

## REPORT ON THE MASTER THESIS

IEPS – International Economic and Political Studies, Faculty of Social Sciences, Charles University

<b>Title of the thesis:</b>	<b>What Determines the Price of Bitcoin?</b>
<b>Author of the thesis:</b>	<b>Bc. Hugo Vozak</b>
<b>Referee (incl. titles):</b>	<b>Prof. Ing. Oldřich Dědek, CSc.</b>

**Remark:** It is a standard at the FSV UK that the Referee's Report is at least 500 words long. In case you will assess the thesis as "non-defendable", please explain the concrete reasons for that in detail.

### **SUMMARY OF POINTS AWARDED** (for details, see below):

<b>CATEGORY</b>	<b>POINTS</b>
<i>Theoretical background (max. 20)</i>	18
<i>Contribution (max. 20)</i>	18
<i>Methods (max. 20)</i>	20
<i>Literature (max. 20)</i>	16
<i>Manuscript form (max. 20)</i>	18
<b>TOTAL POINTS (max. 100)</b>	<b>90</b>
<b>The proposed grade (1-2-3-4)</b>	<b>1</b>

You can even use a decimal point (e.g. giving the grade of 2.5 for 60 points).

### **Comments of the referee on the thesis highlights and shortcomings (following the 5 numbered aspects of your assessment indicated below).**

#### **1) Theoretical background:**

The author combines his vivid interest in the issue of virtual currencies with an effort to equip his understanding of this specific segment of financial markets with useful insights of economic theory. First of all, he demonstrates remarkable knowledge of the practical functioning of the digital money on which he puts a layer of economic theory of money. The central place of the theoretical part is occupied by the Wang model, which is based on the mainstream equation of exchange. This model serves as a point of departure for research hypotheses, whose relevance is verified by using advanced techniques of econometric analysis.

#### **2) Contribution:**

The master thesis provides a genuine added value by arousing interest in the issue. It shows that without deeper knowledge of electronic money systems and cryptography one cannot penetrate more deeply into the secrets and the logic of the modern phenomenon, which the market with bitcoins definitely is. The discussion of bitcoins from the perspective of traditional functions of money (medium of exchange, unit of account and store of value) is also illuminating. It is praiseworthy that the undisputed cheering of unregulated currency, so typical for young generation, does not prevent the author to identify and acknowledge some fundamental weaknesses of bitcoins, particularly with regard to preserving purchasing power in the light of occasional sharp price fluctuations in bitcoin price. After all, the author concludes that the ambition of bitcoins was never to compete with fiat money. However, this conclusion is not completely supported by the evidence about the growing attention that this virtual currency is paid by monetary and fiscal authorities.

#### **3) Methods:**

The author applies the Wang model as a theoretical background supporting two main investigated hypotheses: H1: The price of bitcoin is not Influenced by changes in the trade volume and H2: The price of bitcoin is determined by the likelihood that a bitcoin will be saved. Despite the perfect cooperation with the supervisor there are still some unclear points, which may require further explanation. For example, why in the final price equation on page 29 the price of bitcoin is in an inverse relationship with the variable called "likelihood that a bitcoin is transacted," although

hypotheses H2 operates with a variable "likelihood that an individual bitcoin is saved." It is also unclear whether the author considers the sum of these two likelihoods equal to one, since the respective formula presented in the middle of the same page is not entirely clear.

**4) Literature:**

The author demonstrated that his knowledge of the problem is supported by the study of relevant literature. This literature encompasses both the practical aspects of the functioning of bitcoin, as well as available theoretical sources.

**5) Manuscript form:**

The undisputable comparative advantage of the thesis is perfect English thanks to the nationality of the author. He demonstrates the ability of expressing ideas in exact way.

**DATE OF EVALUATION: 3 June 2015**

***prof. Ing. Oldřich Dědek, CSc.***

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***Referee Signature***

**The referee should give comments to the following requirements:**

**1) THEORETICAL BACKGROUND:** Can you recognize that the thesis was guided by some **theoretical fundamentals** relevant for this thesis topic? Were some important theoretical concepts omitted? Was the theory used in the thesis consistently incorporated with the topic and hypotheses tested?

Strong                      Average                      Weak  
20                              10                              0                      points

**2) CONTRIBUTION:** Evaluate if the author presents **original ideas** on the topic and aims at demonstrating **critical thinking** and ability to draw conclusions based on the knowledge of relevant theory and relevant empirical material. Is there a distinct **value added** of the thesis (relative to knowledge of a university-educated person interested in given topic)? Did the author explain **why** the observed phenomena occurred? Were the policy implications well founded?

Strong                      Average                      Weak  
20                              10                              0                      points

**3) METHODS:** Are the **hypotheses** for this study clearly stated, allowing their further verification and testing? Are the theoretical explanations, empirical material and **analytical tools** used in the thesis relevant to the research question being investigated, and adequate to the aspiration level of the study? Is the thesis **topic comprehensively analyzed** and does the thesis not make trivial or irrelevant detours off the main body stated in the thesis proposal? More than 10 points signal an exceptional work, **which requires your explanation "why" it is so**.

Strong                      Average                      Weak  
20                              10                              0                      points

**4) LITERATURE REVIEW:** The thesis demonstrates author's full understanding and **command of recent literature**. The author quotes relevant literature in a proper way and disposes with a representative bibliography. (Remark: references to Wikipedia, websites and newspaper articles are a sign of **poor research**). If they dominate you cannot give more than 8 points. References to books published by prestigious publishers and articles in renowned journals give much better impression.

Strong                      Average                      Weak  
20                              10                              0                      points

**5) MANUSCRIPT FORM:** The thesis is **clear and well structured**. The author uses appropriate language and style, including academic **format** for quotations, graphs and tables. The text effectively refers to graphs and tables, is easily readable and **stimulates thinking**.

Strong                      Average                      Weak  
20                              10                              0                      points

**Overall grading scheme at FSV UK:**

TOTAL POINTS	GRADE	Czech grading	US grading
81 – 100	<b>1</b>	= excellent	= A
61 – 80	<b>2</b>	= good	= B
51 – 60	<b>3</b>	= satisfactory	= C
41 – 50	<b>3</b>	= satisfactory	= D
0 – 40	<b>4</b>	= fail	= not recommended for defence