

**Public Session Minutes for the Meeting of May 31, 2018
10:00 a.m. to 10:50 a.m., ERC 3023**

Attendees: Stephanie Chow (Chair), Craig Elliott (non-voting), Thorsten Koseck, Susan McGovern (non-voting), Steven Murphy, Yowsif Yakub

Staff: Becky Dinwoodie, Cheryl Foy

Guests: Leila Fiouzi, Karim Hamasni and Taylor Woodward from PH&N

Regrets: Nigel Allen, Doug Allingham

1. Call to Order

The Chair called the meeting to order at 10:08 a.m.

2. Agenda

Upon a motion duly made by T. Koseck and seconded by S. Murphy, the Agenda was approved as presented.

3. Conflict of Interest Declaration

There were no conflict of interest declarations.

4. Chair's Remarks

The Chair thanked N. Allen for chairing the last meeting in her absence. She welcomed S. Murphy to his first Investment Committee meeting.

5. Approval of Minutes of the Meeting of February 21, 2018

Upon a motion duly made by T. Koseck and seconded by S. Murphy, the Minutes were approved as presented.

6. Investment Review

6.1 Fourth Quarter Investment Review

(Y. Yakub arrived at 10:11 a.m.)

L. Fiouzi reviewed the fourth quarter portfolio performance, which was +.70 above the benchmark. The annual investment management fees are currently 37 basis points. The portfolio is slightly overweight in equities.

6.2 Investment Learning – Cryptocurrency

K. Hamasni delivered a presentation on Blockchain and Cryptocurrencies. He started by discussing the evolution of money. Money must be durable, portable, divisible and scarce and is essentially a system of record keeping. Today, money is mostly entries on a digital register. The digital record keeping system requires a lot of trust.

BITCOIN

The goal of bitcoin is to create a decentralized digital money system. K. Hamasni reviewed the challenges of using digital files as money. The Blockchain system is a mesh network of computer nodes. A master copy of the balance tracking ledger is distributed to all of the nodes.

Benefit of a Distributed Ledger:

- Hackers would have to hack every single node in order to alter the ledger

It is the first time that we can synchronize data across a distributed network with no centralized authority. Achieving consensus through bitcoin mining is what makes the system possible. K. Hamani explained that there is a high cost to falsifying transactions, as well as a high cost to mining since it uses a lot of electricity.

Bitcoin Wallet:

- private key
- public key
- if you were to lose your private key, it would likely be impossible to recover your bitcoin

Economics of Bitcoin:

- predefined & controlled rate of supply – will not exceed 21M
- every bitcoin mining transaction requires 215KWh per hour of electricity
- there is a small fee associated with bitcoin transactions
- by 2140, when all of the bitcoin has been mined, the transaction fees will be the incentive to mine
- the transactions with the biggest fees will be given priority by miners
- supply & demand gives bitcoin its value
- 70+ market exchanges worldwide where can exchange for bitcoin

- treated by many as an investment
- Bitcoin meets 4 criteria of money: durable, portable, divisible, scarce
- However, it is very volatile – this is holding it back from becoming a currency

ETHEREUM:

- can run complete applications known as **smart contracts** in a decentralized way
- once a smart contract is deployed, contract is tamper proof
- network handles whole commercial transaction & acts as the middle man
- true global peer-to-peer commerce

Three Pillars of Banking:

- cryptocurrency meets criteria of 3 pillars of banking
- Ernst & Young monitoring this as accounting is built into the system
- K. Hamasni discussed how Blockchain technology would be useful to countries without infrastructure (e.g. Ministry of Transportation not necessary to prove vehicle ownership)
- reduces administration

Risks of Cryptocurrency

- transactions are irreversible
- private keys cannot be recovered if lost or destroyed
- technology has issues scaling up to wide use
- extreme price volatility – risky as an investment
- lack of a trusted name makes user susceptible to scams

K. Hamasni answered questions from the committee. He discussed private Blockchains, as well as the anonymity of the system and the tools that can be used to identify users.

RBC is preparing for future investing in cryptocurrency; however, today it is still too risky of an investment.

7. Other Business

8. Adjournment

There being no other business, upon a motion duly made by T. Koseck and seconded by Y. Yakub, the public session of the meeting adjourned at 10:59 a.m.

Becky Dinwoodie, Secretary