbrokers regulation comes from governmental regulation (federal/provincial/municipal). Consumer protection right and Criminal code also applies. While other provinces<sup>34 35</sup> have their own ruling, the Government of Ontario repealed the Pawnbroker Act<sup>36</sup> at the beginning of 2019. The Ministry of the Attorney General said<sup>37</sup>:

*"Without the Act, pawnbrokers would no longer be required by provincial legislation to have a municipal business license. Municipalities would determine whether to require a license or otherwise regulate."*

Pawnshops and alike concepts such as gold-backed lending<sup>38 39 40 41</sup> are not regulated by the securities or derivatives regulatory agencies.

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<sup>34</sup> <https://www.avocat.qc.ca/public/iipretgage.htm> (05/02/19)

<sup>35</sup> [http://www.bclaws.ca/civix/document/id/complete/statreg/96350\\_pit](http://www.bclaws.ca/civix/document/id/complete/statreg/96350_pit) (05/02/19)

<sup>36</sup> <https://www.ola.org/en/legislative-business/bills/parliament-42/session-1/bill-66#BK4> (05/02/19)

<sup>37</sup> <https://globalnews.ca/news/4883939/pawnbrokers-act-bill-66-ontario/> (05/02/19)

<sup>38</sup> <https://loanscanada.ca/loans/loans-using-collateral/> (05/02/19)

<sup>39</sup> <https://cashgoldcanada.ca/collateral-loans-cash-gold-canada/> (05/02/19)

<sup>40</sup> <https://loansforjewels.ca/> (05/02/19)

<sup>41</sup> <https://www.cashcanada.com/pawn-buy-sell/gold-and-jewelry/> (05/02/19)





## 2.4 Summary

Individuals are free to own what they perceive to be of value and retailers are not responsible for suitability assessment of the purchase. Securities regulators do not oversee the dealers or trading activities of collectibles or stores of value. Suitability assessment of non-securities items is not part of the securities regulators' mandate and would represent stepping over individual's personal preference. FINTRAC regulates the commerce of certain type of assets (such as precious metals and stones, real estate and virtual currencies) in the context of preventing money laundering and financing of terrorist activities. Thefts, frauds and misleading statements are already illegal or forbidden and punishable by law. There is no need for a specific regulation on Bitcoin as it is already covered by the actual legal framework.

ETFs and investment trust investing in gold have already answered similar concerns that securities regulators have expressed in 21-402. Regulators should not single out or impose more stringent rules than they would otherwise do for other investment structures. **Securities regulators did not have to regulate the trading and market places of gold or real estate to allow their inclusion in investment trusts.** This is not to advocate in favor of investment trusts investing in crypto, as I believe participants should have the option to participate in bitcoin the way that suits them best. But rather to identify, the zone in which there is an intersection between the two ecosystems and where securities regulators can exert their regulatory framework.

Securities regulators were not concerned with suitability of gold or REITs as an investment but were rather preoccupied with the appropriate risks disclosure in the information conveyed to potential investors. Even though they were confronted with novel and specific risks, these did not prevent their inclusion from investment trusts. Instead, legal language was included in the prospectus to reflect the risks and was drafted in a way that satisfied securities regulators. As demonstrated with the Canadian examples, naming the risk was in certain cases deemed a sufficient disclosure.

This section also demonstrated that the act of custody or the act of pledging an asset as collateral does not change the nature of the asset. Custody and collateral are not an investment or a derivatives contract.

21-402 risk sending the securities regulators in a long and unfruitful process that sits outside their mandate and leading to miss the objective of protecting the consumer. The most direct way securities regulators can influence the industry without creating distortion, unnecessary costs and delays is first to clearly define what is a security within crypto-assets from what is not. Secondly, to focus on the securities vehicle (such as investment trusts) who want to participate in bitcoin or so-called crypto-assets. Securities regulators will be able to assess whether or not the proper disclosures have been achieved in the prospectus in regards to the risks participants would expose themselves to.

Unfortunately, securities regulators in Canada have expressed an unnuanced and negative bias against Bitcoin and cryptocurrencies. This stance has led to unintended consequences that we will cover in the next section.



### 3. Preoccupations

Consultation paper 21-402 proposes a framework for crypto-asset trading platforms without clearly expressing the type of crypto-assets it is going after or explicitly excluding and defining what are non-securities crypto-assets. The definition of the underlying target is particularly important as securities regulators could be attempting to regulate something that is not under their jurisdiction. This lack of clarity, creates market uncertainty, friction, misinformation and raises several concerns.

#### 3.1 Multi-dimensional & open-ended regulatory struggle

CSA Staff Notice 46-307<sup>42</sup> outlines how Canadian Securities Laws and 'substance over form' tests may apply to ICOs, crypto asset investment funds and exchanges.<sup>43</sup>

CSA Staff Notice 46-308<sup>44</sup> "reiterated the CSA's views, adding that many purported 'utility' tokens were not eligible to be exempt from securities laws, therefore requiring both a prospectus and the registration of the securities issuer."<sup>45</sup>

The following is an extract from 46-307. It gives an example of the lack of clarity the market received:

*"For example, if an individual purchases coins/tokens that allow him/her to play video games on a platform, it is possible that securities may not be involved. (...)"*

Are securities regulators genuinely not able to state that a sword bought or earned in an online game that could be portable to another game (with perhaps a different value) is not a security?

Are the following crypto-assets considered securities in the context of 21-402 framework?

- Central Bank Digital Currencies (CDBC).
- Stablecoins (fiat-pegged issued coins).
- Token of an online game sword that would be portable/tradeable in multiple online games.
- Tokenized patents, tokenized music rights.
- My own personal individual data.

Do the securities regulators intend to regulate?

- how scientists can monetize their patents?
- how the music industry operates?
- how many swords a kid can own and trade while playing his favorite online games?
- how an individual can exert control and monetization over his/her own individual data?
- Software, AI and IoT economic relationships?

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<sup>42</sup> [https://www.osc.gov.on.ca/en/SecuritiesLaw\\_csa\\_20170824\\_crypto-currency-offerings.htm](https://www.osc.gov.on.ca/en/SecuritiesLaw_csa_20170824_crypto-currency-offerings.htm) (04/26/19)

<sup>43</sup> <https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/cryptoasset-regulation/#.XMMwpZNKjUZ> (04/26/19)

<sup>44</sup> [https://www.osc.gov.on.ca/en/SecuritiesLaw\\_csa\\_20180611\\_46-308\\_securities-law-implications-for-offerings-of-tokens.htm](https://www.osc.gov.on.ca/en/SecuritiesLaw_csa_20180611_46-308_securities-law-implications-for-offerings-of-tokens.htm) (04/26/19)

<sup>45</sup> <https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/cryptoasset-regulation/#.XMMwpZNKjUZ> (04/26/19)



Are the following crypto-assets trading platforms considered by the 21-402 framework?

- Non-custodial exchanges and apps.
- Embedded in other platform (ex: tipping on twitter).
- Social media platforms (ex: Facebook is rumored to have an upcoming coin).
- Integrated in a web browser (ex: content monetization).
- Data market places.
- Smart phones, E2EE messengers, satellites, ham radio, smoke signals, emojis.
- Paper.

If the answers are yes, then Canada will be at a significant disadvantage versus the rest of the world. If the answers are yes, the fundamental objectives pursued have to be questioned. In the end, what will truly be accomplished by 46-307, 46-308 and 21-402 if businesses can't develop in Canada? And what would this mean for software, computer networks and businesses in general going forward?



## 3.2 Stigmatization

Securities regulators in Canada, have repeatedly and publicly expressed their dislike of cryptocurrencies as a whole. This creates a difficult environment for legitimate entrepreneurs who need banking relationships to conduct their normal business (e.g. pay rent, salaries, insurance, income taxes). Statements such as below demonstrate an *a priori* negative bias.

**“Cryptocurrencies facilitate the organization of fraudsters”.<sup>46</sup>**

Would the same discourse be held towards the Internet, Wi-Fi, cellular phones, emails, encryption, text messages, pre-paid cards? Because they all facilitate the organization of fraudsters.

This next statement goes along the same lines:<sup>47</sup>

**Risk of participating in criminal, terrorist or fraudulent activities or money laundering**

Cryptocurrencies have been associated with fraud, money laundering and criminal or terrorist activities.

It is important to distinguish between the crime and the means to commit the crime. Toronto<sup>48</sup> and Vancouver<sup>49</sup> real estate have also been associated with money laundering. Have securities regulators issued the same public warning against residential and commercial properties?

### Are these claims factual or judgmental?

A study commissioned by the European Parliament’s Policy Department for Citizen’s Rights and Constitutional Affairs<sup>50</sup> and published in May 2018 offers a documented picture of the situation. Key findings about Virtual Currencies (VCs) include:

- a small number of cases suggest some jihadist and right-wing extremists are using (VCs).
- VC’s currently do not provide substantial benefits over traditional methods.

In 2018, according to Japan Times<sup>51</sup>, there were 7,096 on a total of 417,465 suspicious transactions that involved cryptocurrencies. Said differently, from all the suspected cases of money laundering in Japan, only 1,7% were attributable to cryptocurrencies.

Same information has been found in the USA as per this comment from the Office of Terrorist Financing and Financial Crimes:

*“Although virtual currencies are used for illicit transactions, the volume is small compared to the volume of illicit activity through traditional financial services.”<sup>52</sup>*

<sup>46</sup> <https://journalmetro.com/cryptomonnaies/2237877/la-crypto-facilite-lorganisation-des-fraudeurs/> (04/16/19)

<sup>47</sup> <https://lautorite.qc.ca/en/general-public/investments/bitcoin-and-other-virtual-currencies/> (04/25/19)

<sup>48</sup> <https://globalnews.ca/news/5080238/toronto-real-estate-money-laundering-opaque-investment/> (04/29/19)

<sup>49</sup> <https://www.bloomberg.com/news/articles/2019-05-10/billions-in-dirty-cash-helped-fuel-vancouver-s-housing-boom> (05/12/19)

<sup>50</sup> [http://www.europarl.europa.eu/RegData/etudes/STUD/2018/604970/IPOL\\_STU\(2018\)604970\\_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/604970/IPOL_STU(2018)604970_EN.pdf) (04/25/19)

<sup>51</sup> <https://www.japantimes.co.jp/news/2019/02/28/national/crime-legal/cases-money-laundering-linked-cryptocurrency-japan-tenfold-2018/#.XMyC69NKjUZ> (05/03/2019)

<sup>52</sup> <https://www.judiciary.senate.gov/imo/media/doc/Fowler%20Testimony.pdf> (05/10/2019)



Lastly, and with the intent of presenting an order of magnitude for comparison, the example of Danske Bank will be put forward. While it is one of the most respected financial institutions in Europe, it has been caught last fall in a \$200 billion USD money laundering scandal<sup>53</sup> <sup>54</sup>. At the time of writing these lines, the total bitcoin market cap hovers around \$100 billion USD. This one scandal, from a single financial institution is twice the size of the entire market cap of bitcoin.

In light of these, does Bitcoin deserve such a severe stigma from Canadian securities regulators?

### **Who deals with PCMLTFA matters in Canada?**

FINTRAC, the Financial Transactions and Reports Analysis Center of Canada deals with matters pertaining to Proceeds of Crime (Money Laundering) and Terrorist Financing Act (PCMLTFA). Financial entities such as banks, securities dealers (e.g. IIROC/CSA's members), precious metals dealers and money service businesses (MSBs) are examples of FINTRAC reporting entities<sup>55</sup>.

Late in the summer of 2018, FINTRAC held public consultations across Canada to obtain feedback from the industry about its proposed regulatory framework modifications for MSBs dealing in Virtual Currencies. Legislative modifications are currently pending and are sitting with FINTRAC's working group. The results are expected later this year or early 2020.

The AML / FT compliance requirements for MSBs come from FINTRAC not from IIROC / CSA.

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<sup>53</sup> [https://moneyweek.com/495970/danske-banks-money-laundering-scandal/\(05/03/2019\)](https://moneyweek.com/495970/danske-banks-money-laundering-scandal/(05/03/2019))

<sup>54</sup> [https://www.theguardian.com/business/2018/sep/21/is-money-laundering-scandal-at-danske-bank-the-largest-in-history\(05/03/2019\)](https://www.theguardian.com/business/2018/sep/21/is-money-laundering-scandal-at-danske-bank-the-largest-in-history(05/03/2019))

<sup>55</sup> <http://fintrac-canafe.gc.ca/reporting-declaration/Info/re-ed-eng.asp> (05/13/19)



### 3.3 There is regulation

Contrary to what is stated in this video<sup>56</sup> from the Canadian Securities Administrators, there is regulation. Stating that regulation is lacking and that there is little recourse fails to account for important information and may be misleading the public.



First, it misses several points:

- **FINTRAC:** oversees Money Service Business, AML / FT. (regulatory update pending).
- **Code of law / criminal code:** is not nullified by the usage of Bitcoin. Fraud and theft are illegal and punishable by law.
- **Consumer protection right:** is not nullified by the usage of Bitcoin. It may be more difficult to enforce in the context of global businesses but nowadays online reputation is a strong behavioral incentive, possibly more effective than regulation itself to service clients well.
- **Bitcoin has its own embedded rules:** And they are enforced consistently and objectively. This is beautifully described by Spencer Bogart, CFA in his essay *The Internet's Magna Carte Moment: Bitcoin & The Value of Strong Assurances*<sup>57</sup>. An extract can be found below:

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*"The Bitcoin network, for example is a self-contained, rules-based, self-arbitrating court where valid transactions are clearly defined, objectively verifiable, and unerringly enforced y network participants"*

*"Bitcoin, for example, offers a self-contained, reliable foundation for property rights in a digital world. The Bitcoin network is a riles-based, self-arbitrating court – it's likely the fairest, most transparent and most predictable court in the world".*

*"The Bitcoin network is a decentralized institution that defines, monitors and enforces property rights".*

*It is global in nature (not limited by geography/citizenship), it is clearly defined (no subjective interpretation) and perfectly enforced (objectively and unerringly enforced).*

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<sup>56</sup> [https://www.youtube.com/watch?time\\_continue=16&v=dLPNyHlp8CU](https://www.youtube.com/watch?time_continue=16&v=dLPNyHlp8CU)(04/25/19)

<sup>57</sup> <https://medium.com/blockchain-capital-blog/the-internets-magna-carta-moment-bitcoin-the-value-of-strong-assurances-56fb86887b8a> (04/25/19)



Second, it contradicts some of the regulator’s own claims:

- **Securities regulators:** oversee securities offering including ICO’s as stated on their own websites. Please see OSC’s<sup>58</sup> and AMF’s<sup>59</sup> website. What is the true message when the securities regulators say there is a lack of regulating authority?

**Are ICOs regulated by the AMF?**

The AMF regulates ICOs that involve the sale of securities. In Québec, many ICOs are subject to the [Securities Act](#),<sup>60</sup> mainly because they are considered investment contracts.

**CRYPTOCURRENCY OFFERINGS**

Cryptocurrency offerings such as initial coin offerings (ICOs) and initial token offerings (ITOs) can provide new opportunities for businesses to raise capital and for investors to access a broader range of investments. Many ICOs and ITOs involve sales of securities. Securities laws in Canada will apply if the person or company selling the securities is conducting business from within Canada or if there are Canadian investors.

- **Securities regulators:** oversee at least one crypto-assets platform in Canada.

Contrary to what is stated on page 1 of the consultation paper 21-402: “*Currently there are no platforms recognized as an exchange or otherwise authorized to operate as a market place or dealer in Canada...*” we can see from AMF’s website that ShakePay Inc. has been delivered a Money Service Business permit<sup>60</sup> two years ago (2017-04-26). Are we possibly facing a definition problem?

SHAKEPAY INC.	Change de devises Transfert de fonds	2017-04-26
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This is an extract from ShakePay website<sup>61</sup>.

ShakePay only offers BTC (bitcoin) and ETH (ethereum).

 **Regulatory oversight**

Shakepay is licensed as a Money Service Business by FINTRAC and the AMF to operate in all Canadian provinces and territories

Should we conclude that these two crypto-assets are not considered by consultation paper 21-402? If so why?

Question for IIROC and CSA: Have your members been required to update their PTA (personal trading authorization) procedures to reflect the inclusion of crypto? Because if certain crypto-assets are deemed to be securities, or if your members have access to material non-public information on crypto assets, this could mean they are breaching your very own compliance code.

<sup>58</sup> <https://www.osc.gov.on.ca/en/our-approach.htm> (04/25/19)

<sup>59</sup> <https://lautorite.qc.ca/en/general-public/investments/bitcoin-and-other-virtual-currencies/> (04/25/19)

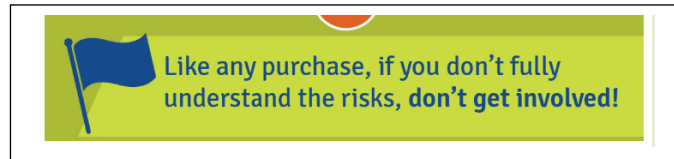
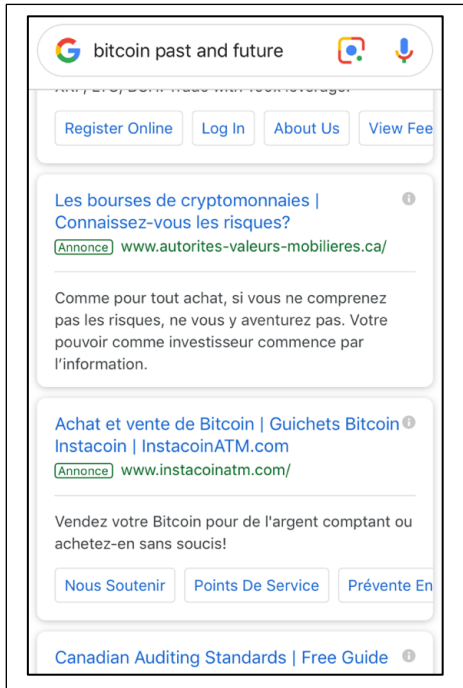
<sup>60</sup> [https://lautorite.qc.ca/fileadmin/lautorite/bulletin/2018/vol15no19/vol15no19\\_8-3.pdf](https://lautorite.qc.ca/fileadmin/lautorite/bulletin/2018/vol15no19/vol15no19_8-3.pdf) (04/29/19)

<sup>61</sup> <https://shakepay.co/>(04/29/19)



### 3.4 Double standard (1) - Volatility

One of the key angles put forward by securities regulators against cryptocurrencies is price volatility. This google ad, shows this is something securities regulators are willing to pay advertisement for<sup>62</sup>.



**Don't get involved!**<sup>63</sup>

#### Volatility risk

The value of a cryptocurrency is determined by the public's interest in it and is based strictly on supply and demand. Media coverage of a cryptocurrency can have a major impact on its value over a short period of time without any official organization or mechanism controlling the volatility. There are also numerous platform or digital exchanges on which digital cryptocurrencies can be negotiated. All such exchanges may offer different prices for the same cryptocurrency.

- *"The value of a cryptocurrency is determined by the public's interest in it and is based strictly on supply and demand"*<sup>64</sup>.
  - Isn't the law of supply and demand an economic tenant underlying all markets?
- *"(..) without any official organization or mechanism controlling the volatility".*
  - Other than the market itself, what organization or mechanism should "control the volatility"?
  - Are the securities regulators asking for some form of price manipulation?

<sup>62</sup> Curious of the budget to perform such ad, Octonomics reached out to a firm specialized in google advertising to obtain a quote. The current (04/18/19) price to capture Bitcoin's advertising in Quebec only is +/- 1,400\$ /mth.

<sup>63</sup> <https://www.securities-administrators.ca/investortools.aspx?id=1696> (04/25/19)

<sup>64</sup> <https://lautorite.qc.ca/en/general-public/investments/bitcoin-and-other-virtual-currencies/>



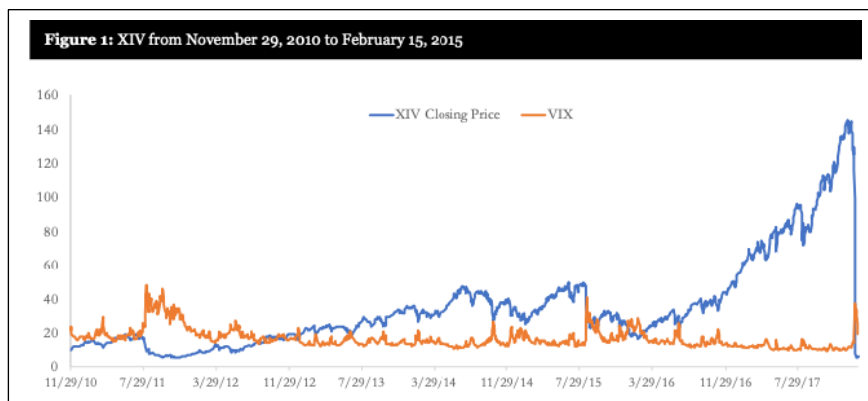


## The double standard

There are other highly volatile products available to Canadian investors. For example, penny stocks listed on the Venture Stock Exchange or inverse and leveraged ETFs listed on the Toronto Stock Exchange.

What is different about these examples where their high volatility levels don't warrant public warnings from securities regulators?

There is a recent and interesting case of a regulated, prospectus-based volatility product that totally blew up. The product was not listed on Canadian stock exchanges, yet Canadian investors were able to trade it. On February 5th 2018, the Exchange Traded Note (ETN) XIV from Credit Suisse, lost 97% of its value (+/- \$2 billion USD) in a single day<sup>65</sup>. The last trading day occurred two weeks later<sup>66</sup>.



It is worth noting that:

1. People who lost money were on the right side of the trade. They were betting that volatility would go down. And it did. But they lost 97% of their investment in one day.
2. This 2012 lawsuit<sup>67</sup> showed prior warnings that the product was not functioning properly.
3. The 60+ pages prospectus states: **The long term expected value of your ETN is zero**<sup>68</sup>.

In light of this, should securities regulators also have actively campaigned "if you don't understand the risks, do not get involved" or was the highly complex 60+pages prospectus referring 63 times to a value of zero sufficient to cover the "fully understand the risks" part? Were investors anymore protected because the prospectus said the long-term value is zero?

<sup>65</sup>[https://www.slcg.com/pdf/workingpapers/Material%20Misrepresentations%20in%20XIV%20Prospectus%20Led%20to%20\\$700%20Million%20in%20Losses.pdf](https://www.slcg.com/pdf/workingpapers/Material%20Misrepresentations%20in%20XIV%20Prospectus%20Led%20to%20$700%20Million%20in%20Losses.pdf) (05/04/19)

<sup>66</sup> <https://www.credit-suisse.com/corporate/en/articles/media-releases/credit-suisse-announces-event-acceleration-xiv-etn-201802.html> (05/04/19)

<sup>67</sup> <https://www.etfstrategy.com/lawsuit-filed-against-credit-suisse-for-tvix-etns-debacle-relating-to-velocityshares-daily-2x-vix-short-term-etns-66447/> (05/04/19)

<sup>68</sup> [https://www.sec.gov/Archives/edgar/data/1053092/000095010318000969/dp85741\\_424b2-vix48.htm](https://www.sec.gov/Archives/edgar/data/1053092/000095010318000969/dp85741_424b2-vix48.htm) (05/03/2019)



### 3.5 Weak educational content

The CSA uses the social media platform Twitter<sup>69</sup> to target the general public and to share messages. It is interesting to observe the regularity at which the cryptocurrencies warnings efforts are deployed but also that there are days it is the only thing the CSA tweets about.

Various hashtags such as: #bitcoin, #Bitcoin, #ethereum, #ripple, #dash, #litecoin, #initialcoinoffering, #cryptocurrency, #blockchain, #ICO, #cryptoinvestment are used to maximize traction to reach the targeted audience.

Essentially, these sustained warnings point to the same educational content.

1. ICO's<sup>70 71 72</sup>
2. Cryptocurrencies<sup>73 74 75</sup>

I will not offer a lengthy comment on the ICO educational pieces because I agree with the essence of the message and because these structures for fundraising very much look like securities and therefore fall under securities legislation. That said, beyond the securities-status recognition, a market observer will realize there is a great deal of unsubstantiated marketing claims floating around. Narratives that don't yet exist are pushed ahead as a *fait accompli* and trendy buzzwords are used lightly and loosely by shady promoters. Transparency, clarity of business model and adequate warnings are often lacking. I think we ended up with a plethora of crypto-assets for the same reasons' capital was raised in Great Britain in 1720 for a great deal of ludicrous projects during the South Sea Bubble<sup>76</sup>. That is the meeting of "get rich quick hopes" and unscrupulous people.

Not all project are intentional scams. Some legit entrepreneurs are sending the message to securities regulators they wish to operate globally without the heavy bureaucratic process-oriented burden the global fragmented securities framework has to offer.

As explained in 1.1, Bitcoin is a different animal and doesn't fit in the securities regulation. The current orientation of the regulators bundling everything into one big category is worrisome.

In 46-307, we can read: *"Any disclosure provided to investors, whether an OM or otherwise, must not be false or misleading. The disclosure must focus on material facts and be relevant, clear, balanced, in plain language and not overly promotional"*.

However, some of the information provided by the securities regulators is inaccurate, misleading and sometimes unfair. In that context and because a broad negative bias has been demonstrated, the next pages will provide comments on the educational content from the CSA in regards to cryptocurrencies.

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<sup>69</sup> [https://twitter.com/ACVM\\_Nouvelles](https://twitter.com/ACVM_Nouvelles) and [https://twitter.com/CSA\\_News](https://twitter.com/CSA_News) (04/25/19)

<sup>70</sup> <https://www.securities-administrators.ca/investortools.aspx?ID=1697&LangType=1033> (05/04/19)

<sup>71</sup> <https://twitter.com/NSSCommission/status/1123603571004592128/photo/1> (05/04/19)

<sup>72</sup> <https://twitter.com/MSCCommission/status/1123273331053088768> (05/04/19)

<sup>73</sup> <https://www.securities-administrators.ca/investortools.aspx?id=1696> (05/04/19)

<sup>74</sup> <https://twitter.com/NSSCommission/status/1123241064062648321> (05/04/19)

<sup>75</sup> <https://www.youtube.com/watch?v=dLPNyHIp8CU> (05/04/19)

<sup>76</sup> *Extraordinary Popular Delusions and The Madness of Crowds* (by Charles Mackay) p. 33-36



### It's obscure:

It's hard to make informed decisions about a cryptocurrency's value without financial statements or other traditional assessment criteria to rely on.



Bitcoin is not only transparent, but the information is abundantly available for free online to whomever wants to invest the time to research, curate, read and learn. The monetary policy, the emission curve, the protocol, the risks, the challenges and many more are exposed in the open.

Gold doesn't have financial statements; it doesn't pay dividend or interest. There are no earnings announcement or management team to gold. Yet, gold's valuation is in the trillions of dollars. Paintings, sculptures and other art work do not have financial statements and their pricing does not rely on traditional assessment criteria. Securities are investments, but investments are not necessarily securities.

Traditional measures such as market cap may not always be useful when it comes to crypto assets. Realized capitalization may offer more accurate insights<sup>77</sup>. Being able to assess network performance, developer's activity, behavior profile of activity and user base are a new set of data forming metrics that are very different from what traditional finance professionals are used to working with.

### No backing:

Cryptocurrencies are not backed by a bank or authority.



The "No backing" is presented in the "Risks" section. This should instead be presented in the "Value" section (if there was one). The fact that bitcoin is not backed by a bank or a central authority is part of the core proposition. It is a *raison d'être*. Avoiding pricey rent-seeking intermediaries or corruptible entities with the powers to confiscate, debase or misuse the asset are example of Bitcoin's mission. Bitcoin's white paper<sup>78</sup> published over 10 years ago is clear about the "no central authority" (see section 6).

<sup>77</sup> <https://newwebsite.coinmetrics.io/realized-capitalization/> (05/10/2019)

<sup>78</sup> <https://bitcoin.org/bitcoin.pdf?> (04/25/19)



### It is complex:

It can be difficult, confusing and time-consuming to withdraw cryptocurrency, often requiring several intermediaries.



This statement both unfair and inaccurate. Unfair because anything someone does for the first time may seem to be difficult or confusing. It's called a learning curve and yes, it is time-consuming. For those old enough to remember the pre-internet era and the launch of online banking, most will recall how difficult, confusing and time-consuming it felt. Most of us are now quite familiar with it but it did not happen day one.

As far as withdrawal often requiring "several" intermediaries, it is inexact and fails to recognize the peer-to-peer nature and the various ways to withdraw (or utilize) bitcoin: at exchange, at bitcoin ATM, person to person or in exchange of goods or services.

### It's vulnerable:

Online wallet companies and exchanges are susceptible to cybersecurity threats and hacking, putting your deposits at risk.

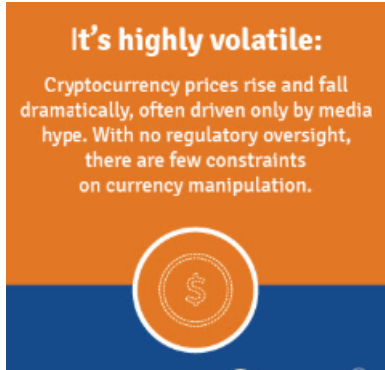


Any secured website or application in the digital realm is susceptible to hacking. This is not exclusive to online wallets. Credit cards, smartphones, clouds, connected devices, secured websites are all subject to hacking. Facebook<sup>79</sup>, Amex<sup>80</sup> and Equifax<sup>81</sup> are all recent public examples of hacking of consumer's personal data. If the regulators' mission is one of education (and not of fear), mentioning there are different ways to custody crypto-assets (where some are more secured than others), would better inform the audience. Alternatives have pros and cons, but do exist.

<sup>79</sup> <https://www.theguardian.com/technology/2018/sep/28/facebook-50-million-user-accounts-security-berach> (04/23/19)

<sup>80</sup> [https://thenextweb.com/in/2018/11/07/amex-blunder-left-thousands-of-indian-customers-personal-info-unsecured/?utm\\_source=TNW&utm\\_campaign=3fdf8a3b9b-EMAIL\\_CAMPAIGN\\_2018\\_06\\_07\\_01\\_28\\_COPY\\_01&utm\\_medium=email&utm\\_term=0\\_32f70ba9aa-3fdf8a3b9b-12941949&mc\\_cid=3fdf8a3b9b&mc\\_eid=d643670b08](https://thenextweb.com/in/2018/11/07/amex-blunder-left-thousands-of-indian-customers-personal-info-unsecured/?utm_source=TNW&utm_campaign=3fdf8a3b9b-EMAIL_CAMPAIGN_2018_06_07_01_28_COPY_01&utm_medium=email&utm_term=0_32f70ba9aa-3fdf8a3b9b-12941949&mc_cid=3fdf8a3b9b&mc_eid=d643670b08) (04/23/19)

<sup>81</sup> <https://techcrunch.com/2018/12/10/equifax-breach-preventable-house-oversight-report/> (04/25/19)



This next statement leads to believe there is currency manipulation. Is data available to support or is it a speculative statement?

Can there be price spreads between various trading places? Yes. Were there opportunities in traditional markets to arbitrage the price differential of an individual stock listed on two different exchanges? Yes. Did technological improvements and increased competition reduce the arbitrage opportunity with time? Yes. Was this available from the start? No. Can regulation force tight spreads or rule out price discrepancies? No. The market will, if it can.

It would be a mistake to think that regulated markets are completely exempt from price manipulation. Traditional regulated markets have had their fair share of price manipulation: Libor fixing scandal<sup>82</sup>, Foreign exchange rates manipulation<sup>83</sup>, metals markets<sup>84</sup>. Convicted banks paid fines and continued operating.

For those interested in the "fake volume" aspects of crypto assets trading, Bitwise Asset management presented an extensive document<sup>85</sup> to the U.S. S.E.C.

For those interested in how "artificial volume" is generated in traditional regulated markets and for what reason it is seen as beneficial, these articles<sup>86 87</sup> provide great examples and broader perspective.

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<sup>82</sup> [https://en.wikipedia.org/wiki/Libor\\_scandal](https://en.wikipedia.org/wiki/Libor_scandal) (04/25/19)

<sup>83</sup> <https://www.reuters.com/article/us-banks-forex-settlement/global-banks-admit-guilt-in-forex-probe-fined-nearly-6-billion-idUSKBN0050CQ20150520> (04/25/19)

<sup>84</sup> <https://www.forbes.com/sites/traceygreenstein/2011/03/25/j-p-morgan-chase-and-hsbc-may-have-gained-billions-from-influencing-the-price-of-silver-2/#3d8843313a89> (04/25/19)

<sup>85</sup> <https://www.sec.gov/comments/sr-nysearca-2019-01/srnysearca201901-5164833-183434.pdf> (04/26/19)

<sup>86</sup> <https://www.bloomberg.com/graphics/2019-etf-tax-dodge-lets-investors-save-big/> (04/26/19)

<sup>87</sup> <https://www.bloomberg.com/graphics/2019-vanguard-mutual-fund-tax-dodge/> (05/05/19)



The data behind the statistical claim **“often driven only by”** would be interesting to obtain and to consult as it talks about a global, fragmented, multi-media, 24/7 market.

But first and foremost, this completely fails to account that Bitcoin is not a company. There is no publicity paid by bitcoin, there is no marketing department or PR agency.

So, are the securities regulators after bitcoin or after media outlets in this claim? Media is paid by publicity and assessed in clicks and views. Their coverage is spontaneous and they are incentivized to talk about what people wish to hear.

When securities regulators pay publicity or actively campaign in the media against the category, aren't they also part of that media hype? Are the securities regulators contributing to this price volatility? Has the impact of all global regulators been accounted for in this claim?

In 3.4, we saw securities regulators say the value of a cryptocurrency (...) is based strictly on supply and demand. But here we read “often only driven by media hype”.

Are securities regulators accusing the media of manipulating their audience? Are the securities regulators trying to regulate speech and media content? Imagine if Bitcoin was THE company (or event) everyone wanted to hear about. How can “it” be held responsible for the spontaneous, unpaid and earned media coverage?

Have the securities regulators envisioned that perhaps some bitcoin market participants do not care, value, listen or form their opinion by mainstream media coverage?

There are risks involved in bitcoin. Bitcoin is a technological experiment with a successful ten-year track record. As in any journey, it should be understood that there is no guarantee of success. But ignoring may be just as hazardous. Decentralization, security and scalability are technological risks not regulatory risks. Education is the best investment one can make and is probably a better advice than “don't get involved” when you don't understand. To the contrary, do get involved. People should be invited to be curious, to question, to invest the time needed to understand, to form their own opinion, to develop critical thinking. ‘Do not get involved’ is a similar message to ‘stay ignorant’. This is not a productive recommendation when the objective is public protection.

Education and knowledge don't happen by osmosis. It requires hard work and time. For many this investment of hard work and time is their skin in the game and everyone should be encouraged to educate themselves. In the era we live in, information is abundant, free and easily accessible to every human being with access to Internet. Do your own research. Don't trust, verify.



### 3.6 Double standard (2) – Accountability

As seen in 3.5 volatility is a pretty big deal for regulators because volatility is a measure of risk. Then, what if adding a small % of bitcoin in a portfolio was the right thing to do? What if because of its low correlation to traditional assets, a clients' portfolio's risk/return profile would be improved by an allocation to bitcoin?

Presenting the potential risk without also presenting potential reward draws is an incomplete picture. The picture is as incomplete if you only present returns. Both risk and return are important.

Retail investors who deal with IIROC / CSA investment advisors do not have access to risk measures. Examples of risk measures include: variance, standard deviation, maximum drawdown, peak-to-trough. None of these metrics are available to retail end investors.

If volatility is so important to securities regulators, then why no such measures are offered to end investors about their overall investment's portfolio performance?

Institutional investors have several reports and measures to demonstrate if they generated alpha (value added) and where their performance ranked versus their peers. Why is there no such statistics available to Canadian retail investors?

Let me illustrate with Bob's investments. Bob filled the risk assessment questionnaire and was categorized as a balanced (medium) risk investor. After a certain period of time, Bob might want to know: So, were my advisor's recommendations good or not? Said differently, versus all the other retail investors with a balanced risk profile in Canada, where do I stand? How far away am I from the pack? Is it excellent, fair or mediocre?

The answer does not exist because it is not calculated by the industry. Volatility (risk) is not measured<sup>88</sup> nor compared, nor accessible at the individual investor's account level.

Back to my initial question, what if adding a small allocation of bitcoin to the client's portfolio was the right thing to do? Where would this show? What if advisors making that allocation end up delivering a better risk-adjusted portfolio returns than their peers? How can investors verify? How can investment professionals demonstrate their investment management skills, if they have no quantitative means to compare their performance with their peers?

The double standard is that on one hand only returns are presented, but when it comes to bitcoin, only risk is put forward by securities regulators.

The chart below contains the returns of 33 different markets<sup>89</sup> in the decade that followed the regulated market financial crisis. Data is from March 9<sup>th</sup> 2009 to March 9<sup>th</sup> 2019.

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<sup>88</sup> IIROC dealers may state that they look at risk metrics such as standard deviation. Those who do, use monthly data. Daily data are needed for statistical significance. The monthly data risk statistics is not shared with clients.

<sup>89</sup> <https://www.rcmalternatives.com/2019/03/heres-how-33-markets-performed-since-the-2009-low/> (04/17/2019)



MARKET	NOW	THEN	% CHANGE
Bitcoin	3,900	0.025	390,000.00%
Fed Funds	2.40%	0.20%	1,100.00%
Nasdaq 100	7015.69	1043.87	572.08%
RUSSELL 2000	1521.629	343.26	343.29%
S&P 500	2743.07	676.53	305.46%
German Dax	11457.84	3692.03	210.34%
MSCI World Index	2051.12	684.07	199.84%
US 2yr Yield	2.45%	0.96%	155.21%
Cotton	0.6899	0.3593	92.01%
Copper	2.894	1.630	77.60%
Live Cattle	128	81.72	56.63%
Gold	1298.17	922.78	40.68%
China Shanghai Composite	2970.24	2118.75	40.19%
Case-Shiller US Home Prices	205.35	146.52	40.15%
Crude Oil	56.12	47.07	19.23%
Silver	15.323	13.013	17.76%
Aussie Dollar	0.7045	0.6316	11.55%
Wheat	466.5	452.5	3.09%
Soybeans	840.5	860.5	-2.32%
Canadian Dollar	0.7450	0.7715	-3.43%
Corn	356.25	371.50	-4.10%
British Pound	1.3012	1.3816	-5.82%
US 10yr Yield	2.62%	2.89%	-9.34%
Sugar	12.18	13.5	-9.78%
Euro Currency	1.123	1.264	-11.15%
Japanese Yen	0.8995	1.0124	-11.15%
Cocoa	2244	2592	-13.43%
Coffee	124.28	145.28	-14.45%
Lean Hogs	0.5170	0.6100	-15.25%
US 30yr Yield	3.00%	3.59%	-16.43%
Natural Gas	2.865	3.870	-25.97%
VIX	16.05	40.8	-60.66%
German 10yr Yield	0.06%	3.02%	-98.01%

Sources: Commodity markets = barcharts.com 'cash' contract, Stock indices = Yahoo Finance, Bond yields, Home prices = FRED, Bitcoin = coinbase.com

In all fairness, very few knew about bitcoin in March 2009 and it is unlikely that investment professionals could have been able to make such recommendation. Many market observers became aware of bitcoin during its most recent bull run (December 2017) and subsequent drawdown. But how many observed higher lows and higher highs in its history.

What if some investment professionals regulated by IROC and/or the CSA read bitcoin as a computing revolution (and not just a financial one)? What if they see bitcoin as a resilient computing system? What if they believe bitcoin is a worthy hedge against disruption in the business model of securities (such as AWS, Google, Facebook, Visa,) they own in the client's portfolio they manage? What if they assess bitcoin as a global hedge<sup>90</sup>? Why would such tool not be available to them?

Past returns are certainly not an indication of future returns, but if bitcoin succeeds, now that pretty much everyone knows it exists, advisors' clients may ask why a small allocation of their portfolio was not invested in it. They may also question why crypto funds<sup>91 92</sup> were available to accredited investors<sup>93</sup> and not to the mass market investors. They may question why and how inserting bitcoin in a securities format transformed it into a product available to just a few (already rich people)? If 1% of Bob's portfolio can benefit from it, why can't a 1% also be available to Alice?

Who is accountable for the risk-adjusted returns delivered to clients? Who is responsible to look at the peer-to-peer statistics? Who is responsible for the fairness of opportunities? The securities regulators, the investment dealers or the investment advisors?

<sup>90</sup> <https://www.cnbc.com/2019/05/13/bitcoin-emerges-as-a-global-hedge-while-stocks-tumble-in-us-china-trade-war.html> (05/13/19)

<sup>91</sup> <https://rivemont.ca/en/rivemont-crypto-fund/> (04/25/19)

<sup>92</sup> <https://3iq.ca/3iq-global-cryptoasset-fund/> (04/25/19)

<sup>93</sup> <http://accreditedcapitalcorp.com/cadosc45.php> (04/25/19)





## 4. The crux of the issue

### 4.1 Problem: Custodial exchanges & the misuse of funds

21-402 tries to cast a very wide net when it is really trying to address one fundamental challenge: audit and custody. The problematic situation recently highlighted in Canada with QuadrigaCX is not a new situation or an isolated event. In fact, there has been over USD\$1,3 billion worth of cryptocurrency stolen at exchanges since 2009<sup>94</sup>. The problem exists but casting as wide as 21-402 is trying to may create the risk that securities regulators may step out of their jurisdiction, create unnecessary delays and costs while failing to accomplish what matters most: consumer protection.

The problematic situation primarily arises from platforms who offer both transactional and safe keeping (custodial) services. But not all exchanges or applications are custodial. Platforms offering custodial services have safekeeping responsibilities and are exposed to several risks such as: internal/external hacks and frauds, key personnel risk and critical errors.

Despite the adage, *not your keys, not your coins*, many end up leaving their crypto assets on exchange platforms. Some do it because they want to trade, while others may lack the know-how to self-custody or have other reasons to use a third party. This custodial relationship is what places the platform in a position to potentially misuse the client's funds and to run a fractional reserve system.

The crux of the issue is proving the solvency of the exchange. Do they have on-hand all the crypto they say they have and should have? They may be transforming a custodial service into a bank-like mechanism. In the traditional banking system, all depositors cannot withdraw their cash at once because their money has been lent by the bank. This is partially how money is created and permits borrowers to access lending products such as mortgages and personal loans. When they are not outright frauds, custodial exchanges operating a bank-like fractional reserve system, should disclose their solvency ratio and unless they have the in-house expertise, may run into several problems such as regulatory, cash management, treasury management. This is a consumer's right protection issue. Proving reserves and solvency will demonstrate there is no misuse of funds.

Similar challenge (proof-of-reserves) can also occur in the gold market. Could the gold audit for investment trusts, *technically* be cheated? Yes. The trust is on the audit process to demonstrate that there is, *at all times*, sufficient gold bullions to back funds held in the investment structure.

Similar challenge (*proof-of-reserve*) can also occur with traditional financial institutions. Could a bank misuse client cash? Yes. This 2016 example<sup>95</sup> from Merrill Lynch shows it happened.

This is not a problem which is unique to the crypto-asset industry. However, bitcoin could offer a level of transparency and real-time auditability that no other assets have been able to provide up to now. Bitcoin reserves can be verified at no cost, with little effort and with mathematical precision using public key cryptography<sup>96</sup>.

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<sup>94</sup> <https://www.aon.com/unitedkingdom/insights/keeping-cryptocurrency-secure.jsp> (05/14/19)

<sup>95</sup> <https://www.sec.gov/news/pressrelease/2016-128.html> (04/26/19)

<sup>96</sup> To avoid any confusion, this cryptographic proof is not a de facto feature in all crypto-assets (ex: stablecoins).



## 4.2 Solution: Vires in Numeris

As explained in this research piece from Blockstream<sup>97</sup>, it is technically possible to standardize a solution to bitcoin's proof-of-reserves challenge while offering a more uniform way to understand and compare various exchanges. There is still work to be done, but this is an example of a solution that solves for both provability of reserves without revealing themselves.

Another great article by Nic Carter, a partner at Castle Island Ventures<sup>98</sup> explains this custodial challenge and how it can be tackled without compromising privacy.

**It must be understood, that this is not a regulatory problem; this is a technological problem and Bitcoin has the means to offer a level of audit proofs not possible in traditional markets.** This is an opportunity for the bitcoin industry to step up, develop solutions and purge out bad actors by establishing high standards. This is an opportunity for the crypto-currency industry to self-regulate itself, to educate clients and to set rigorous standards. Unwillingness to provide proof-of-reserves by custodial platforms would be seen as suspicious and business should migrate towards strongest propositions.

This is also an opportunity for securities regulators to influence the development of the industry in Canada without stepping outside of their jurisdiction, without stifling innovation all while allowing a home-grown talent pool to flourish.

There are investment funds who want to offer bitcoin exposure in mass-market investment format (such as an ETF). A regulated investment structure investing in physical bitcoin, just like a physical gold investment would occur, is a way for less tech savvy investors and for finance professionals to participate. Securities regulators have the opportunity to influence the exchange platforms and crypto custodians who target non-securities crypto-assets investment funds. This is where securities regulators can be the most effective and achieve the desired outcome of protecting the end investors without having to attempt at regulating all platforms and all crypto-assets all at once.

Securities regulators could take into account the questions gold and real estate have already trailed blazed and provide the investment funds with a list of outcome requirements that are missing for bitcoin. Regulators could express what their objectives are rather than forcing instructions on how to achieve it. This will incentivize platforms and custodian to develop solutions that meet the regulatory desired outcome, should they wish to service investment funds.

As covered in section 2.2, there are non-traditional assets like gold and real estate who have answered several preoccupations of the securities regulators. This leaves much fewer open-ended questions than presented in 21-402. The focus should revolve around custody and be concerned with; wallet architecture, key security, physical protection, cybersecurity program and operational controls.

Lastly, it is important that securities regulators be mindful of not creating unintended consequences with the framework they propose and outcome requirements they may express.

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<sup>97</sup> <https://blockstream.com/2019/02/04/en-standardizing-bitcoin-proof-of-reserves/> (05/05/19)

<sup>98</sup> [https://medium.com/@nic\\_carter/how-to-scale-bitcoin-without-changing-a-thing-bc4750dd16c7](https://medium.com/@nic_carter/how-to-scale-bitcoin-without-changing-a-thing-bc4750dd16c7) (05/05/19)



## 4.3 Unintended consequences

Contrary to gold or cash, bitcoin is much more portable as illustrated in the picture below. Theft prevention has a very different meaning and it is important that well-intended regulators do not introduce risks and vulnerabilities in their requirements when there is a cross-over with this industry.



Source Reddit

### Creating vulnerabilities

Privacy is a major concern as revealing too much information publicly weakens the safety of the exchange and of the custodian. Imposing the disclosure of certain elements pertaining to the preservation of the private keys or security process can be the actual security breach. Funds, custodial exchanges and custodians are honey pots. Not only is it undesirable to publicly disclose the size of the bounty, it is easy to understand that employees with access to the map of the treasure's location are subject to being compromised.

This transparency must be achieved in a way that does not breach privacy which would lead to identifying the pot-of-bitcoin size. Understanding the need for mixing coins will be important. For example, one doesn't need to know how much gold Kitco custodies, it just needs to know that they have the amount they claim to have (zero knowledge proof). From a game theory perspective, crime and specie insurance providers are best positioned to assess security procedures of the assets they insure. They have vested interest in not creating vulnerabilities in the risks they insure. The market for this type of insurance is developing and so is institutional grade custody solutions

Privacy is also a major concern for individual clients. Money Service Businesses with AML/KYC requirements (such as Kitco or crypto-exchanges) have the dual responsibility to both comply with regulatory requirement and preserving with the highest possible standards the identification of the clients. They are also the custodian of personal and sensitive information. This ID custody is a regulatory requirement. How can one ensure that this regulatory requirement doesn't become another honey pot for bad actors?

Even though this is not a 2019 problem, and unlikely a securities regulator's consideration, we nevertheless may, in the future, face a disadvantageous situation for humans versus machines. A decentralized digitally native payment system can service the economic relationship needs of non-biological users like software and connected devices. What if in time, my connected-refrigerator needs to transact directly with a retailer to replenish supplies? What if my personal artificial intelligence assistant needs to buy more RAM with crypto. Point is some forward-looking situations will arise outside the scope of securities regulation. It is important to leave room for innovation to breathe as we don't know the future holds.



## Conclusion

Regulators in general, not just securities regulators, are placed in a difficult situation when confronted to change. This is best illustrated by a quote from Elon Musk's biography<sup>99</sup>:

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*"There is a fundamental problem with regulators. If a regulator agrees to change a rule and something bad happens, they could easily lose their career. Whereas if they change a rule and something good happens, they don't get a reward. So, it's very asymmetric. It's then very easy to understand why regulators resist changing the rules. It's because there is a big punishment on one side and no reward on the other. How would any rational person behave in such a scenario?"*

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Crypto-assets are mind-bending and they force various regulatory agencies to think differently. Traditionally, financial regulation was split in distinct buckets such as commodities, securities and money. Crypto-assets are blurring these lines. What lies ahead of us is the potential for global, open and interoperable exchange of value just like data. Amongst other things, this has an impact on notions of ownership, storage and custody that were traditionally serviced by securities dealers. This is a solid paradigm shift.

Canadian securities regulators are not the only one struggling with this challenge. However, individuals like SEC Commissioner Hester M. Peirce are expressing concerns shared by the industry participants. These quotes are taken from her most recent allocution (four days ago)<sup>100</sup>:

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*I worried that, by contrast, a regulatory sandbox, something the SEC had been urged to establish, would tempt the Commission to "grab hold of the shovels and buckets" and meddle in the building of sandcastles. It is not the regulator's job to get involved in the creative process, and, in any case, creativity is not the regulator's strong suit.*

(...)

*It is not the SEC's overzealous action that has stifled the crypto industry, but its unwillingness to take meaningful action at all.*

*Forbearance on the part of a regulator is often appropriate, especially in the interest of allowing market forces, rather than knee-jerk regulatory impulses, to shape a developing industry. The problem is that the securities laws do not cease to operate as a new industry develops. Consequently, individuals and companies in the industry must comply with our securities laws or risk becoming the subject of an enforcement action. It is therefore our duty as a regulator to provide the public with clear guidance as to how people can comply with our law. We have not yet fulfilled this duty.*

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<sup>99</sup> Elon Musk by Ashlee Vance (page 242)

<sup>100</sup> <https://www.sec.gov/news/speech/peirce-how-we-howey-050919> (05/13/19)



I invite Canadian securities regulators to clearly state, in plain English, what is a crypto-assets security. Then, businesses, entrepreneurs, investors and clients will know if they are concerned or not with 21-402. Failure to do so, may create costs, delays and move projects and businesses who want to do things right in a jurisdiction that offers greater clarity.

Some platforms and service providers may want to service only non-securities crypto like bitcoin and their endeavors may be stalled by lack of clarity. It would be quite unfair to them to be stalled by a securities regulator, when they are not dealing in securities.

While securities regulators are trying to regulate very broadly with 21-402, they may miss the low hanging fruit and the opportunity to directly influence the development of the industry by allowing the inclusion of bitcoin in a regulated securities format. They risk imposing regulatory standards that are disproportionate in comparison to previously approved structured containing different, but comparable risks.

I also invite Canadian securities regulators to not paint the entire industry with the same brush and to be mindful of the stigmatization they can create on legitimate entrepreneurs who are trying to build a business to service Canadians. Good actors in this ecosystem have a vested interest in protecting the public against charlatans.

Bitcoin is not a security, therefore not a securities regulator's matter.

Thank you

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