



CENTRAL BANK OF
TRINIDAD & TOBAGO

Payments Quarterly

Payments Quarterly is a newsletter on developments in the Payments System in Trinidad and Tobago

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Please see our full contact details on the last page.

In this edition of Payments Quarterly:

We give an update on Bitcoins which have encountered many challenges since the debut article in our June 2013 Payments Quarterly. As you may recall a virtual currency is defined as "a medium exchange that operates like currency but doesn't have the attributes of real currency. In particular, it does not have legal tender status in any jurisdiction. It is unregulated, digital money, which is issued and usually controlled by its developers and used and accepted among the members of a specific virtual community..."¹

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Also featured is the final guideline in a series of Payments System guidelines issued by the Central Bank of Trinidad and Tobago in 2012. In the previous Payments Quarterly, Guideline Number Three on the Operation of Payment Service Providers was discussed. This issue focuses on key aspects of Guideline Number Four, Oversight of Systemically Important Payment Systems. The Operator's Spot, provides highlights on the Government Securities Settlement (GSS) System.

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¹ ConvergEx Group is a provider of global brokerage and trading-related services for institutional investors and financial intermediaries.

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Bitcoin, is it here to stay? - Part II

In the June 2013 edition of the Payments Quarterly we featured an article on the virtual currency, Bitcoin. Since then numerous issues concerning this virtual currency have surfaced, including the recent malfunctioning of the Bitcoin software and the loss of significant amounts of bitcoins from Mt. Gox, the once largest Bitcoin exchange that subsequently resulted in its filing for

bankruptcy; the use of Bitcoins for illicit activities (money laundering and narcotics) that have led to several arrests in the United States; and the mounting pressure on regulators globally to make pronouncements on whether it is a currency or commodity and if it should be regulated. These challenges along with the use of bitcoin for speculative purposes have contributed to the volatility of the bitcoin which has fluctuated significantly in price over the last several months.

There were over 11.5 million Bitcoins in circulation valued at US\$1.2 billion² in mid-2013, by December 2013 the total value peaked at US\$14.5 billion but has since declined to US\$6.9 million with over 12.3 million Bitcoins in circulation.³ See Chart 1.

The use of Bitcoin to pay for goods and services is growing and more businesses are putting systems in place to allow for payment by Bitcoins and in certain jurisdictions Bitcoin ATMs are being installed. However, questions about its use for illegal transactions have become a source of concern for regulators internationally. "Virtual currency" has been defined as 'a medium of exchange that operates like a currency in some environments, but does not have all the attributes of real currency. While there has been no central agency monitoring the system, certain countries are seeking to develop laws and regulations to address virtual currencies⁴. See Table1.



² <http://ivn.us/2013/08/20/the-uncertain-future-of-bitcoins/>

³ <http://blockchain.info/charts>

⁴ <http://www.theguardian.com/technology/2014/jan/27/bitcoin-foundation-vice-chair-arrested-money-laundering>

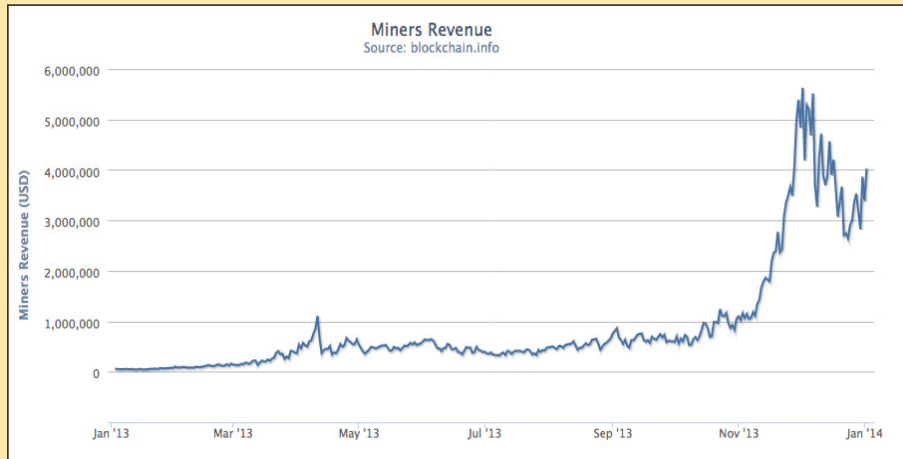
Bitcoin, is it here to stay? - Part II (cont'd).

Among the first agencies to consider the economic consequences of virtual currencies, the European Central Bank developed a white paper advising Central Banks to guard against losing control over monetary policy. Despite the warning, some regulators have allowed Bitcoin to develop with minimal interference, expressing the opinion that the meager level of activity in Bitcoin would not have a considerable impact on financial stability. Conversely, in other jurisdictions, the market for Bitcoin has become quite significant and regulators have taken a stronger stance.

In China one of the largest markets for Bitcoin, financial institutions and payments companies have been prohibited by the People's Bank of China from handling virtual currencies. This move by China triggered a price crash as some retailers stopped accepting payment in Bitcoin,

even as the authorities indicated that members of the public were free to trade in the currency at their own risk. In Asia, where there are certain pre-existing controls with regard to currency and capital, the

Chart 1: Bitcoin Market Value



Source: <http://blockchain.info/charts>

environment for Bitcoin has been described as very "chilly".

In the United States proposed regulation on Bitcoin is on the way. The New York Department of Financial Services conducted a panel discussion to examine how to

regulate virtual currencies as the authorities in the United States of America are currently trying to treat with the potential use of the anonymous exchange of the virtual currency for illicit activities. The idea of a 'BitLicense' for Bitcoin Exchanges and money transmitters is being explored and discussions are well underway for the development of a regulatory framework for virtual currency companies.

Certain countries have taken measures to either cut back on the use of virtual currencies or as in the case of Russia, advised their populations that virtual currencies are money substitutes and cannot be used by individuals or legal entities.

In Trinidad and Tobago, the concept of virtual currency is somewhat addressed under the framework established for electronic money by the Financial Institution's Act, 2008 (The Act)⁶. The Act treats with the issuance of virtual currency as stored value, issued on receipt of funds and accepted as payment by persons other than the issuer. This activity is defined within the context of 'business of a financial nature' and requires the approval of the Central Bank.

There have been several assertions made in regional publications (or newspapers) that the introduction of virtual currencies may be imminent in the Caribbean. Potential users of this product must be aware of the risks involved in investing in virtual currencies as regulators seek to establish appropriate frameworks to ensure the continued safe operation of the payments system and the smooth conduct of monetary policy.

Table 1: International position on Bitcoin

COUNTRY	CURRENCY STATUS	REGULATION
CANADA	Does not consider Bitcoins to be legal tender.	Continues to "monitor developments involving virtual currencies". Users will have to pay taxes on transactions in digital currency.
CHINA	Defined as a special 'virtual commodity'; not a currency and should not be circulated and used as such.	Issued a Notice on Precautions Against the Risks of Bitcoins and the need to strengthen the oversight of Internet websites. Banks and payment institutions are prohibited from dealing in Bitcoins.
EUROPEAN UNION	No clear position	Not currently regulated but issued a warning advising on the dangers associated with transactions. There is also the possibility that users may incur taxes on Bitcoin transactions.
GERMANY	Issued a communication (December 2013) stating that Bitcoins are legally binding financial instruments.	Not supervised as regulators have advised that the current nature of transactions does not require bank supervisory licensing. Currently discussing the implementation of taxes on Bitcoin transactions.
RUSSIA	Russian Law currently only recognizes the Russian ruble as the exclusive means of payment.	Monitoring developments, however, has not excluded the possibility of future regulation.
UNITED KINGDOM	No official statement	Currently unregulated, however, review was done. Liable to a value added tax of 10-20%

Adapted from: <http://www.loc.gov/law/help/bitcoin-survey/index.php>

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⁵ <http://www.ft.com/intl/cms/s/0/b750f70c-7c97-11e3-b514-00144feabd0.html#axzz2ta9fZdc5>
⁶ <http://www.central-bank.org.tt/pdf/Legislation/Financial%20Institutions%20Act%202008.pdf>

GUIDELINES FOR THE REGULATION OF PAYMENTS SYSTEM IN TRINIDAD AND TOBAGO

The Central Bank issued four (4) Guidelines for the Licensing and Operation of Interbank Payment Systems in 2012. In the previous 2013 editions of the Payments Quarterly newsletter, Guidelines Number 1, 2 and 3 were highlighted. In this issue we present Guideline Number 4 which focuses on the Oversight of Systemically Important Payment Systems (SIPS).

A system is considered systemically important if problems in the system could have widespread or system-wide consequences.⁷ In Trinidad and Tobago these systems comprise of:

- i. Large value fund transfer systems – Real Time Gross Settlement (RTGS) system, and
- ii. Retail payments systems –such as the Automated Clearing House, Cheque Clearing System, and payment card systems for Electronic Funds Transfer at point of sale (POS) and ATM transactions (LINX).

Payment systems other than those identified as systemic will be subjected to a lighter oversight framework involving a process of registration (as opposed to licensing) and less stringent reporting requirements.

The main elements in the oversight of SIPS are summarized below.

Reporting by SIPS Operators

The Operator of SIPS must submit its Annual report and Auditor's report to the Central Bank within 3 months of its financial year-end. Additionally, the Operator may be required to submit any other report or transaction data deemed necessary by the Central Bank. Particular emphasis is placed on information pertaining to:

- a) The adequacy of the internal controls of the Operator's Payment System;
- b) The Operator's non-compliance with pertinent provisions in the Central Bank Act (CBA), Financial Institutions Act (FIA), directions issued under these Acts, and other relevant laws, regulations or guidelines.

Source:

⁷ Payments System Oversight Policy – Central Bank of Trinidad and Tobago, December 2006.

⁸ The Central Bank may enter into co-operation or information-sharing with any local or foreign regulatory agency or body that oversees payment systems.

⁹ <http://www.bis.org/publ/cpss43.pdf>

¹⁰ <http://www.bis.org/publ/cpss101a.pdf>

Notification to the Central Bank of Certain Events

SIPS operators are expected to notify the Inspector of Financial Institutions within 5 days of any of the following occurrences:

- a) Any legal proceeding instituted against the Operator;
- b) Disciplinary action taken against a participant;
- c) Any disruptions in the availability of the system or failure of settlement.

Imposition of Access Regimes

An Access Regime is the entitlement and eligibility of persons to become Participants in or Operators of a payment system. The Access regime also includes the terms and conditions of participation in the system with respect to fees, charges and participant criteria.

When imposing an access regime, the Central Bank will:

- a) Publish it on its website;
- b) Regard it as in force on the day the decision to implement the regime is made or another specified day;
- c) Based on its discretion, set the access regime for a specified timeframe;
- d) Outline the requirements for application for revocation.

Once in force, an access regime:

- a) May be varied by the Central Bank based on relevant factors;
- b) May result in a direction being given in writing to an Operator or Participant if there is failure to comply;
- c) May expire once an expiration date is given;
- d) May be revoked by the Central Bank or if the system ceases to exist.

The Central Bank will give written notice (at least 5 days) before the effective date of its intention to adjust or rescind an access regime.

Principles for the Operation of Payment Systems

To ensure the safe and sound operation of the payment system, the Central Bank requires certain

basic principles to be observed by the Operators. Highlighted below are the principles upon which payment systems are assessed:

- a) The strength of the system's rules and procedures regulating the system's activity, the documentation of same and their accessibility to participants;
- b) The understanding and treatment of risk by operators and participants;
- c) The efficiency and timeliness of completion of the settlement process;
- d) The security, reliability and robustness of the system; and
- e) The adequacy of the system's governance arrangements.

Compliance Assessment

The Central Bank conducts regular reviews of the operations of each SIPS. The standards for evaluation are the Core Principles for SIPS established by the Bank for International Settlements (BIS).

The assessment methodology may be amended or changed by the Central Bank in order to introduce, vary or revoke principles. Any changes will be promptly conveyed to payment system operators.

Upon completion of a review the Central Bank is obliged to share its findings and recommendations with the relevant Operator.

Management of Disputes

All payment systems are required to implement systems for the management of disputes. The Central Bank may establish arrangements for the settlement of disputes if it determines that these issues can affect the safety and efficiency of the payment system.

Information Sharing

Section 100 of the FIA⁸ allows the Central Bank to enter into cooperation or information sharing with any local or foreign regulatory agency or body that oversees the payment system by Memoranda of Understanding.

It should be noted that this guideline is subject to change once the new standards for Payments System Oversight have been implemented. The 10 Core Principles⁹ currently used to assess the Payments System will be replaced by new Principles for Financial Market Infrastructures (PFMIs)¹⁰ established by the Bank for International Settlements (BIS). ■

Contributor:
Payments System Department
Central Bank of Trinidad and Tobago.

OPERATOR'S SPOT: THE GSS SYSTEM

The Government Securities Settlement (GSS) system is an electronic auction and registry system for domestic government and government-guaranteed securities. The Domestic Market Operations department of the Central Bank of Trinidad and Tobago oversees the operation of the GSS.

Activity on the GSS system consists primarily of the issuance of three types of securities; namely, treasury bills (for debt management and open market operations purposes), treasury notes and bonds. Institutions authorized to trade in government securities on the primary market (called Government Securities Intermediaries), and those which trade in treasury bills and notes (called primary dealers) are linked to the GSS system. In turn the GSS is linked to the Real Time Gross Settlement system (the RTGS) to facilitate

the settlement of government securities transactions and the simultaneous recording of the ownership of securities in the depository.

In 2013, there were 36 such treasury bill issues with face values ranging between \$50 million and \$100 million and with tenors of three and six months. Treasury bills and treasury notes issued for open market operations are offered only to commercial banks and other designated primary dealers for the Bank's execution of monetary policy. OMO treasury bills are issued with a tenor of up to one year, while OMO treasury notes may have a tenor between 366 days and up to five years. There were 120 issues of OMO bills and notes during calendar year 2013, at a total cost basis of \$24.130 billion. The average nominal OMO issue size was approximately \$200 million, with auction sizes ranging from \$50 million to \$535 million.

The Central Bank auctioned three bonds via the GSS system in 2013 - two (2) on behalf of Government and one (1) on behalf of a state enterprise. Two of the bonds were issued at a premium, (with the yield to maturity at auction below the coupon rate), while the other was issued at par. The bid-to-cover ratio, which is the ratio of the total bids received to total issue size, averaged 1.7 to 1, with a high of 2.8 to 1 and a low of 0.9 to 1. There were also two maturities of Government bonds on the GSS system in 2013, comprising two amortizing bonds, each with an original face value of \$250 million.

A full version upgrade to the GSS system was implemented in September 2013. This upgrade was geared primarily towards enhancing the system's operational and reporting functionality. ■

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Domestic Market Operations
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The Central Bank of Trinidad and Tobago, through the Payments System Department, launched an internal educational programme for staff on electronic payments (called e-pay today) in October 2013 which ran for three months. At the end of each month, an online quiz was given to staff. Participants were asked to answer questions on the ACH and RTGS systems¹¹ as well as, payment cards, ATM and POS machines.

The Payment Systems Department would like to thank staff for participating and congratulate the following winners:

ACH Quiz 1 October 31st 2013	Dana Le Ben Lena Persad-Bindoo Renee Samuel Barry Mitchell Lorna Moore Gail Marshall-Daniel Kevin Jack Cheryl Beckles-Forde Pearl Harris Cherylann Wiltshire
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RTGS Quiz 2 November 29th 2013	Lena Persad-Bindoo Cherylann Wiltshire Gail Marshall-Daniel Renee-Anne Landeau-Creece Pearl Harris Beverly Moore Sherry-Ann Persad Dana le Ben Laurraine Gonzales Renee Samuel
Know Your Card & Machines Quiz 3 January 10th 2014	Renee-Anne Landeau-Creece Sherry Ann Persad Yentl Figaro-Chandler Anderson Alexander

¹¹ A full list of questions and answers will be available on the Central Bank's Intranet soon.

Payments Glossary



Here are 8 terms applicable to the Payments System:

1. Automated Clearing House (ACH)	An electronic clearing system in which payment orders are exchanged among financial institutions, primarily via magnetic media of telecommunication networks, and handled by a data-processing centre.
2. Systemically Important Payment System (SIPS)	A payment system is systemically important where, if the system were insufficiently protected against risk, disruption within it could trigger or transmit further disruptions amongst participants or systemic disruptions in the financial area more widely.
3. Debit Card	A card enabling the holder to have his purchases directly charged to funds on his account at a deposit-taking institution (may sometimes be combined with another function e.g. that of a cash card or cheque guarantee card).
4. Operator	The Central Bank or the person operating an Interbank Payment System or a Licensed Interbank Payment System.
5. Participant	A person who participates in a Protected System in accordance with the Rules and Procedures of the protected system.
6. Security	A general term for stocks, bonds, options, subscription rights, warrants and other tradable investments that confer a right to income or ownership. Commodities and foreign exchange are not included under this term. Also, the collateral that is pledged to secure a loan.
7. Open Market Operations	Central bank intervention in the money markets, where it buys and sells securities in order to control the money supply and the level of interest rates.
8. Real-Time Gross Settlement	The continuous (real-time) settlement of funds or securities transfers individually on an order by order basis (without netting).

Source: A Glossary of Terms used in Payments and Settlement Systems, BIS, March 2003. Except Operator and Participant - Financial Institutions Act 2008. Security and Open Market Operations – Financial Times Lexicon - <http://lexicon.ft.com/Term?term=security>.

Payments Quarterly Volume Meter				
<i>RTGS, ACH and Cheques Volumes, 2010 - 2013</i>				
(Million)				
	2010	2011	2012	2013
RTGS¹²	0.05	0.05	0.05	0.06
ACH	2.89	3.13	3.41	3.62
Cheques	9.65	9.46	9.75	9.2
Total	12.59	12.64	13.21	12.88

Source: Central Bank of Trinidad and Tobago, Trinidad and Tobago Interbank Payments System Ltd.

¹² The Real Time Gross Settlement (RTGS) system is also called Settlement Assured for Financial Exchanges in Trinidad & Tobago (Safe-tt)

If you require any further details or would like to offer any suggestions, please contact the Payments System Department at the Central Bank of Trinidad and Tobago at Phone number: 1 (868) 625-4835 ext. 2719; or send an email to: rtgs@central-bank.org.tt