

Шутова Елена Юрьевна  
Тюменский государственный университет  
Кафедра иностранных языков и международных профессиональных  
коммуникаций  
Старший преподаватель  
[eshutova@mail.ru](mailto:eshutova@mail.ru)

Гордеева Кристина Анатольевна  
Тюменский государственный университет  
Кафедра информационной безопасности  
Студент группы КБ167  
[kriss.gord@gmail.com](mailto:kriss.gord@gmail.com)

### **Криптовалюты**

Shutova Elena Yurevna  
University of Tyumen  
Department of foreign languages and  
intercultural professional communication  
Senior lecturer  
[eshutova@mail.ru](mailto:eshutova@mail.ru)

Gordeeva Kristina Anatol'evna  
University of Tyumen  
Department of information security  
Student of CS167  
[kriss.gord@gmail.com](mailto:kriss.gord@gmail.com)

## CRYPTOCURRENCIES

### **ABSTRACT**

*KEY WORDS: Cryptocurrency; Block chain; Private keys; Wallets; Mining; Advantages and disadvantages of cryptocurrency; Cryptocurrency Examples.*

*The article is headlined “cryptocurrency”. The text is devoted to the history of the development of the cryptocurrency and it’s relevance to date. In the article such technologies as block chain, private keys, wallets and mining are presented. The article gives information about advantages and disadvantages of cryptocurrency and cryptocurrency Examples.*

### **АННОТАЦИЯ**

*КЛЮЧЕВЫЕ СЛОВА: Криптовалюты; Блок Чейн; Приватные ключи; Кошельки; Майнинг; Преимущества и недостатки криптовалют; Примеры криптовалют.*

*Статья озаглавлена «Криптовалюты». Текст посвящен истории развития криптовалюты и её актуальности на сегодняшний день. В статье представлены такие технологии, как блок чейн, приватные ключи, кошельки и майнинг. Статья дает информацию о преимуществах и недостатках криптовалют, и их примеры.*

### **Cryptocurrencies**

Cryptocurrencies, or virtual currencies, are digital means of exchange created and used by people. Most of cryptocurrencies aren’t regulated by governments, so they’re considered alternative currencies.

Cryptocurrencies use cryptographic protocols, or complex code systems that encrypt sensitive data transfers, to secure their units of exchange. Cryptocurrency developers

build these protocols on advanced mathematics and computer engineering principles that render them virtually impossible to break, and thus to duplicate or counterfeit the protected currencies.

Cryptocurrencies are also marked by decentralized control. Cryptocurrencies' value are controlled by the activities of their users and highly complex protocols built into their governing codes, not the conscious decisions of central banks or other regulatory authorities.

Importantly, cryptocurrencies can be exchanged for fiat currencies in special online markets, meaning each has a variable exchange rate with major world currencies.

Cryptocurrency's technical foundations date back to the early 1980s, when an American cryptographer named David Chaum invented a "blinding" algorithm that remains central to modern web-based encryption. The algorithm allowed for secure, unalterable information exchanges between parties, laying the groundwork for future electronic currency transfers. This was known as "blinded money."

A cryptocurrency's block chain is the master ledger that records and stores all prior transactions and activity, validating ownership of all units of the currency at any given point in time. It has a finite length – containing a finite number of transactions – that increases over time.

A cryptocurrency transaction technically isn't finalized until it's added to the block chain, which usually occurs within minutes. Once the transaction is finalized, it's usually irreversible – unlike traditional payment processors, such as PayPal and credit cards, most cryptocurrencies have no built-in refund.

Every cryptocurrency holder has a private key that authenticates their identity and allows to exchange units. Users can make up their own private keys, which are formatted as whole numbers between 1 and 78 digits long, or use a random number

generator to create one. Once they have a key, they can obtain and spend cryptocurrency.

Cryptocurrency users have “wallets” with unique information that confirms them as the temporary owners of their units. Whereas private keys confirm the authenticity of a cryptocurrency transaction, wallets lessen the risk of theft for units that aren't being used.

Miners' work periodically creates new copies of the block chain, adding recent, previously unverified transactions that aren't included in any previous block chain copy – effectively completing those transactions. Each addition is known as a block.

The term “miners” relates to the fact that miners' work literally creates wealth in the form of brand-new cryptocurrency units. In fact, every newly created block chain copy comes with a two-part monetary reward: a fixed number of newly minted (“mined”) cryptocurrency units, and a variable number of existing units collected from optional transaction fees (typically less than 1% of the transaction value) paid by buyers.

Advantages of Cryptocurrency is built-in Scarcity, loosening of government currency monopolies, self-Interested, self-policing communities and fewer barriers and costs to international transactions

But it has cons too, for example, black market activity, potential for financial loss due to data loss and limited to no facility for chargebacks or refunds.

The most popular cryptocurrencies is Bitcoin, Litecoin, Ripple, Ethereum, Dogecoin and Zcash (ZEC).

To the conclusion I want to say, that cryptocurrency is an exciting concept with the power to fundamentally alter global finance for the better.

In the meantime, cryptocurrency users (and nonusers intrigued by cryptocurrency's promise) need to remain ever-mindful of the concept's practical limitations. Any claims that a particular cryptocurrency confers total anonymity or immunity from legal accountability are worthy of deep skepticism, as are claims that individual cryptocurrencies represent foolproof investment opportunities or inflation hedges. After all, gold is often touted as the ultimate inflation hedge, yet it's still subject to wild volatility – more so than many first-world fiat currencies.

## ***REFERENCES***

1. Brian Martucci. Available at: <https://www.moneycrashers.com/cryptocurrency-history-bitcoin-alternatives/>. [Accessed 09/11/2017].
2. Nick Farrell, Jonas DeMuro. Available at: <https://www.techradar.com/news/what-is-bitcoin>. [Accessed 15/11/2017].
3. Noelle Acheson. Available at: <https://www.coindesk.com/information/what-is-bitcoin/>. [Accessed 16/11/2017].