Celtic lab

HYBRID BANK

Hybrid Bank Cash SMART CONTRACT AUDIT REPORT

Introduction

This is a technical audit report for Hybrid Bank Cash token(**HBC**)smart contract. This audit is purely technical and is not for any investment advise.

Only thing it will tell is, Hybrid Bank Cash smart contract is safe to make transactions

Smart Contract Audit goals

Consensys ethereum smart contract security best practices

- Whether the code is written in a simple, readable and security mindset
- Checked the code whether its able to protect against all smart contract known attacks like re-entrancy, race conditions, time stamp dependence, underflow and overflow, DoS attacks like unexpected revert, block gas limit etc
- Checked against gas optimization
- OpenZepplin safeMath library
- Analyze smart contract with various Consensys recommended tools like Mythril, Securify, Smartcheck to name a few. Also used some proprietary developed tools

Primary architecture review

- In depth architecture review
- Code correctness
- Documentation
- Code analysis for syntax errors

Testing against Hybrid Bank Cash requirements

- Testing smart contract against the specified customer requirements which are described in Hybrid Bank Cash White paper and website
- Evaluating the smart contract on Ethereum test network

About Hybrid Bank

Examining the developing interest from the general population and, as an outcome, increment in the estimation of digital money, it very well may be expressed with certainty that virtual monetary forms won't obsolesce, and their worth will only grow.

While there's a raise in the adoption of Cryptocurrencies and number of users are exponentially increasing in the ecosystem, the mainstream Banks still have an upper hand when it comes to Lending money to Crypto products like Exchanges.

Exchanges are primary source for users where one can Buy, Sell and Trade crypto assets. Exchanges need to stabilize and maintain the price of Crypto currencies trading on their platform based on the fluctuations on top exchanges like Binance, Coinbase, Bitmex and likes, which requires the exchanges to borrow emergency funds. With limited options of borrowing avenues, Miners are the primary source for Exchanges. Miners often lend Assets (Bitcoin, Ethereum etc..) at exorbitantly high interest rates. Fusing the traditional Lending methodologies and Banking system with modern crypto currency technology, Hybrid Bank captures this opportunity by becoming a source to Lend to Exchanges at Lower Interest rates by cashing on Exchange users and existing securities of Exchanges as collateral.

Hybrid Bank acts as bridge between Digital Assets and real-world assets while allowing holders to earn interest completely on-chain.

Hybrid Bank Cash Smart Contract Audit

There is a vast market opportunity which is not dominated by any new solution. We are offering easy and affordable solution to the 300+ Exchanges and a stable way to earn for 25 million+ crypto holders.

Hybrid Bank, in collaboration with Technology partner, Elamachain and Proceedings Company, Hybrid Global, brings users a powerful , Intelligent, Regulated and backed with 4th Industrial Technology Tools, to Lend and Earn, by Exchanges, Mining Companies and partnered Exchange users.

This creates an ecosystem of members-only *like* crypto community with access to exclusive Lending and Depository goods.

Hybrid Bank aims to become a Credit Information disclosure system along with unlocking the potential of encrypted assets such that the true value will be recognized and accepted as collateral by Lending, Banking and Non-Banking Financial corporations (NBFCs) not just in Blockchain Financial sector but also in traditional Financial Sector.

Hybrid Bank offers its users a Insured, Free and Secured savings bank like account with smart and varied Interest Rate and Recovery periods to pick from along with intelligently collateralized borrowing options for Exchanges and Mining Companies.

For more information, visit website

About HBC Token

Hybrid bank platform will be powered with HBC token

HBC is an ERC-20 compatible token

The amount of HBC tokens is limited to 10,000,000,000

Token Name : **Hybrid Bank Cash**
Token Symbol : **HBC**
Token Decimals : **18**
Total Supply : **10,000,000,000**

Performed Tests

Performed the following tests on the given smart contract

- Crowdsale is properly initialized with given parameters in the code
- Tested onlyOwner modifier requirement
- pauseTransfer and resumeTransfer functionality
- addToForbiddenAddresses functionality
- removeFromForbiddenAddresses functionality
- burn functionality
- transfer and transferFrom when transfer addresses are in forbiddenAddresses
- HBC token satisfies ERC-20 interface as this is required for crypto exchange listing
- ERC-20 compatible transfer() is available

- Tokens can be transferred with ECR-20 allowance approval
- One cannot transfers more than approved allowance
- transferOwnership and renounceOwnership functionality
- increaseAllowance and decreaseAllowance functionality

Limitations

Security auditing can’t bare all existing vulnerabilities, and even an audit in which no vulnerabilities are found is not a guarantee for a secure smart contract.

However, auditing is there to find out vulnerabilities that are not seen during development and areas where additional security measures are necessary.

We for that reason carry out a source code review to determine all locations that need to be fixed.

Audit company has performed wide spread auditing in order to find out as many vulnerabilities as possible.

Risk

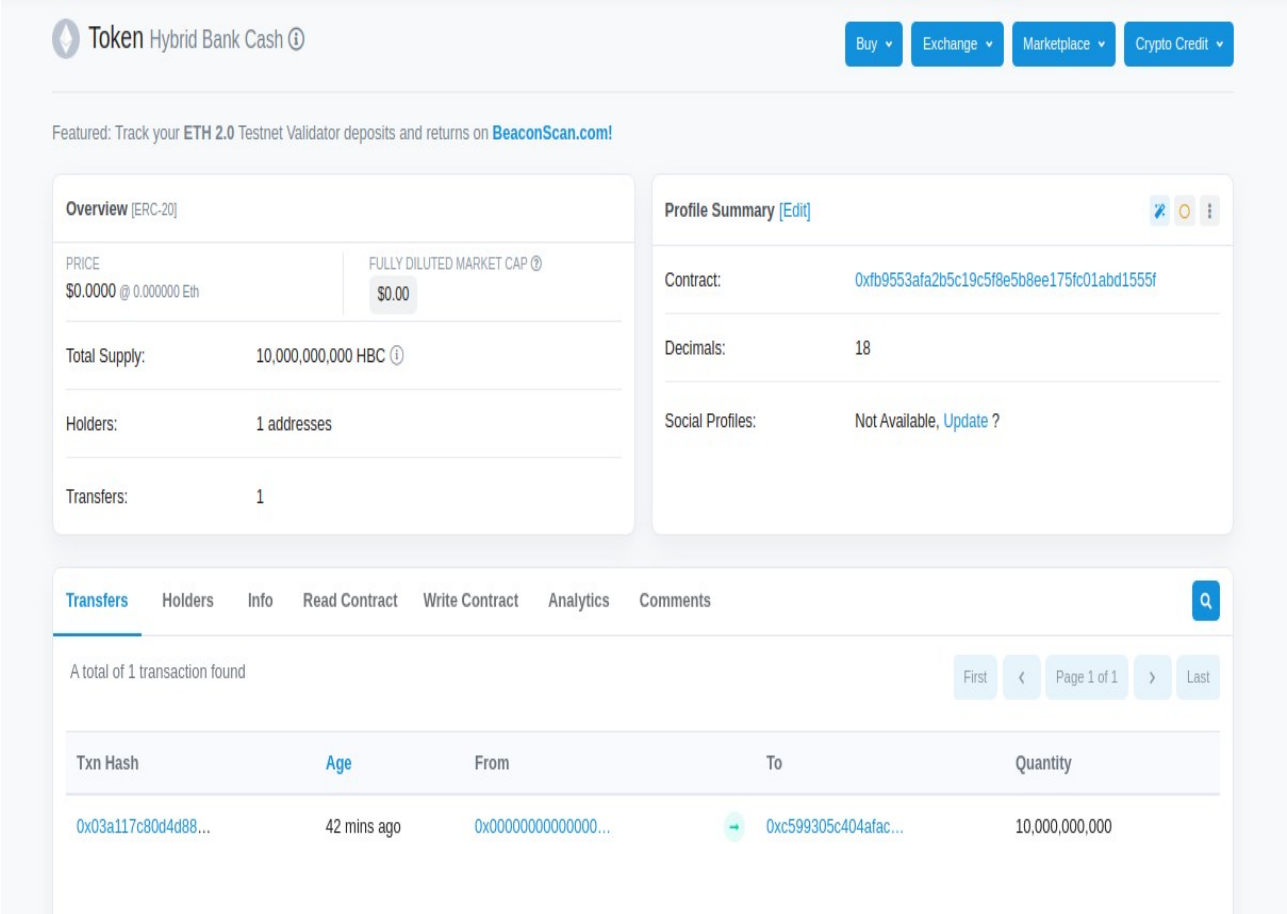
Hybrid Bank Cash Smart Contract has no risk of losing any amounts of ethers in case of external attack or a bug, as contract does not takes any kind of funds from the user in the smart contract

Transfer of tokens from smart contract can be controlled by using a script running on back end and can be seen through EtherScan.io

HBC tokens will be transferred according to the investment you made

By using EtherScan.io, smart contract code can be verified which will lead the compiled code getting matched with the byte code of deployed smart contract in the block chain. It indicates, there is no deviation in Hybrid Bank Cash smart contract

Hybrid Bank Cash Smart Contract Audit



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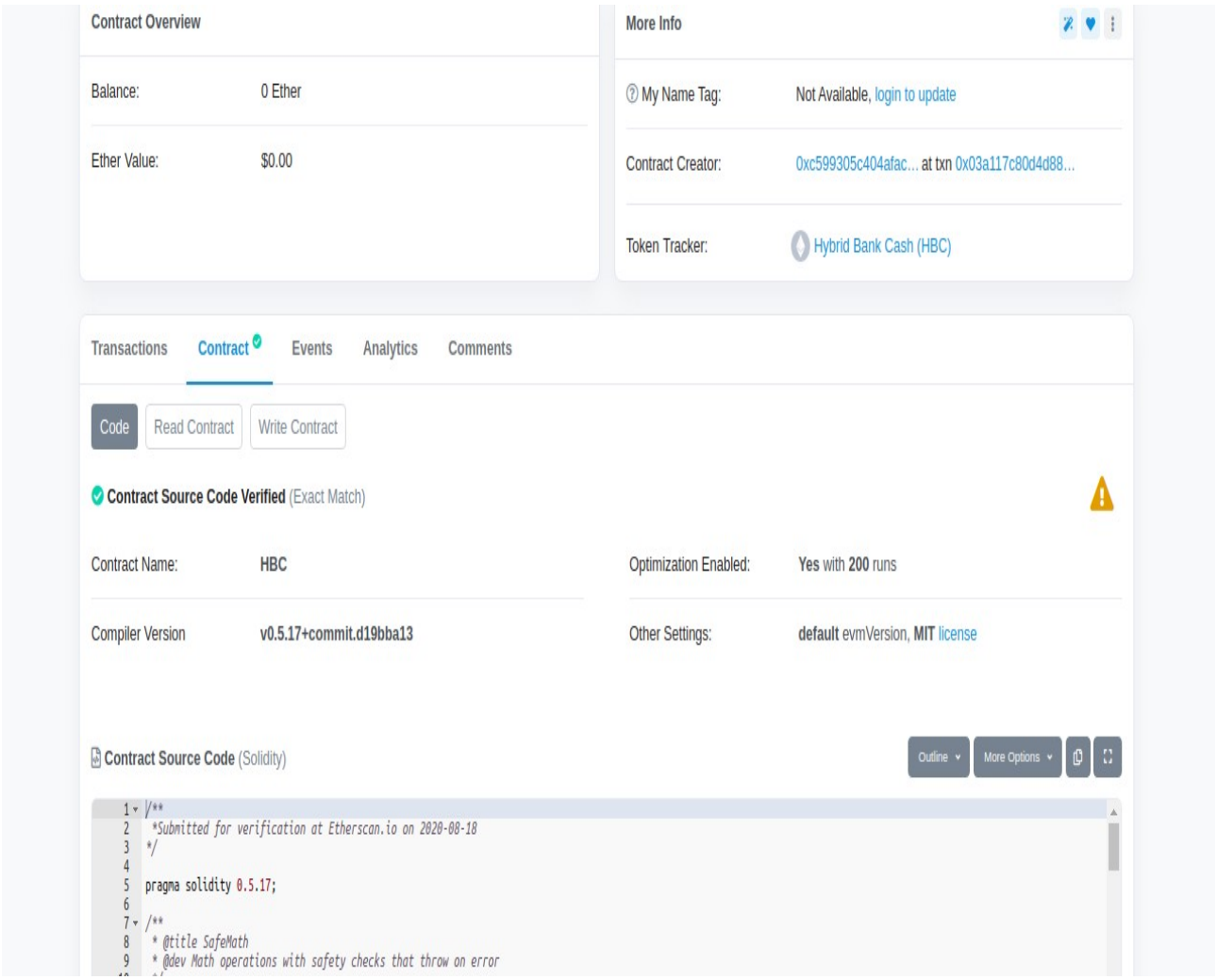

Summary

The smart contract has been analyzed using different manual and automated tools.

Code quality is very good and well documented.

Smart Contract logic was checked and compared with White paper description.

Didn’t find any inconsistency.

Safe for transactions and to list on any crypto exchanges.